



सत्यमेव जयते

# ECONOMIC SURVEY, ASSAM 2019-20



GOVERNMENT OF ASSAM  
TRANSFORMATION & DEVELOPMENT DEPARTMENT  
DIRECTORATE OF ECONOMICS AND STATISTICS, ASSAM  
JAYANAGAR, BELTALA, GUWAHATI - 28



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**GOVERNMENT OF ASSAM  
TRANSFORMATION & DEVELOPMENT DEPARTMENT  
DIRECTORATE OF ECONOMICS AND STATISTICS, ASSAM  
JAYANAGAR, BELTALA, GUWAHATI-28**



**Sarbananda Sonowal**



**Chief Minister, Assam  
Guwahati**

Dispur  
11.02.2020

**MESSAGE**

It gives me immense pleasure to learn that the Directorate of Economics and Statistics, Assam is bringing out the 'Economic Survey, Assam 2019-20'. The publication has given the focus on the analyses of past, present and future trends of different socio-economic aspects of Assam.

The Directorate of Economics and Statistics is performing yeoman's service in collecting, compiling and publishing data pertaining to various socio-economic facets of the state and incorporating them in this issue of publication. I hope the publication helps the policy makers, planners, administrators, researchers along with a host of others.

I appreciate the officers, staff of the Directorate of Economics and Statistics, Assam for their efforts in bringing out this all-important publication.

**(SARBANANDA SONOWAL)**

**DR. HIMANTA BISWA SARMA, Ph.D., LLB**  
Minister, Assam



Finance, Transformation & Development,  
Education, Health & Family Welfare and  
Public Works Department.



## Message

I am glad to know that the Directorate of Economics and Statistics, Assam is bringing out its prestigious publication the "Economic Survey, Assam, 2019-20". The publication focusses on the trends of performance based on the development of State of Assam.

Statistics allow for a wider sense of comparison enabling policymakers and concerned authorities to formulate policies and suggestions to overcome problems. In this issue efforts have been made to depict the latest statistical updates and analysis of various developmental schemes and programmes that are being implemented in the state in a comprehensive manner. In the publication important analysis on Primary, Secondary and tertiary Sectors are put into twenty chapters. State Income, State Finance, Industry and Mining, Agriculture, Animal & Husbandry, Forestry, Panchayat & Rural Development, Transport and Communication, Power, Social Sector comprising Health and Education etc, are the chapters of interest of the readers. The eminent experts have also extended their efforts to make this issue more resourceful along with the departments concerned. This publication will definitely be beneficial for the Administrators, Planners, Academicians, Researchers etc.

I extend my sincere appreciation for the efforts made by the officers and staff of the Directorate of Economics & Statistics, Assam associated with this valuable publication.

(HIMANTA BISWA SARMA)



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**Chief Secretary**



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## **MESSAGE**

I am happy to know that the Director of Economics and Statistics, Assam is publishing "Economic Survey, Assam 2019-20" focusing on performance based trends on economic development of Assam.

This issue of the publication contains information regarding the schemes and various stages of achievement implemented by Government of Assam for socio economic development of the State.

Agriculture, Industry & Mining, Panchayat & Rural Development, State Finance, Forestry, Fishery are some of the major areas which are elaborated in the publication. This will definitely help policy makers in formulating future policy while providing material to researchers and academicians besides general public.

My thanks and appreciation go to the officers and employees of the Directorate of Economics and Statistics, Assam and also to the contributors to the publication for their sincere efforts in collating and presenting information in a comprehensive form through this publication.

February 19, 2020

  
Chief Secretary, Assam

**Rajiv Kumar Bora, IAS**  
**Additional Chief Secretary**



**Government of Assam**  
**Department of Finance,**  
**Department of Transformation &**  
**Development, Department of Soil**  
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## **M E S S A G E**

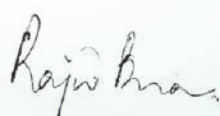
It is a matter of great satisfaction that the Director of Economics and Statistics, Assam is bringing out the 2019-20 edition of "Economic Survey, Assam, 2019-20" depicting the latest statistical information on Assam Economy.

The Directorate of Economics and Statistics, Assam has been entrusted with the task of collecting, compiling and analysis of data on different sectors of the economy and incorporating the details in the current issue of the "Economic Survey, Assam, 2019-20".

I hope that the publication will be of use to Policy makers, Planners, Administrators & Researchers and other interested parties.

I extend my sincere appreciation for the efforts made by the officers and staff of the Directorate of Economics and Statistics, Assam associated with the publication.

Date : 17-02-2020.

  
(Rajiv Kumar Bora)

**SAMIR K. SINHA, IAS**  
*Principal Secretary*  
Finance, Health & FW,  
Transformation & Development Departments  
Government of Assam



Assam Sachivalaya, Dispur,  
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Dated : The 12<sup>th</sup> February, 2020.

## **MESSAGE**

It is matter of great satisfaction that the Directorate of Economics and Statistics, Assam is bringing out the 2019-20 edition of “Economic Survey, Assam” depicting the latest statistical information on the Economy of Assam.

The Directorate of Economics and Statistics, Assam is performing an impressive job in collection, compilation and analyzing data on different sectors of the economy and incorporating in the current issue of the “Economic Survey, Assam, 2019-20”.

I hope that the publication will help the Policy makers, Planners, Administrators & Researchers and many others.

I extend my sincere appreciation for the efforts made by the officers and staff of the Directorate of Economic and Statistics, Assam associated with the publication.

  
(Samir K. Sinha)



**Nitin Khade, IAS  
Commissioner & Secretary  
Transformation and Development  
Department , Govt. of Assam**



**Assam Civil Secretariat.  
Block –F, Ground Floor  
Dispur, Guwahati-781006**



## **MESSAGE**

I am glad to know that the Directorate of Economics and Statistics, Assam is bringing out its most prestigious publication the “Economic Survey, Assam, 2019-20”. The publication focuses on the trends of the Socio-Economic development of the State of Assam.

In this issue an effort has been made to depict the latest statistical updates and analysis of various developmental schemes and programmes being implemented in the State in a comprehensive manner. In this publication important analysis on Primary, Secondary and Tertiary Sectors is done under chapters like State Income, State Finance, Industry and Mining, Agriculture, Animal Husbandry & Veterinary, Forestry, Panchayat & Rural Development, Transport & Communication and Power etc.

I expect this publication will definitely be beneficial for the Administrators, Planners, Academicians, Researchers and many others.

I appreciate eminent experts who have taken efforts to make this issue more useful along with the departments concerned.

I extend my sincere appreciation for the efforts made by the officers and staff of the Directorate of Economics & Statistics, Assam who are associated with the publication.

**Date :** 19/2/2020

**( Nitin Khade )**

**Kamala Kanta Nath, ISS**  
Secretary to the Government of Assam  
Transformation & Development Department



सत्यमेव जयते

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## FOREWORD

The Directorate of Economics and Statistics, Assam was established in 1948 with an objective to collect, collate, compile, analyse and maintain database on various aspects of the Economy of Assam. It used to collect some information, especially on socio-economic sector through primary sources and others from secondary sources mainly from Government Departments and agencies having State, National and international repute. The collected information are published in the form of three main annual publications namely, Statistical Hand Book Assam, Economic Survey Assam and Assam at a Glance.

Economic Survey Assam is a publication of the Directorate which contains detail sectoral analysis of the economy of the state, Departmental activities, schemes and programmes undertaken by the Government for development, etc. The information for the publication are being collected from various authenticated sources like Departments of the Government of Assam, Ministries/ Departments of Government of India, etc. The current 2019-2020 edition of the publication contains twenty chapters pertaining to the State Income, Finance, Institutional Finance, Agriculture and allied activities, Forestry, Industry, Power, Transport and Communication, Services sector, etc.

The publication has significance in economy of Assam related not only for people of Assam but for the entire country for formulation of Government Policies and to prepare plans and programmes by different stakeholders. The valuable inputs are also helpful for the new generations like students, researchers etc. in the State.

I acknowledge the contribution made by various stakeholders to make this publication resourceful and offer gratitude to the experts under the leadership of Dr. Kalyan Das, Director, OKDISCD for reviewing the chapters, officials of various Departments, organizations, institutions for providing information and all officials and staff of the DES, Assam for their sincere efforts in bringing out this publication nicely.

I hope the readers will find this publication useful.

**(Dr. Kamala Kanta Nath)**



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## ASSAM AT A GLANCE

Sl. No.	Item	2016-17	2017-18	2018-19
1.	Geographical Area("000sq. Km.)	-	-	78.44
2.	Administrative Setup-(in no.)	-	-	-
(i)	Revenue Circles	-	-	184
(ii)	District	-	-	33
(iii)	No. of Gaon Panchayat	-	-	2200
(iv)	Inhabited Villages	-	-	25372
(v)	Un -inhabited villages	-	-	1023
(vi)	No. of Towns	-	-	214
3.	Population as per Census 2011 (in "000)	-	-	-
(i)	Total	-	-	31205
(ii)	Male	-	-	15939
(iii)	Female	-	-	15266
(iv)	Rural	-	-	26807
(v)	Urban	-	-	4398
(vi)	Scheduled Cast	-	-	2231
(vii)	Scheduled Tribes	-	-	3884
(viii)	Density of Population (per sq. km.)	-	-	382
(ix)	Literacy rate (percentage)	-	-	73
(x)	Sex ratio(Female per thousand male)	-	-	958
(xi)	Percentage of urban population to total population	-	-	14.1
4.	Net State Domestic Product (Rs. In crore)			
(i)	At current Price	209688	227570	280394
(ii)	At Constant Price	165019	172961	208035
(a)	Agriculture &, Forestry and Fishing (Rs. In crore)			
(i)	At current Price	42670	44127	51106
(ii)	At Constant Price	31722	32699	36993
(b)	Service Sector (Rs. In crore)			
(i)	At current Price	100245	111508	147645
(ii)	At Constant Price	71709	76202	96813
5.	Rainfall-percent to Normal(in mm)	88.95	101.89	75.77
6.	Agriculture-(Area in "000 Ha.)			
(i)	Net area sown	2774	2722	-
(ii)	Gross cropped area	4087	4045	-
7.	Area under principal crops (in "000 ha.)			
(i)	Rice	2467	2434	2425
(ii)	Wheat	17	18	16
(iii)	Maize	31	32	32
(iv)	Rape & Mustard	294	290	286
(v)	All cereals	2521	2488	2479
(vi)	All pulses	146	155	150
(vii)	All foodgrains	2667	2643	2629
(viii)	Sugarcane area	31	31	31
(ix)	Cotton	1	1	1
(x)	Total Fruits & Vegetables	211	211	207

## ASSAM AT A GLANCE

Sl. No.	Item	2016-17	2017-18	2018-19
8.	Production of principal crops (in '000 tonnes)			
(i)	Rice	5127	5284	5437
(ii)	Wheat	23	25	23
(iii)	Maize	91	99	105
(iv)	Rape & Mustard	189	186	184
(v)	All cereals	5245	5410	5569
(vi)	All pulses	108	116	113
(vii)	All food grains	5353	5526	5682
(viii)	Sugarcane (cane)	1207	1143	1093
(ix)	Total Fruits & Vegetables	2387	2420	2507
9.	Index number of agricultural production	133.44	137.54	150.86
10.	Agriculture Census			
(i)	Number of operational landholding(in '000)	* 2720	* 2720	# 2741
(ii)	Area of operational landholding(in '000)	* 2999	* 2999	# 2976
(iii)	Average size of operational landholding (ha.)	* 1.1	* 1.1	# 1.09
11.	Livestock Census-as on 2012			
(i)	Total livestock (in '000)	19080	19080	19080
(ii)	Total poultry (In '000)	26019	26019	26019
12.	Forest Area (sk.km.)	13517	13517	13590
13.	Index of Industrial production of Assam			
(i)	Manufacture	119.26	124.55	125.46
(ii)	Mining & Quarrying	86.72	90.15	89.55
(iii)	Electricity	140.66	131.11	153.46
14.	Electricity-(Million Kwh)			
(i)	Gross Unit Generation (MU)	1651	1490	1594
(ii)	Total Consumption	6526	6813	6968
(iii)	Industrial consumption	817	888	1127
(iv)	Domestic consumption	3423	3703	3477

\* - Data for the year 2010-11

# - Data for the year 2015-16

## ASSAM AT A GLANCE

Sl. No.	Item	2016-17	2017-18	2018-19
15.	Banking -(Scheduled Commercial)			
(i)	Banking offices	2276	2326	2348
(ii)	Banking office for rural population	477	1062	481
16.	Education			
(i)	Primary schools (in nos.)	40465	39780	36262
(ii)	Enrolment (in"000)	2914	2495	2650
(iii)	Secondary schools (in nos.)	4314	3380	5142
(iv)	Enrolment (in "000) (Including High & Higher secondary )	818	810	783
17.	Health			
(i)	Civil Hospital (including sub-divisional civil Hospital)	39	39	39
(ii)	Dispensaries	272	278	278
(iii)	Beds per lakh population (Estimated population)	58.97	58.29	53.35
(iv)	Birth rate	* 21.7	# 21.2	-
(v)	Death rate	* 6.7	# 6.5	-
(vi)	Infant mortality rate	* 44	# 44	-
18.	Transport			
(i)	Railway route length (in Km.)	2440.39	2464.89	2518.99
(ii)	Total road length (in km.)	49454.4	52890.00	57848
(iii)	Motor vehicles on Road (in "000 Nos.)	2938	3310	3725
(iv)	Road Length per lakh of population	146	169.49	163.41
(v)	Road Length per "00sq. Km. of Area (in km.)	66.35	67.43	73074

\*- Data for the year 2016

# - Data for the year 2017



## ASSAM'S COMPARISON WITH INDIA

Sl. No.	Unit	Unit	Assam	India	Comparison with India (%)
1	2	3	4	5	6
1	Population (2011, as per census)	In '000'			
1.1	Total population	"	31205	1210855	2.57
	(a) Male	"	15939	623270	2.55
	(b) Female	"	15266	587585	2.59
1.2	(a) Rural population	In '000'	26807	833749	3.21
	(b) Proportion of rural population to total population	Per cent	85.9	68.9	-
1.3	(a) Urban population	In '000'	4398	377106	1.16
	(b) Proportion of urban population to total population	Per cent	14.1	31.1	
1.4	Sex Ratio	Females per thousand males	958	943	-
1.5	Decadal growth rate of population (2001-2011)	Per cent	17.1	17.7	-
1.6	Literacy rate	"	72.19	72.99	-
1.7	Population of scheduled cast and scheduled tribes	In '000'	6115	305924	1.99
1.8	Total workers	"	11969	481889	2.48
1.9	Geographical area	In '000'sq.km.	78.44	3290	2.38
2.	Agriculture(2016-17)	In Hac.			
2.1	Net area sown	"	2773855	N.A.	
2.2	Gross cropped area	"	4087449	N.A.	
2.3	Gross irrigated area	"	224777	N.A.	
2.4	Percentage of gross irrigated area to gross cropped area	Per cent	5.49	N.A.	
2.5	Area under principal crops (Average for years 2014-15 to 2016-17)	In '000 Hac.			
(i)	Rice	"	2482	130800	1.89
(ii)	Wheat	"	21	92500	0.02
(iii)	All cereals	"	2538	297600	0.85
(iv)	All food grains(cereals and pulses)	"	2684	375500	0.71
(vi)	Sugarcane area	"	31	14400	0.21
(vii)	Cotton	"	1	35900	

## ASSAM'S COMPARISON WITH INDIA

Sl. No.	Unit	Unit	Assam	India	Comparison with India (%)
1	2	3	4	5	6
3.	Livestock Census (2012)				
3.1	Total livestock	In '000 No.	19080	512057	3.72
4.	Forests				
4.1	Total forest area (Reserved) (2017-18)	Sq. km.	13517	767419	1.76
5.	Electricity (2017-18)				
5.1	Total generation	Million kwh.	7629	1433400	0.53
5.2	Total consumption	"	6814	N.A.	
5.3	(a) Industrial consumption	"	1448	N.A.	
	(b) Percentage of Industrial consumption to total consumption	Per cent	21.25	N.A.	
6.	Banking (Scheduled commercial) (March 2018)				
6.1	Metro politan	Number	Nil	26961	-
6.2	Semi Urban		665	38481	1.72
6.3	Urban		599	25307	2.36
6.4	Rural	"	1062	49384	2.15
7.	State/National Income (2017-18) (QE)				
7.1	Net State domestic Product (At current price)	Rs. In crore	227570	14710563	1.55
7.2	Per capita income at current prices	In Rs.	72289	111782	64.66
7.3	Gross State Domestic Product (GSDP)/Gross Domestic Product (GDP)	Rs. In crore	259997	16438895	1.58

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# CHAPTER-I

## ASSAM ECONOMY- AN OVERVIEW

### AREA AND POPULATION

Assam, is a state located between 26.2006°N-92.9376°E latitude and longitude in the northeast region of India bordering seven states namely Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries, namely Bhutan and Bangladesh. The geographical area of the state is 78,438 sq. Km (30285 sq. mile) of which 98.4 percent area is rural. Assam shares about 2.4% of the country's landmass, providing shelter to 2.6% of India's population as per census, 2011. For administration and revenue purposes, the State has presently 33 districts, including six newly created districts namely Biswanath, Charaideo, Hojai, South Salmara, West Karbi Anglong and Majuli. Assam is a state of heterogeneous population with socio-cultural and ethnic diversity. According to the Census of India, 2011 the population of Assam was 312.05 lakh of which 159.39 lakh were male and 152.66 lakh were female. The decadal growth rate of the state population during 2001-2011 was 17.07% against 17.68% growth for the country as a whole. Out of the total population, 86% population lived in rural areas and 14% population in urban areas of the state, while the percentage of rural population of the state was higher than all India average(69%). However, the urban population in the state had increased from 12.9% in 2001 to 14% in 2011. The density of the population of Assam in 2011 was 398 person per sq.km. as compare to 340 person in 2001. The sex ratio(number of female per thousand male) of Assam had improved to 958 in 2011 from 935 in 2001. On the other hand, sex ratio at birth in Assam as per 2011 census was 957. Notwithstanding, compared to overall sex ratio of the state, the child sex ratio(age group 0-6 years) had gradually declined from 975 in 1991 to 967 in 2001 and further to 962 in 2011.

### STATE INCOME:

As per quick estimates, the Gross State Domestic Product (GSDP) of the State at current prices is estimated to attain a level of Rs. 323555.38 crore during 2018-19 indicating a growth of 12.15% over the preceding year and the GSDP of the State at constant prices is to be increased at the level of Rs. 234771.79 crore indicating a growth of 6.92%. During 2018-19, the percentage contribution of agriculture and allied sector, industry, service and taxes and subsidies to total GSDP of Assam at current prices were 15.80%, 33.51%, 45.63% and 5.03% respectively as against 15.76%, 36.36%, 41.24% and 6.65% at constant prices. The share of agriculture and its allied activities in GSDP at current prices had marginally come down from 19.89% in 2011-12 to 16.76 % in 2017-18(P.E) and 15.80% in 2018-19(Q.E). During the same period, the share of industry sector at current prices has increased gradually from 30.63% in 2011-12 to 32.71% in 2017-18(P.E) and 33.51% in 2018-19(Q.E). The positive trend has been reflected in service sector during the same period. The annual growth rate of GSDP in respect of agriculture and its allied sector at current prices for the year 2018-19(Q.E) is estimated to attain a growth of 5.68% as against 2.76% at constant prices. The annual growth rate in Industry sector is estimated at current prices to attain at 14.22% during 2018-19 over the previous year as against 6.24 % at constant prices. During the same period, the annual growth rate in Service sector is estimated to attain a growth rate of 12.82% at current prices over the previous year as against 7.27% at constant prices. The per capita income of the State in terms of NSDP at constant (2011-12) prices is estimated at Rs.60721.00 for the year 2018-19(Q.E) as against Rs.57099.00 in 2017-18 (P.E) with an increase of 6.34% and the same was Rs. 41142.00 in the year 2011-12.

### STATE FINANCE:

In F.Y 2019-20 (B.E), total revenue receipts of the state is expected to be achieved at the level of Rs. 83147.99 crore as against Rs. 89854.30 crore in F.Y 2018-19(R.E) with a deficit of Rs.6706.31 crore in Revenue Receipt Account. The total State's own tax revenue was Rs. 10501.00 crore in F.Y 2011-12 and it grown up to Rs. 17287.49 in F.Y 2017-18 with annual growth rate of 12.9%. It is expected that the State's own revenue resources to increase from Rs. 17287.49 crore in F.Y 2017-18 to Rs. 31667.80 crore in F.Y 2018-19 (R.E) with a growth rate of 83.2% and then to decline to Rs. 26525.80 crore in F.Y 2019-20 (B.E).

Total revenue expenditure was Rs.26528.55 crore in F.Y 2011-12 and it increased to Rs. 55480.94 crore in 2017-18. The salary expenditure was 24.5% to total expenditure in F.Y 2011-12 and it increased to 46.4% in F.Y 2017-18. The share of salary expenditure to total revenue expenditure for the year F.Y 2019-20(B.E) is estimated to attain a level of 41.8% as against 38.4% in F.Y 2018-19(R.E). During the period from F.Y 2011-12 to F.Y 2017-18, the salary expenditure (Revenue) was increased by 2.21 times. Another component of revenue expenditure is interest payment. The share of interest payment expenditure to the total revenue expenditure has gradually come down from 7.8% in F.Y 2011-12 to 6.0% in F.Y 2016-17, 5.8% in F.Y 2017-18 and 5.1% in F.Y 2018-19(R.E). The share of pension expenditure to total revenue expenditure was about 11.8% in F.Y 2011-12 and it is expected to decline to 9.8 % in F.Y 2018-19(R.E). Out of the total revenue outlay for F.Y 2019-20(B.E), Social Services accounted for 45.7%, General Services (33.3%), Economic Services (20.4%) and Grants in Aid (0.6%) respectively. The relative shares of expenditures in Financial Year 2011-12 under the four heads viz. General Service, Social and Community Services, Economic Services and Grants-in-aid were 36.7 %, 43.2%, 17.6% and 2.5% respectively.

Capital receipts increased from Rs. 6155.59 crore in F.Y 2014-15 to Rs. 8451.78 crore in F.Y 2017-18 with annual growth rate of 12.4% and it is expected to increase at Rs.15191.06 crore in F.Y 2019-20(B.E) as against Rs. 16587.64 crore in F.Y 2018-19(R.E). During the F.Y 2019-20 (B.E), internal debt is decreased by 0.3% as against the previous F.Y.

Capital expenditure increased from Rs.6170.02 crore in F.Y 2014-15 to Rs. 26485.54 crore in F.Y 2018-19(R.E). During the period from F.Y 2014-15 to F.Y 2018-19(R.E), capital outlay and repayment of public debt had increased by 5 times and 4 times respectively. During the same period, repayment of public debt had declined by 3.2%. In the F.Y 2017-18, the state faced revenue deficit of Rs. 1350.01 crore and a fiscal deficit of Rs. 9292.21 crore. In F.Y 2019-20(B.E), it is estimated to attain a revenue surplus of Rs. 3405.73 crore against a fiscal deficit of Rs.11113.465 crore. During the F.Y 2017-18, the State showed that a fiscal deficit of 3.33% of GSDP and it is expected the fiscal deficit to decline slightly at 2.97% of GSDP in F.Y 2019-20(B.E).

### **INSTITUTIONAL FINANCE:**

According to the Reserve Bank of India, the number of reporting Bank Offices of all Scheduled Commercial Banks in Assam has been increased to 2348 as on March 2019 from 2326 as on March 2018. With the increase in the bank networking, the dependence per bank offices in Assam has been considerably decreased over the years and reduced from 42.14 Sq.km as on March 2014 to 33.41 Sq.km as on March 2019. However, average population covered per bank branch office in Assam was calculated at 13.3 thousand (based on Population Census 2011) as on March, 2019 compared to All India average of 8.54 thousand during the same period.

The expansion of banking facilities in the State has augmented not only in respect of volume of deposits but also in respect of disbursement of credit. The aggregate deposit with Scheduled Commercial Banks in Assam, which was Rs.134643 crore in March 2018, has increased to Rs.147203 crore in March 2019. The total volume of credit disbursed by the banks has been increased to Rs.65070 crore in March 2019 from Rs.57307 crore in March 2018 thereby recorded an impressive growth of 13.55 percent. The per capita deposit at the end of March 2019 was Rs.47172 showing an increase of 9.33 percent over per capita deposit of Rs.43147 on 31<sup>st</sup> March 2018. The per capita credit as on March,2019 increased to Rs.20852 from Rs.18364 in March 2018 showing a growth of 13.55 percent during 2019 over the previous year.

The Credit-Deposit ratio of all Scheduled Commercial Banks in Assam is marginally increased to 44.20 percent at the end of March, 2019 compared to 42.56 percent during the year 2017-18. The State Level Banker's Committee Report reveals that District-wise, Morigaon has the highest CD Ratio (79) as on March, 2019 followed by Lakhimpur (74), Golaghat (71) as on 31<sup>st</sup> March 2019 and the four districts with the lowest CD ratio are Kamrup Metro (36), Karimganj (34), Kokrajhar (28) and Dima Hasao (27).

### **AGRICULTURE AND ALLIED ACTIVITIES:**

Agriculture is the backbone of the State's Economy and plays key role in the development of the State. The contribution of Agriculture and allied activities towards GSDP in 2018-19 at current prices is 15.80% and at constant prices is 15.76%, which was 16.17% and 16.39% in the previous year 2017-18. There is a

marginal decline in the year 2018-19 over the previous year 2017-18 is due to less production in case of Paddy, Pulses and some vegetable crops. The annual growth rate of Gross State Domestic Product in agriculture and allied sector in the year 2018-19 (QE) at current prices is 5.68%. The total food grains production is 5683 (.000 tonnes) during the year 2018-19. For the financial benefit Govt. had issued 398629 nos of Kissan Credit Cards with Rs. 1415.58 crores credit sanction limit during the year 2018-19. The average rainfall of Kharif Season is normal and Rabi Season is deficient during the year 2019.

Agriculture Census 2015-16 reveals that the total no. of operational holdings (including all sizes) are 2741722 and total area operated are 2976765 hectare (including all sizes). The average size of holding is 1.09 hectare. The area covered under food grains is 26.30 lakh hectares, under Rice (Autumn, Winter and Summer) covers 24.26 lakh hectares, under Wheat covers 0.17 lakh hectares, total Pulses covers 1.50 lakh hectares and total Oilseeds (Excluding Coconut) covers 3.09 lakh hectares respectively during the year 2018-19.

### **MILK, MEAT AND EGG PRODUCTION:**

The total milk production of the state for the year 2018-19 was estimated at 945.92 Million Ltrs against 925.78 Million liters of the previous year. It reveals that the growth of milk production has increased by 2.2% over the previous year. Further during the year Indigenous/Non descript cattle milk is observed to have constituted 53% of the total milk production of the State while the contribution of Crossbreed cattle milk is around 31.54% and thus the cattle milk together contributes 84% to the total milk. Buffalo and Goat milk contributes 13% and 2% respectively to the total milk production. The total number of dispensaries in the State is 311 and Sub-Centre/FAC/SMC is 804 key village centre is 19 nos. and total number of livestock vaccinated is 1087278 and number of poultry vaccinated is 154851 in the year 2018-19.

The total meat production 2017-18 is 48.43 (.000 tonnes) in the year 2018-19 is 50.42(.000tonnes). There is a 4.11% increase in meat production in 2018-19 over the previous year 2017-18.

The Egg production during the period 2018-19 for both (Fowl and Duck) is 5014.61 lakhs and during the period 2017-18 for both (Fowl and Duck) it was 4950.77 lakhs. There is a marginal increase of 1.29% in egg production in the year 2018-19 over the previous year 2017-19.

### **FISHERY:**

Fishery and aquaculture play an important roles in providing employment, nutrition and livelihood security thereby reducing poverty and promoting health. Fish is an extremely nutritious vital and cheapest source of animal protein. Considering the importance of the sector, fishery sector has been identified as one of the Ratnas among the selected Navaratnas under the 'Chief Minister's Samagra Gramya Unnayan Yojana (CMSGUY)'. Fish Production in the state has reached a level of 3.31 lakh MT during 2018-19 against the corresponding nutritional requirement of 3.54 lakh MT. More than 90% of the people of the state prefer fish in their meal. Thus, the Fishery Sector is considered as an important economic activity in the socio-economic context in the state of Assam, especially in the rural areas of Assam fish production and its related activities providing a good scope for employment generation. The contribution of Fishery Sector to the State's GDP (at constant price 2011-12 prices) was Rs. 5,56,199.00 lakh as per provisional estimates 2017-18 with a growth rate of 6.79 percent over previous year and Rs. 5,88,862.00 lakh as per quick estimates 2018-19 with a growth rate of 5.87 percent per annum as per provisional estimates 2017-18.

### **IRRIGATION:**

Out of the Gross Cropped Area of 40.87 lakh hectares( estimated for 2016-17) of the State 10.07 lakh hectares (24.64%) irrigation potential were created by Government up to March,2019 under ongoing irrigation schemes. Out of 10.07 lakh hectares 2.73 lakh hectares (27.11%) are covered through both major and medium irrigation projects and the rest 7.34 lakh hectares (72.89%) were covered through minor irrigation schemes. During the last five years, around 2.49 lakh hectares are covered under irrigation potential with an annual increase of 6.57%.

**FORESTRY:**

The recorded forest area in Assam was 26,832 Sq. K.M. which is 34% of total Geographical area of Assam and 3.21 % of the country's total forest area as per ISFR report 2019. Out of total recorded forest area the reserved area constituted about 13950 sq. K.M. which is 52% of total forest area. According to the forest Report 2018-19 out of total reserved forest area about 3,641.45 Sq. K.M. i.e. one fourth of the total reserved forests has already been encroached. Assam has witnessed a marginal increase in forest and tree cover as per assessment made in 2019 over the year 2017 as per India State Forest Report (ISFR) 2019. It is estimated that the forestry and logging contributes 5.46% toward GSDP in 2018-19 (Q.E) against 4.4% in 2017-18. (R.E.). Which shows a positive trend of forestry and logging in the state economy.

**INDUSTRY AND INDUSTRIAL GROWTH:**

Industry sector comprises of mining & quarrying, manufacturing, electricity, gas, water supply & other utility services and construction. As per Quick Estimates for 2018-19 at constant (2011-12) prices, annual growth rate in Industry sector is estimated to attain the level of 6.24% over the previous year as against 14.22% at current prices. At constant prices, the contribution of the sub sectors to the industry sector for 2018-19 (A.E.) is estimated at 4.33% in mining and quarrying, 4.99% in manufacturing, 7.72% in electricity, gas, water supply & other utility services and 8.01% in construction respectively. All the sub sectors of Industry sector have posted encouraging growth performance both at current and constant prices over the previous year. The contribution of Industry Sector to the state's Gross Domestic Product (GDP) is 33.51% at current prices during the year 2018-19 which was 30% during 2017-18.

<b>Sub-Sectors</b>	<b>Current Price</b>	<b>Constant Prices (2011-12)</b>
Mining & Quarrying	16.35%	4.33%
Manufacturing	14.95%	4.99%
Electricity, Gas, Water Supply & Other Utility Services	23.26%	7.72%
Construction	10.23%	8.01%
<b>Industry Sector Total</b>	<b>14.22%</b>	<b>6.24%</b>

Source: Directorate of Economics and Statistics, Assam

**Index of Industrial Production (Base: 2011-12=100):**

During 2018-19, the Index of Industrial Production (Base: 2011-12=100) in respect of registered manufacturing sector is calculated at 125.46 (Prov.) showing a positive growth of 0.75 % over the previous year 124.63. Index of industrial Production of Assam during 2018-19 has been worked out at 111.24 (Prov.) registering a growth of 1.8 % over 109.29 in 2017-18.

**Table-1.2**  
**Production of some selected Industries in Assam**

<b>Year</b>	<b>Tea (000' tonnes)</b>	<b>Wheat Flour (000' tonnes)</b>	<b>Coal (000' tonnes)</b>	<b>Jute Textiles (000' tonnes)</b>	<b>Crude Oil (000' tonnes)</b>	<b>Cement (000' tonnes)</b>	<b>Fertilizer (Urea) (000' tonnes)</b>
2015-16	653	110	397	22	4513	606	390
2016-17	657	104	600	23	4202	617	368
2017-18	667	94	782	23	4345	639	299
2018-19	702	98	783	32	4222	640	277

Source: Tea: Tea Board of India; Minerals: Indian Bureau of Mines, Nagpur.

**Plantation Industry-Tea:**

Tea industry plays a very special role in the State economy. Assam alone produces more than half of India's tea production. According to the Tea Board of India in 2018 there were more than 101085 registered Small Tea Growers (i.e. with up to 10.12 hectares of land) in Assam, which all together produced about 304490 thousand kg of tea in 105291 hectares of land. The number of big Growers' Garden (i.e. with holding above 10.12 hectares) in the state is 765 in 2018 producing 387420 thousand kg in total 232400 hectares of land. The production of tea in Assam was 651.91 thousand tonnes in 2018; produced in 337 thousand hectares of land against 665.33 thousand tonnes produced in 314 thousand hectares in 2017. The production of tea in Assam had shown an increase by 0.85% in the 1917 compared to 2016. But in 2018 it has decreased by 2 % in 2018 compared to 2017.

**MINERALS:**

The state is richly endowed with mineral resources, and the minerals are major contributors to the state's industrial performance. The contribution of Mining and Quarrying sector to the economy has been around 11-12% at Current Price in 2018-19. During the year 2018-19, production of coal increased slightly but the production of crude oil decreased by 2.8% compared to the previous year. The Index of Industrial Production is calculated at 89.55(Prov.) during 2018-19 compared to 90.15 during 2017-18.

The Table 11.3 shows the trend of some major minerals exploited in the state during the last four years.

**Table-1.3**  
**Mineral Production in Assam**

Year	Coal ('000MT)	Crude Oil ('000MT)	Natural Gas Utilised (MCM)	Limestone ('000MT)	Sulphur ('000 MT)
2015-16	397	4513	2903	442	4322
2016-17	600	4202	2907	1597	6571
2017-18	782	4345	3034	1432	8339
2018-19	783	4222	3083	1651	6956

Source: Indian Bureau of Mines.

During the year 2018-19, production of Coal remains almost the same and Sulphur has decreased by 16.60 % while the production of Crude oil is a little bit less than the previous year. The production of Natural Gas has increased by 1.6% compared to the previous year and the production of Lime stone during 2018-19, however, has increased by 15% compared to the previous year.

**POWER:**

The installed capacity of generating plants in Assam was 376.96 MW as on March 31, 2019, which includes hydel and gas plants of the State. Source-wise electricity generated in Assam, now also includes renewable energy sources like Solar and Wind Energy utilization to meet its various additional requirements.

The energy requirements of the State has been worked out at 9144 Million Units (MU) for the year 2018-19 as against 8694 MU during the year 2017-18 and 8239.77 MU during the year 2016-17. Availability of energy during the period, 2017-18 and 2018-19, was also the same, except in the year 2016-17, there was a shortage of 960.60 MU. The power generation during the years 2018-19, 2017-18 and 2016-17 was 1594.459 MU, 1489.848 MU and 1650.607 MU respectively. The peak demand for electricity in the State has increased from 1679 MW in 2016-17, to 1823 MW in 2017-18, and further increased to 1894 MW in 2018-19, though the shortage of power has come down to 46 MW in 2016-17, but has risen to 79 MW in 2017-18 and further to 85 MW in 2018-19, the shortage in percentages being 3%, 4% and 4% respectively during the periods.

Efforts have been made for promoting the utilization of Renewable Energy sources like Solar and Wind energy. Steps have also been taken up in this direction by setting up of Solar photovoltaic power plants and Wind Energy Monitoring Stations to cater to all additional power requirements in the State.



## **TRANSPORT:**

The contribution of the transport and communication sector was calculated at 6.11% of GSDP in 2017-18 at constant prices (at 2011-12 prices). The road network in Assam comprised of total 57849 km. of roads consisting of 3890 km. National Highways, 2530 km. State Highways, 4379 km. Major District Roads, 1714 km. Urban roads, 45336 km. Rural Roads as on March 2019. The total road network of 3890 km National Highways [193.74 km. under construction and 894.79 km. newly declared NH] is maintained by the State PWD. The road length per lakh population [2011 Census] is 169.49 and 67.43 km. per 100 sq.km of geographical area on March 2019. The on road vehicle population in the State was 3725529 as on March 2019. The density of motor vehicles in Assam was 47.5 per sq. km. during the year 2018-19 as against 42.2 vehicles per sq. km. during the year 2017-18. At present Assam has total railway route length 2464.89 km. which is 3.6% of the total Railway Route length of the country.

As per report from Directorate of Civil Aviation and Airport Authority of India, air traffic movement and passenger traffic (for LGBI Airport, Guwahati and Mohanbari Airport, Dibrugarh and Silchar and Lakhimpur (Lilabari) Airport published by the DGCA) has gone up by 27 percent during 2018-19 compared to the previous year. Similarly average number of fights handled has gone up by 23 percent in 2018-19. In respect of handling of freights, the growth was calculated at 29 percent in 2018-19 over the previous year 2017-18. The average number of flight per day was 164 in 2018-19 against 125 in 2017-18 and the average cargo handled per day was 70 MT in 2018-19 which was 65 MT in 2017-18.

## **SOCIAL SECTOR:**

### **EDUCATION:**

During 2018-19 numbers of Primary schools (class I to VIII) was 473294 with enrolment in the Lower Primary and Upper Primary level at 2650625 and 1493160 respectively. As per, DISE 2018-19, the average annual Drop-out Rate at Primary level in the State during 2018-19 was 3.1 percent which was 5.60 percent in 2016-17. At the Upper Primary level the drop- out rate was 1.9 percent in 2018-19 which was 2.51% in 2016-17. Among the districts, Hailakandi registered highest dropout rate of 9.6 percent in Lower Primary level and Karimganj registered highest dropout rate of 9.7 in the upper Primary Level. The Pupil-Teacher Ratio (PTR) in the Primary level of the State during the year 2018-19 was 22 percent. While in the Upper Primary level, the PTR of the state was 19 percent in 2018-19. Further during 2018-19, the number of secondary & higher secondary schools from (class IX to XII) was 4032 and the total enrolment in these classes (class IX to XII) was 237841.

### **HEALTH:**

The status of health care performance in the state improving over the years. At present there are 6 Medical colleges, 25 Civil Hospital, 14 Sub- Divisional Civil Hospitals, 15 First Referral Units, 946 Primary Health Centres, 172 Community Health Centres, 278 State Dispensaries, 4644 Sub-Centres, 18886 nos. bed for patients in the Government Hospital at the end of 2018. Till 31<sup>st</sup> March, 2019 there are 6010 Doctors including Ayurvedic and Homeopathic doctor, 2089 Pharmacist, 6395 G.N.M. 12251 A.N.M. 562 Rural Health Practitioner and 1647 Nos. Laboratory Technician who are rendering their level best services for better health of common people.

For sustainable health care facilities in the state, Government has concentrated a continuous efforts toward establishment an efficient system of health care and family welfare through effective planning. Department of Health and Family Welfare, Assam, along with National Health Mission has been implementing so many health care schemes for improving Maternal health and reducing MMR, IMR and under 5 Mortality Rate. Data reveals that due the initiative of Govt. the MMR per 100,000 live births in the state has been declined to 237 in the year 2014-16 against 328 in the year 2010-12. Though it is still high compare to all India level MMR 130 per 1,00,000, yet due to improvement in maternal health, increasing medical attention at the time of delivery either at Govt. hospital or private hospital helps to decline the rate of MMR. Like this, the IMR has also significantly declined in the year 2014-16 to 44 compare to 67 against the year 2006-07 and 74 in 2001 respectively. As per report available, Under 5 Mortality Rate (U5MR) of Assam per 1,000 live birth is also higher for the state as compare to the all India figure. It was 48 for Assam in 2017 against 37 in all India level.

## RURAL DEVELOPMENT:

The re-structured erstwhile IAY programme is now called as PMAY-G and is implemented for providing shelter to the shelterless/houseless people living below the poverty line. It is funded by the Central and the State at the ratio of 90:10. and a beneficiary gets Rs.1.30 lakh from 2016-17. Implementation of a new scheme to provide financial assistance to the landless PMAY-G beneficiaries for procurement of a plot of land @ Rs.50000/-is going to start.

About 122772 no. of IAY houses were sanctioned for construction and 106489 houses have been completed against the annual target of 123193 nos. during the financial year 2015-16. Similarly, in financial year 2016-17 and 2017-18, the targeted nos. of houses were 219695 and 40119 nos. respectively, out of which houses sanctioned in 2016-17 were 179875 and 26418 in 2017-18. Accordingly, more than 100853 nos. of PMAY-G houses were completed during financial year 2016-17 and 2017-18 altogether.

In Assam, the Deendayal Antodaya Yojana–NRLM(DAY-NRLM) is being implemented through Assam Rural Livelihood Mission, Assam (ARSLM), since 2012 is working with a mission to reduce poverty by enabling the poor households to access gainful self employment and skilled wage employment opportunities. This is resulting in appreciable improvement in their livelihood building strong grass root institutions of poor. Till 31<sup>st</sup> March, 2019 Assam State Rural Livelihood Mission promoted 2,31,306 Women SHGs across 33 districts covering 24,35,199 women.

In order to empower women SHGs financially, the Government of Assam launched Kanaklata Mahila Sabalikiran Asoni on 1<sup>st</sup> April 2018 for promotion of 1 lakh women SHG in the state and subsidy linked loan upto Rs.5 lakhs for development of Women SHGs. Govt. of Assam has already released Rs. 250 Crores under Kanaklata Mahila Sabalikiran Asoni for disbursement of Revolving Fund (RF) of Rs.25000/- to newly formed SHGs under NRLM and additional Rs. 10000/-to NRLM SHGs which have already received Rs.15000/- previously. In the FY2018-19 a total of 1,09,857 SHGs received Rs.10000.00 each under KAMS and43,974 SHGs received Rs.25,000.00 each, taking the total to 1,53,831 SHGs and total amount of Rs.219.79 crores.

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## CHAPTER-II

### POPULATION

Assam, located in the north eastern region of India is surrounded by seven states of the country namely, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries, namely Bhutan and Bangladesh. Assam has a total geographical area of 78,438 sq km (30285 sq miles), occupies 2.4 percent of India's landmass. Assam accounts for 2.6% of India's population to the data of 2011 Census. Topographical asymmetry of the state is highlighted by the Karbi Anglong hills and Barail hill ranges sandwiched between two valleys – the Brahmaputra and the Barak, named after the two important rivers of the state. For administration and revenue purposes, the state at present has 33 districts, including six newly created districts-Biswanath, Charaideo, Hojai, South Salmara, West Karbi Anglong and Majuli.

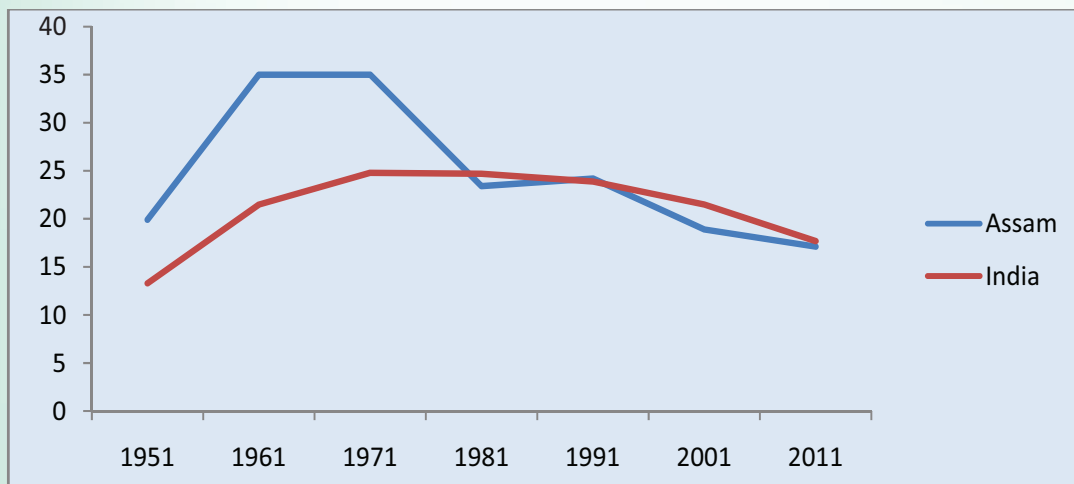
#### LIFE EXPECTANCY AT BIRTH:

The data available from Sample Registration Survey (SRS), 2010-14 show that Kerala state has the highest life expectancy at birth (average life expectancy of 74.9 years) in India, while life expectancy in Assam is towards the lower side at 63.9 years. As a whole life expectancy at birth in India is 67.9 years. According to WHO data, 2018, life expectancy in India overall is 68.8 years (male 67.4 years and female 70.3 years) and ranks 125 in the world.

#### DECADAL GROWTH OF POPULATION IN INDIA AND ASSAM:

Total population of Assam to the Census 2011 was 3,12,05,576 of which 1,59,39,443 were male (51.1 %) and 1,52,66,133 were female (48.9%). Decadal growth rate (DGR) of the state's population during 2001-2011 was 17.07 percent, marginally lower than the country average of 17.68 percent.

#### DECADAL VARIATION OF POPULATION GROWTH IN ASSAM AND INDIA



#### DENSITY OF POPULATION OF ASSAM AND INDIA:

The density of population in Assam has increased from 340 persons per sq km in 2001 to 398 persons in 2011 census. The population density of India has increased to 368 persons in 2011 census per sq km from 325 persons in 2001.

**TABLE 2.1:**  
**DENSITY OF POPULATION IN NE STATES, CENSUS, 2011**

States	Population (Nos)	Density (per sq km)
Arunachal Pradesh	1382611	17
Assam	31205576	398
Manipur	2964007	122
Meghalaya	2964007	132
Mizoram	1091014	52
Sikkim	607688	86
Tripura	3671032	350

Source: Census of India 2011

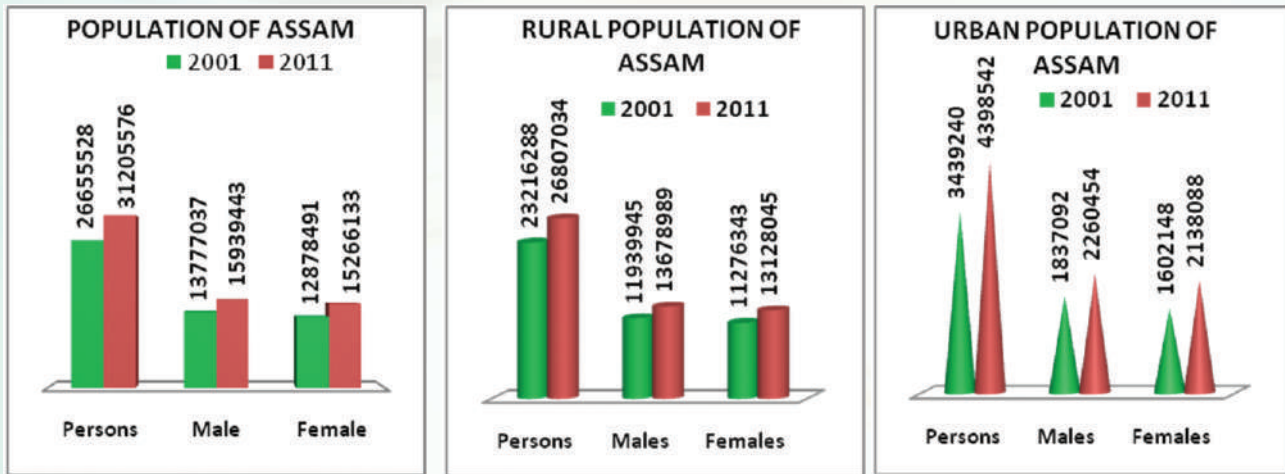
Some important features of population of Assam to the Censuses of 2001 and 2011 are shown in table 2.2.

**TABLE - 2.2**  
**POPULATION FEATURES AT A GLANCE OF ASSAM**

Particulars	Unit	2001 Census	2011 Census
Population	Lakh	267	312
Decadal Growth	Percent	18.92	17.07
Change in percentage of decadal growth	Percent	(-) 5.32	(-)1.8
Density	Per sq km	340	398
Sex-Ratio	Females per 1000 males	935	958
Literacy	Percent	63.25	72.19
(a) Male	Percent	71.28	77.85
(b) Female	Percent	54.61	66.27
Urban Population	Percent	12.90	14.09
(a) Male	Percent	53.41	51.39
(b) Female	Percent	46.58	48.61
Rural Population	Percent	87.10	85.90
(a) Male	Percent	51.43	51.03
(b) Female	Percent	48.57	48.97
SC Population	Percent	7.40	7.15
ST Population	Percent	12.83	12.45

#### **POPULATION: RURAL AND URBAN:**

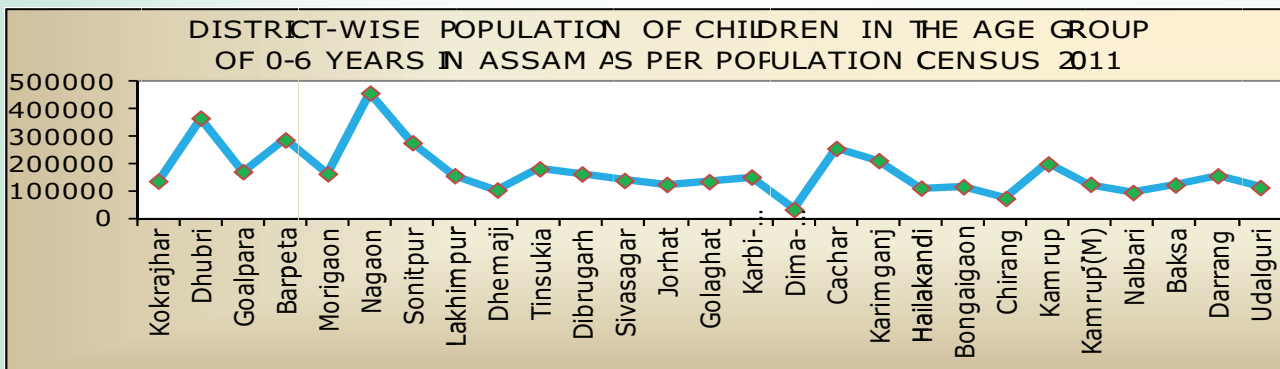
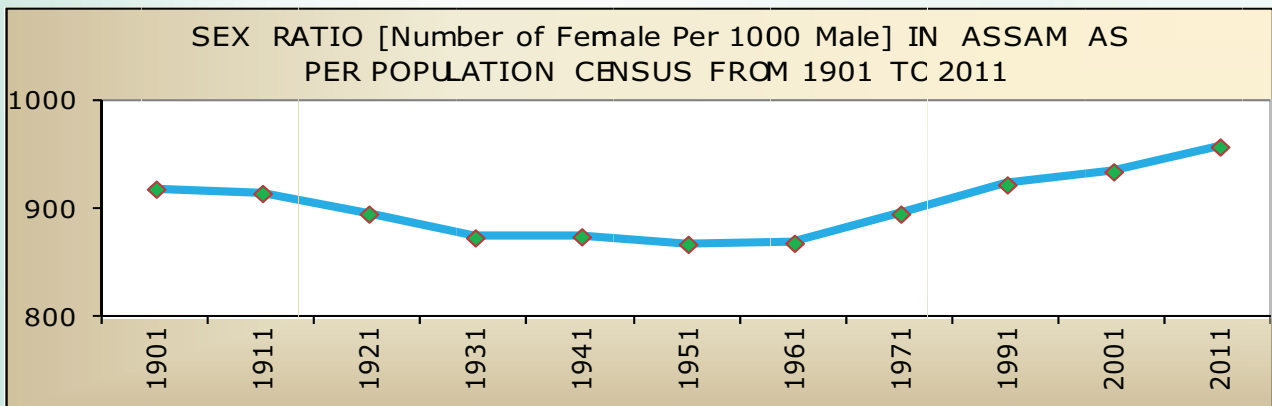
The proportion of rural population of Assam to the Census of 2011 was 86.0 percent of the total population. The proportion of population stay in rural areas of Assam is much higher than the average of the country (69.0 percent). During the period 2001 to 2011 the proportion of rural population in the state had declined by one percent. Out of the total rural population 51.03 percent were male and 48.97 were female. The proportion of urban population in the state increased from 12.9 percent in 2001 to 14 percent in 2011.



**SEX RATIO AND CHILD SEX RATIO:**

Sex ratio of the state to the Census of 2011 was 958; sex ratio of rural areas being 960 and 948 for the urban areas. The sex ratio of the population in the age-group 0-6 years in the state to the data of 2011 census was 962. Child sex ratio is considered as a vital indicator of future sex composition.

The data of Census 2011 show that in all districts of the state sex ratio has shown improvement compared to the Census, 2001. The district of Baska recorded highest sex ratio (974), whereas, lowest sex ratio was recorded in Kamrup metropolitan district (932).



Sex ratio for the 0-6 age group to the Census 2011 was recorded highest in Udalguri district and lowest is in Kamrup metropolitan district. Sex Ratio at birth (0-1 year) for the state was calculated at 957, for rural areas it being 958 and for urban areas it was 948 to the 2011 Census. District wise analysis show that sex ratio at birth was highest in Dima Hasao district (985) and lowest in Dhemajji district (922). Sex ratio of scheduled castes and scheduled tribes population in Assam were 948 and 985 respectively in 2011. In rural and urban areas, sex ratio for scheduled castes population was 945

and 963 respectively; and for scheduled tribes population sex ratio in rural areas was 984 and in urban areas it was 996 in 2001 Census.

**TABLE: 2.3**  
**SEX RATIO IN SELECTED STATES**

State	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
1	2	3	4	5	6	7
Andhra Pradesh	983	996	965	987	978	993
Gujarat	945	949	880	880	920	919
Karnataka	977	979	942	963	965	973
Kerala	1059	1078	1058	1091	1058	1084
Madhya Pradesh	927	936	898	918	919	931
Maharashtra	960	952	873	903	922	929
Rajasthan	930	933	890	914	921	928
Uttar Pradesh	904	918	876	894	898	912
<b>Assam</b>	<b>944</b>	<b>960</b>	<b>872</b>	<b>946</b>	<b>935</b>	<b>958</b>
<b>All-India</b>	<b>946</b>	<b>949</b>	<b>900</b>	<b>929</b>	<b>933</b>	<b>943</b>

**TABLE: 2.4**  
**CHILD SEX RATIOS IN SELECTED STATES**

State	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
1	2	3	4	5	6	7
Andhra Pradesh	963	941	955	935	961	939
Gujarat	906	914	837	852	883	890
Karnataka	949	950	940	946	946	948
Kerala	961	965	958	963	960	964
Madhya Pradesh	939	923	907	901	932	918
Maharashtra	916	890	908	899	913	894
Rajasthan	914	892	887	874	909	888
Uttar Pradesh	921	906	890	885	916	902
<b>Assam</b>	<b>967</b>	<b>964</b>	<b>943</b>	<b>944</b>	<b>935</b>	<b>962</b>
<b>All-India</b>	<b>934</b>	<b>923</b>	<b>906</b>	<b>905</b>	<b>927</b>	<b>918</b>

#### LITERACY RATE:

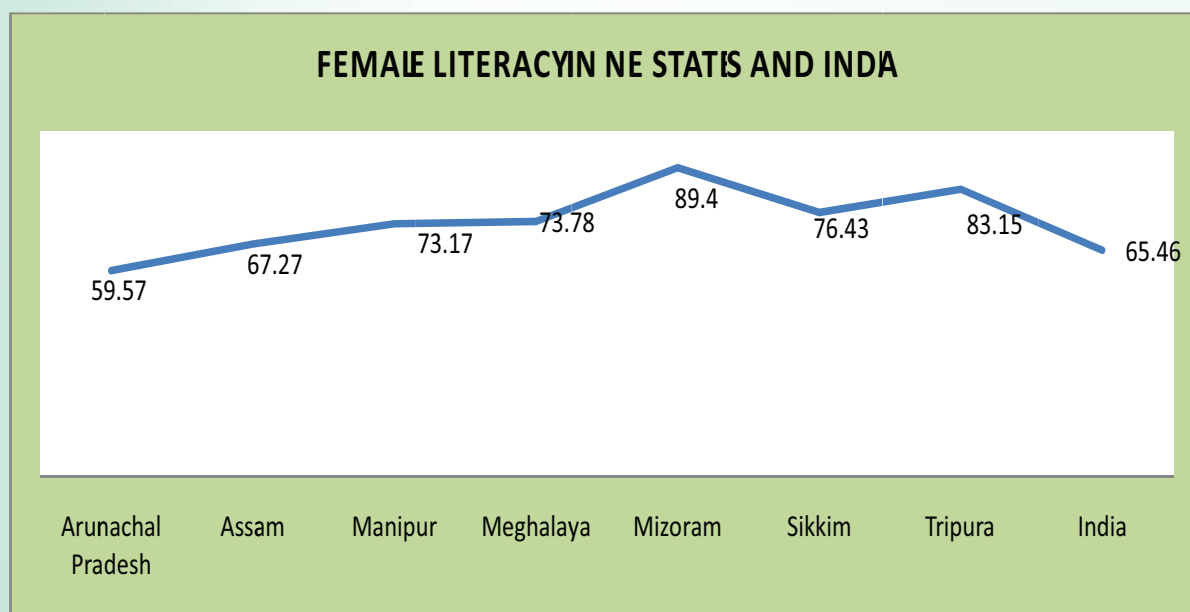
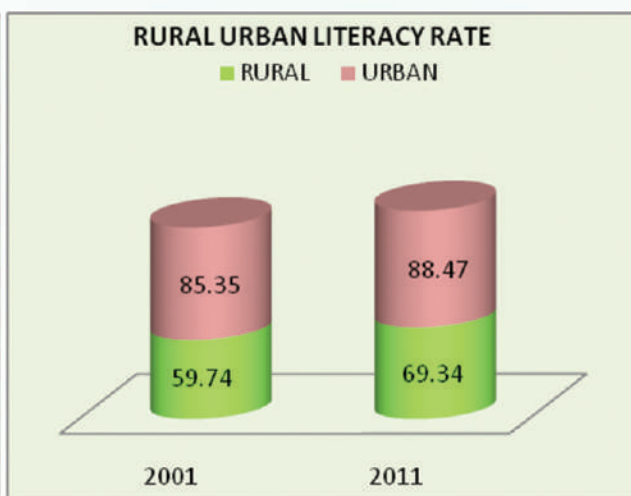
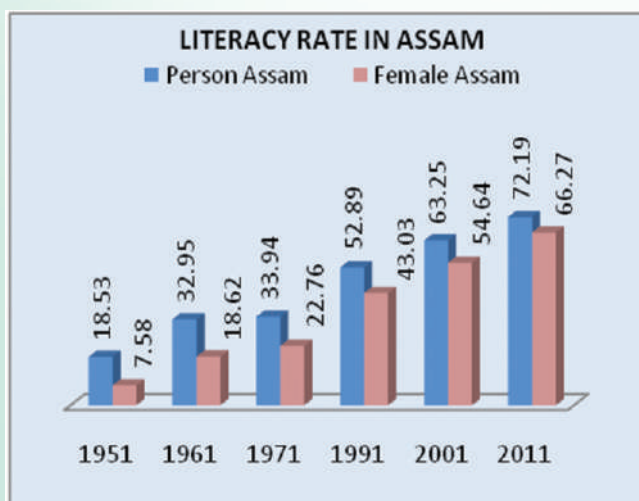
To the enumeration of Census 2011 literacy rate for Assam was 72.19 percent; for male literacy was 77.85 percent and for female it was 66.27 percent. These figures were an improvement from the 2001 census. In 2001 literature rate of the state was 63.25 percent; male literacy being 71.28 percent and female literacy stood at 54.61 percent. In 2001 literacy rates for rural and urban areas of the state were 69.34 percent and 88.47 percent respectively. The literacy rate for country as a whole, on the other hand, was increased to 73 percent in 2011 from 65 percent in 2001. Male literacy rate for the country in 2011 was 80.09 percent and female literacy was 64.64 percent.

**TABLE-2.5**  
**LITERACY RATES FOR SELECTED STATES**  
**(age group 7 years & above)**

(Figure in %)

State	2001			2011		
	Male	Female	Persons	Male	Female	Persons
1	2	3	4	5	6	7
Andhra Pradesh	70.3	50.4	60.5	74.9	59.2	67
Gujarat	79.7	57.8	69.1	85.8	69.7	78
Karnataka	76.1	56.9	66.6	82.5	68.1	75.4
Kerala	94.2	87.7	90.9	96.1	92.1	94
Madhya Pradesh	76.1	50.3	63.7	78.7	59.2	69.3
Maharashtra	86	67	76.9	88.4	75.9	82.3
Rajasthan	75.7	43.9	60.4	79.2	52.1	66.1
Uttar Pradesh	68.8	42.2	56.2	77.3	57.2	67.7
<b>Assam</b>	<b>71.28</b>	<b>54.61</b>	<b>63.25</b>	<b>77.85</b>	<b>66.27</b>	<b>72.19</b>
<b>All-India</b>	<b>75.3</b>	<b>53.7</b>	<b>64.8</b>	<b>80.9</b>	<b>64.6</b>	<b>73.0</b>

Source: Registrar General of India



**SCHEDULED LANGUAGES:**

Table 2.6 shows distribution of population in Assam by the scheduled languages. As revealed by Census data, beside the Assamese language Bengali, Hindi, Bodo and Nepali are the major languages spoken in the state.

TABLE-2.6

## LANGUAGE-WISE DISTRIBUTION OF POPULATION OF MAJOR SCHEDULED LANGUAGES IN ASSAM, AS PER CENSUS

Mother Tongue Name	Population		% of Growth (2001-2011)
	2001	2011	
Assamese	13010478	15095797	16.03
Bengali	7343338	9024324	22.89
Bodo	1296162	1416125	9.26
Dogri	2234	1561	-30.13
Gujarati	6911	7660	10.84
Hindi	1569662	2101435	33.88
Kannada	2059	2597	26.13
Kashmiri	358	357	-0.28
Konkani	156	413	164.74
Maithili	4346	6034	38.84
Malayalam	8141	5768	-29.15
Manipuri	154059	168133	9.14
Marathi	6303	11641	84.69
Nepali	564790	596210	5.56
Odia	231474	218552	-5.58
Punjabi	30763	23313	-24.22
Sanskrit	51	104	103.92
Santali	242886	213139	-12.25
Sindhi	910	19646	2058.90
Tamil	5672	5229	-7.81
Telugu	27463	26630	-3.03
Urdu	4715	8293	75.89
All Scheduled Languages	24512931	28952961	18.11

Source: Census of India.

## HIGHLIGHTS OF -2011 CENSUS:

- The Census of 2011 indicates certain specific positions in the context of Assam. Growth of population in the state during 1971-2011 was 113.12 percent; lower than the national growth rate of 120.77 percent during the same period.
- Assam ranks 14th position in size of population among the states of India.
- The state ranks 15th in density of population among the states of India.
- Assam ranks 15th among the states of India if sex ratio is considered favourable.
- Assam ranks 26th in literacy rate among the states of India.

The following table presents the districts of the state with top and bottom ranks in selected indicators of population – rural as well as urban, growth of population, literacy rate, sex ratio and density to the data of Census, 2011.

Item		Highest	Lowest
Total Population		Nagaon (826,006)	Dima Hasao (213,529)
Total Rural Population		Nagaon (2,457,906)	Dima Hasao (152,302)
Total Urban Population		Kamrup Metro (1,044,832)	Baksa (12,173)
Percentage of Population Growth	Total	Dhubri (24.40)	Kokrajhar (5.19)
	Rural	Dhubri (27.13)	Kamrup Metro (2.93)
	Urban	Nalbari (200.34)	Sonitpur (-2.65)
Literacy Rate	Total	Kamrup Metro (88.66)	Dhubri (59.36)
	Rural	Jorhat (81.36)	Dhubri (56.49)
	Urban	Hailakandi (94.67)	Darrang (66.86)
Sex-ratio	Total	Morigaon (974)	Kamrup Metro (922)
	Rural	Morigaon (975)	Darrang (923)
	Urban	Hailakandi (992)	Dima Hasao (880)
Density		Kamrup Metro (2,010)	Dima Hasao (44)



**AMENITIES IN THE HOUSEHOLDS:**

The following sections present the status of basic amenities – drinking water, toilets, sources of lighting and fuel used in the households of Assam to the Census 2011 data. Table 2.7 compares the status of availability and access of drinking water and toilet facility in the state of Assam with selected states of the country. It is revealed that 54.8 percent households in Assam have drinking water sources within their premises. This figure is though higher compared to all India average of 46.6 percent; is much lower than some of the best performing states like Kerala where 77.7% percent households have sources of drinking water within their premises (Table 2.7). The situation is similar in case of access to toilet facility. In Assam 64.9 percent households have access to toilets within their premises, much higher than the all India average of 46.9 percent, but much lower than the best performing state of Kerala (95.2 %).

**TABLE- 2.7****PERCENTAGE OF HOUSEHOLDS\* BY SOURCE OF DRINKING WATER, AND AVAILABILITY OF LATRINE FACILITY IN SELECTED STATES**

State	Availability of Drinking Water		Latrine Facility Available within the Premises	Latrine not available within Premises	
	Within Premises	Near the Premises		Public	Open
Assam	54.8	26.7	64.9	1.9	33.2
Gujarat	64.0	23.5	57.4	2.3	40.4
Karnataka	44.5	37.3	51.2	3.8	45.0
Kerala	77.7	14.1	95.2	1.1	3.8
Madhya Pradesh	23.9	45.6	28.8	1.2	70.0
Maharashtra	59.4	27.6	53.1	12.9	34.0
Rajasthan	35.0	39.0	35.0	0.7	64.3
Uttar Pradesh	51.9	36.0	35.7	1.3	63.0
All India	46.6	35.8	46.9	3.2	49.8

*\*Excluding of Institutional households*

*Source: Office of the Registrar General of India, 2011*

**Source of Lighting:**

As per the Census, 2011, kerosene is the main source of lighting in the state as reported by 61.8 percent households. Electricity was the second main source of lighting in Assam with 37.0 percent households having access to electricity. Percentage of households by source of lighting with some selected states of India is presented in table 2.8. The data thus show that Assam is a laggard in provisioning of electricity connections to the households in the country.

**TABLE-2.8****PERCENTAGE OF HOUSEHOLDS\* SOURCE OF LIGHTING**

State	Source of Lighting			No Lighting
	Electricity	Kerosene	Other**	
Andhra Pradesh#	92.2	6.9	0.6	0.4
Assam	37.0	61.8	1.2	0.2
Gujarat	90.4	8.1	0.5	1.0
Karnataka	90.6	8.6	0.4	0.4
Kerala	94.4	5.2	0.4	0.0
Madhya Pradesh	67.1	32.1	0.6	0.2
Maharashtra	83.9	14.5	0.7	0.9
Rajasthan	67.0	30.9	1.2	0.8
Uttar Pradesh	36.8	61.9	1.1	0.2
All India	67.3	31.4	0.8	0.5

*\*Excluding Institutional households. \*\* Others include solar energy, other oil and any other*

*# including Telegana*

*Source: Office of the Registrar General of India*

**USE OF FUEL:**

The data of Census, 2011, indicate that fire wood is the main source fuel used for cooking by the households in Assam. In the state just 19 percent households had LPG connections at the time of enumeration in 2011. Table 2.9 presents the percentage of households by source of fuel for cooking in selected states of the country. Fuel use data also show that Assam falls behind to make access to clean energy for cooking in the households.

**TABLE-2.9****PERCENTAGE OF HOUSEHOLDS \* BY SOURCE OF FUEL FOR COOKING IN SELECTED STATES:**

State	Source of Fuel (per cent)				
	LPG	Firewood	Kerosene	Other	No cooking
Andhra Pradesh#	35.8	56.8	3.9	3.2	0.3
Assam	19.0	72.1	0.6	8.3	00
Gujarat	38.3	44.0	7.6	9.8	0.4
Karnataka	32.5	57.5	5.4	4.3	0.3
Kerala	35.8	61.9	0.4	1.6	0.3
Maharashtra	43.4	42.6	6.5	6.8	0.8
Rajasthan	22.8	61.8	0.9	14.3	0.2
Uttar Pradesh	18.9	47.7	0.7	32.5	0.2
All India	28.6	49.0	2.9	19.4	0.3

# including Telegana

Source: Office of the Registrar General Of India

**SLUM POPULATION:**

Census of India 2011 records 31 towns in Assam having slums as against 2613 towns reporting slums in India as a whole. To the data of Census of India, 2011, slum population of the state stands at 197,266 persons of which 101,424 are males and 95,842 are females. The all India figure of slum population as per Census, 2011 was 65,494,604 of which 33,968,203 were males and 31,526,401 were females. The slum population accounts for 0.63 percent of the total population of the state of Assam.

Child population (0-6 years) in slum areas of the state was 22,229 (11.3% to the total population of slum) to Census of 2011, of which 11,378 were males and 10,851 were females. The corresponding child population (0-6 years) for the country as a whole was 8,082,743 (12.3 % of the total slum population) of which male and females figures were 4,204,451 and 3,878,292 respectively. The slum population to the urban population in the state is 4.5 percent.

**LITERACY RATE OF SLUM POPULATION:**

Literacy rate for the slum population of the state was 72 percent (male literacy 76 % and female literacy 68%) to the Census of 2011. The corresponding figure of literacy rate for India as a whole was lower at 68 percent (male literacy 73 % and female literacy 62 %).

**ANNEXURE-2.1 POPULATION TREND IN ASSAM AND INDIA**

Year	Population (in lakh)		Percentage Decadal Variation		Density (Person per sq. km.)	
	ASSAM	INDIA	ASSAM	INDIA	ASSAM	INDIA
1901	33	2384	-	-	42	77
1911	38	2521	17.0	5.8	49	82
1921	46	2513	20.5	0.3	59	81
1931	56	2789	19.9	11.0	71	90
1941	67	3186	20.4	14.2	85	103
1951	80	3611	19.9	13.3	102	117
1961	108	4392	35.0	21.5	138	142
1971	146	5481	35.0	24.8	186	177
1981	*180	6833	*23.4	24.7	*230	230
1991	224	8463	24.2	23.9	286	267
2001	266	10270	18.9	21.5	340	325
2011	312	12106	17.1	17.7	398	368

\*Interpolated.

Source: Census of India 2011

## ANNEXURE-2.2

## DISTRICT-WISE DEMOGRAPHIC PROFILE OF ASSAM, 2011 CENSUS

Sl. No.	District	Area in Sq. Km.	Population	Rural Population	Urban Population	Population Density per Sq. Km.
1	Dhubri*	1511	1394144	1190443	203701	923
2	Bongaigaon	1093	738804	628994	109810	676
3	Kokrajhar	3296	887142	832201	54941	269
4	Chirang	1923	482162	446825	35337	251
5	Baksa	2457	950075	937833	12242	387
6	Goalpara	1824	1008183	870121	138062	553
7	Barpeta	2282	1693622	1546269	147353	742
8	Nalbari	1052	771639	688909	82730	733
9	Kamrup (M)	955	1253938	216927	1037011	1313
10	Kamrup (R)	3105	1517542	1375148	142394	489
11	Darrang	1585	928500	873006	55494	586
12	Udalguri	2012	831668	794094	37574	413
13	Sonitpur*	3409	1533660	1403641	130019	385
14	Lakhimpur	2277	1042137	950804	91333	458
15	Dhemaji	3237	686133	637848	48285	212
16	Morigaon	1551	957423	884125	73298	617
17	Nagaon*	2550	1774798	1523016	251782	742
18	Golaghat	3502	1066888	969152	97736	305
19	Jorhat*	1758	924952	704418	220534	526
20	Sivasagar*	1581	664823	582339	82484	728
21	Dibrugarh	3381	1326335	1082605	243730	392
22	Tinsukia	3790	1327929	1063186	264743	350
23	Karbi-Anglong*	7366	643140	547989	95151	130
24	Dima Hasao	4888	214102	151613	62489	44
25	Karimganj	1809	1228686	1118986	109700	679
26	Hailakandi	1327	659296	611156	48140	497
27	Cachar	3786	1736617	1421153	315464	459
28	Biswanath*	1796	390450	346624	43826	341
29	Majuli*	1093	167304	167304	0	153
30	Charaideo*	1087	486227	458615	27612	422
31	West Karbi-Anglong*	3068	313173	295358	17815	96
32	South Salmara*	665	555114	555114	0	835
33	Hojai*	1422	1048970	931218	117752	655
	ASSAM	78438	31205576	26807034	4398542	398

Source: Newly created districts are estimated at Directorate of Economics and Statistics as per Census of India, 2011

## ANNEXURE-2.3

## DECADAL PERCENTAGE VARIATION IN POPULATION OF ASSAM

District	1901-1911	1941-1951	1951-1961	1961-1971	1971-1991	1991-2001	2001-2011
Dhubri*	28.73	12.74	43.74	43.26	45.65	22.97	24.44
Bongaigaon*	28.69	12.88	36.27	35.81	38.77	22.09	20.59
Kokrajhar*	28.73	17.11	55.41	54.89	61.96	14.49	5.21
Chirang*	5.02	18.18	40.32	57.37	103.33	(-) 0.08	11.34
Baksa*	18.36	33.68	60.52	66.67	73.65	12.51	10.74
Goalpara	29.97	9.25	37.10	45.88	54.12	23.03	22.64
Barpeta*	18.65	16.62	34.39	33.91	40.97	19.62	21.43
Nalbari*	15.24	35.15	33.56	31.79	75.78	14.21	11.99
Kamrup(M)*	6.59	2.39	13.30	19.99	20.77	45.91	18.34
Kamrup *	10.01	17.01	45.12	44.48	81.53	14.97	15.69
Darrang*	22.72	18.58	40.94	36.05	89.77	22.18	22.19
Udalguri *	45.60	29.13	54.04	37.85	43.03	10.02	9.61
Sonitpur*	23.67	22.02	41.99	33.17	68.08	18.11	15.55
Lakhimpur	26.29	17.94	50.46	43.39	56.29	18.30	17.22
Dhemaji	26.29	17.94	75.21	103.42	107.50	19.45	19.97
Morigaon	15.84	36.63	37.89	37.51	50.90	21.35	23.34
Nagaon	15.84	36.65	35.91	38.99	51.26	22.26	22.00
Golaghat	16.55	19.76	26.04	30.85	58.12	14.27	12.75
Jorhat	16.90	14.87	24.17	17.47	33.10	14.69	9.31
Sivasagar	13.41	15.98	23.36	19.47	38.76	15.83	9.44
Dibrugarh	26.29	17.94	30.64	22.93	37.78	13.68	11.92
Tinsukia	26.29	17.94	35.92	31.02	47.03	19.51	15.47
Karbi Anglong	-	30.96	79.21	68.28	74.72	22.72	17.58
Dima Hasao	(-) 33.12	6.16	36.95	40.00	98.30	24.72	13.84
Karimganj	12.94	29.87	22.96	25.13	42.08	21.87	21.90
Hailakandi	16.09	17.48	27.23	23.61	45.94	20.89	21.45
Cachar	12.33	23.92	22.60	23.96	47.59	18.89	20.19
ASSAM	16.99	19.93	34.98	34.95	53.26	18.92	17.07

\*Due to creation of 4 new Districts the rates for 2001 have been affected in 12 Districts.

## ANNEXURE-2.4

## DISTRICTWISE POPULATION OF SCHEDULED CASTES AND SCHEDULED TRIBES IN ASSAM

Sl. No.	District	Scheduled Castes			Scheduled Tribes		
		Total	Male	Female	Total	Male	Female
1	Kokrajhar	29570	15386	14184	278665	139579	139086
2	Dhubri*	62628	32362	30266	2300	1144	1156
3	Goalpara	45094	22999	22095	231570	116013	115557
4	Barpeta	95320	49165	46155	27344	13530	13814
5	Morigaon	117841	60194	57647	136777	68382	68395
6	Nagaon*	156913	79655	77258	86422	43119	43303
7	Sonitpur*	65367	33474	31893	139033	70335	68698
8	Lakhimpur	81840	41689	40151	249426	126716	122710
9	Dhemaji	4225	23006	21219	325560	165449	160111
10	Tinsukia	37688	19443	18245	82066	41769	40297
11	Dibrugarh	58876	30517	28359	102871	51835	51036
12	Sivasagar*	34847	17753	17094	37334	19099	18235
13	Jorhat*	64787	32931	31856	62368	31467	30901
14	Golaghat	62298	31807	30491	111765	56420	55345
15	Karbi Anglong*	33523	17502	16021	345220	174557	170663
16	Dima-Hasao	4337	2340	1997	151843	76520	75323
17	Cachar	264897	136051	128846	17569	8736	8833
18	Karimganj	157890	81384	76506	1940	994	946
19	Hailakandi	70659	36369	34290	691	354	337
20	Bongaigaon	82784	42513	40271	18835	9377	9458
21	Chirang	35135	18105	17030	178688	89273	89415
22	Kamrup	107827	55237	52590	182038	92094	89944
23	Kamrup(M)	101789	52106	49683	75121	37902	37219
24	Nalbari	60216	30654	29562	23364	11692	11672
25	Baksa	73083	37534	35549	331007	165634	165373
26	Darrang	40260	20566	19694	8419	4300	4119
27	Udalguri	37844	19402	18442	267372	133550	133822
28	Biswanath*	43763	22343	21420	93174	47350	45824
29	Majuli*	23878	12263	11615	77603	39328	38275
30	Charaideo*	7500	3815	3685	11705	5890	5815
31	West Karbi-Anglong*	11438	5934	5504	193518	97903	95615
32	South Salmara*	7767	3997	3770	4032	2054	1978
33	Hojai*	109437	56818	52619	28731	14640	14091
	ASSAM	2231321	1145314	1086007	3884371	1957005	1927366

## ANNEXURE-2.5

POPULATION OF CHILDREN IN THE AGE GROUP OF 0-6 YEARS IN ASSAM  
(2011 Census)

District	Male	Female	Rural	Urban	Total
Kokrajhar	70085	66839	131397	5527	136924
Dhubri*	127251	122314	230424	19141	249565
Goalpara	87457	84200	152141	19516	171657
Barpeta	146777	141052	273296	14533	287829
Morigaon	83746	80073	155116	8703	163819
Nagaon*	157143	151066	287622	20587	308209
Sonitpur*	96365	93044	175651	13758	189409
Lakhimpur	80016	76723	146289	10450	156739
Dhemaji	53457	50790	98352	5895	104247
Tinsukia	92777	89049	155228	26598	181826
Dibrugarh	83168	80042	140283	22927	163210
Sivasagar*	40097	38394	70527	7964	78491
Jorhat*	52104	50428	81332	21200	102532
Golaghat	68662	66131	125120	9673	134793
Karbi-Anglong*	50925	48621	88914	10632	99546
Dima-Hasao	16480	15934	25067	7347	32414
Cachar	131417	125357	222673	34101	256774
Karimganj	107638	104322	200334	11626	211960
Hailakandi	56936	54342	106617	4661	111278
Bongaigaon	59099	57293	105251	11141	116392
Chirang	37201	36014	69176	4039	73215
Kamrup	101716	98345	186844	13217	200061
Kamrup(M)	64444	60942	27333	98053	125386
Nalbari	48458	46875	87759	7574	95333
Baksa	62498	60374	121332	1540	122872
Darrang	79437	76971	150916	5492	156408
Udalguri	57410	55864	109653	3621	113274
Biswanath*	44988	43465	85313	3140	88453
Majuli*	11324	10738	22062	0	22062
Charaideo*	31005	29884	57762	3127	60889
West Karbi-Anglong*	26503	25632	49493	2642	52135
South Salmara*	59841	58856	114855	3842	118697
Hojai*	77060	74671	133191	18540	151731
Assam	2363485	2274645	4187323	450807	4638130

## ANNEXURE-2.6

## COMPARATIVE DISTRIBUTION OF CHILD POPULATION (0-6 YEARS) IN ASSAM

Sl. No.	District	2001	2011	Percentage to total Population		Sex Ratio	
				2001	2011	2001	2011
1	Kokrajhar	151366	136924	17.95	15.43	955	959
2	Dhubri	326754	368262	20.86	18.89	964	953
3	Goalpara	159133	171657	19.36	17.03	974	964
4	Barpeta	265146	287829	19.01	16.99	961	953
5	Morigaon	148758	163819	19.16	17.11	966	967
6	Nagaon	426280	459940	18.42	16.29	975	962
7	Sonitpur	270419	277862	16.24	14.44	974	956
8	Lakhimpur	150312	156739	16.91	15.04	967	968
9	Dhemaji	99545	104247	17.40	15.19	970	953
10	Tinsukia	184845	181826	16.07	13.69	958	952
11	Dibrugarh	172631	163210	14.57	12.31	962	961
12	Sivasagar	149098	139380	14.18	12.11	968	954
13	Jorhat	133888	124594	13.40	11.41	967	962
14	Golaghat	142970	134793	15.11	12.63	963	964
15	Karbi-Anglong	150230	151681	18.47	15.86	974	951
16	Dima-Hasao	30807	32414	16.38	15.14	955	932
17	Cachar	229219	256774	15.86	11.79	961	959
18	Karimganj	177431	211960	17.60	17.25	965	963
19	Hailakandi	100976	111278	18.60	16.88	927	951
20	Bongaigaon	110835	116392	18.09	15.75	972	966
21	Chirang	79037	73215	18.25	15.18	958	969
22	Kamrup	204757	200061	15.61	13.18	963	949
23	Kamrup(M)	125033	125386	11.80	10.00	943	936
24	Nalbari	97847	95333	14.20	12.35	961	949
25	Baksa	138906	122872	16.19	12.93	961	974
26	Darrang	146808	156408	19.32	16.85	977	954
27	Udalguri	125044	113274	16.48	13.62	975	973
	<b>ASSAM</b>	<b>4498075</b>	<b>4638130</b>	<b>16.87</b>	<b>14.86</b>	<b>965</b>	<b>958</b>

## ANNEXURE-2.7

POPULATION OF CHILDREN IN THE AGE GROUP OF 0-6 YEARS IN INDIA  
(2011 Census)

State	Total	Male	Rural	Urban	Total
Jammu & Kashmir	1084355	2018905	1593008	425897	2018905
Himachal Pradesh	407459	777898	712822	65076	777898
Punjab	1665994	3076219	1945502	1130717	3076219
Chandigarh	63536	119434	4270	115164	119434
Uttarakhand	717199	1355814	990776	365038	1355814
Haryana	1843109	3380721	2285112	1095609	3380721
NCT of Delhi	1075440	2012454	56716	1955738	2012454
Rajasthan	5639176	10649504	8414883	2234621	10649504
Uttar Pradesh	16185581	30791331	25040583	5750748	30791331
Bihar	9887239	19133964	17383701	1750263	19133964
Sikkim	32761	64111	49218	14893	64111
Arunachal Pradesh	107624	212188	172289	39899	212188
Nagaland	149785	291071	217482	73589	291071
Manipur	174700	338254	236843	101411	338254
Mizoram	85561	168531	93384	75147	168531
Tripura	234008	458014	365309	92705	458014
Meghalaya	288646	568536	490592	77944	568536
Assam	2363485	4638130	4187323	450807	4638130
West Bengal	5410396	10581466	7820710	2760756	10581466
Jharkhand	2767147	5389495	4367507	1021988	5389495
Orissa	2716497	5273194	4525870	747324	5273194
Chattisgarh	1859935	3661689	2924941	736748	3661689
Madhya Pradesh	5636172	10809395	8325731	2483664	10809395
Gujarat	4115384	7777262	4824903	2952359	7777262
Daman & Diu	14144	26934	7438	19496	26934
Dadra & Nagar Haveli	26431	50895	28504	22391	50895
Maharashtra	7035391	13326517	7688954	5637563	13326517
Andhra Pradesh	4714950	9142802	6152022	2990780	9142802
Karnataka	3675291	7161033	4517645	2643388	7161033
Goa	74460	144611	54014	90597	144611
Lakshwadeep	3797	7255	1815	5440	7255
Kerala	1768244	3472955	1823664	1649291	3472955
Tamil Nadu	3820276	7423832	3911302	3512530	7423832
Puducherry	67527	132858	44514	88344	132858
Andaman & Nicobar Islands	20770	40878	26415	14463	40878
<b>INDIA</b>	<b>85732470</b>	<b>164478150</b>	<b>121285762</b>	<b>43192388</b>	<b>164478150</b>



## ANNEXURE-2.8

## STATEWISE POPULATION, SEX RATIO, POPULATION DENSITY, LITERACY RATE AND PERCENTAGE DECADAL GROWTH IN INDIA

Sl. No.	India, States, Union Territories	Population 2011	Sex Ratio 2011	Population Density per sq. km. 2011	Literacy rate 2011	Percentage decadal growth	
						1991-2001	2001-2011
	<b>India</b>	<b>1210854977</b>	<b>943</b>	<b>368</b>	<b>72.99</b>	<b>21.54</b>	<b>17.68</b>
1.	Jammu & Kashmir	12541302	889	56	67.16	29.43	23.64
2.	Himachal Pradesh	6864602	972	123	82.80	17.54	12.94
3.	Punjab	27743338	895	551	75.84	20.10	13.89
4.	Chandigarh	1055450	818	9258	86.05	40.28	17.19
5.	Uttarakhand	10086292	963	189	78.82	20.41	18.81
6.	Haryana	25351462	879	573	75.55	28.43	19.90
7.	Delhi	16787941	868	11320	86.21	47.02	21.21
8.	Rajasthan	68548437	928	200	66.11	28.41	21.31
9.	Uttar Pradesh	199812341	912	829	67.68	25.85	20.23
10.	Bihar	104099452	918	1106	61.80	28.62	25.42
11.	Sikkim	610577	890	86	81.42	33.06	12.89
12.	Arunachal Pradesh	1383727	938	17	65.38	27.00	26.03
13.	Nagaland	1978502	931	119	79.55	64.53	-0.58
14.	Manipur	2855794	992	115	79.21	24.86	12.05
15.	Mizoram	1097206	976	52	91.33	28.82	23.48
16.	Tripura	3673917	960	350	87.22	16.03	14.84
17.	Meghalaya	2966889	989	132	74.43	30.65	27.95
18.	Assam	31205576	958	398	72.19	18.92	17.07
19.	West Bengal	91276115	950	1028	76.26	17.77	13.84
20.	Jharkhand	32988134	948	414	66.41	23.36	22.42
21.	Orissa	41974218	979	270	72.87	16.25	14.05
22.	Chhatisgarh	25545198	991	189	70.28	18.27	22.61
23.	Madhya Pradesh	72626809	931	236	69.32	24.26	20.35
24.	Gujarat	60439692	919	308	78.03	22.66	19.28
25.	Daman & Diu	243247	618	2191	87.10	55.73	53.76
26.	Dadra & Nagar Haveli	343709	774	700	76.24	59.22	55.88
27.	Maharastra	112374333	929	365	82.34	22.73	15.99
28.	Andhra Pradesh	84580777	993	308	67.02	14.59	10.98
29.	Karnataka	61095297	973	319	75.36	17.51	15.60
30.	Goa	1458545	973	394	88.70	15.21	8.23
31.	Lakshadweep	64473	946	2149	91.85	17.30	6.30
32.	Kerala	33406061	1084	860	94.00	9.43	4.91
33.	Tamil Nadu	72147030	996	555	80.09	11.72	15.61
34.	Puducherry	1247953	1037	2547	85.85	20.62	28.08
35.	Andaman & Nicobar Islands	380581	876	46	86.63	26.90	6.86

Source: Census of India, 2011.

## ANNEXURE-2.9

## BIRTH AND DEATH RATES IN ASSAM

YEAR	BIRTH RATE			DEATH RATE		
	Combined	Rural	Urban	Combined	Rural	Urban
1991	30.9	31.7	21.3	11.5	11.8	6.9
1995	29.3	30.2	21.8	9.6	10.0	6.7
1996	27.6	28.9	20.7	9.6	10.2	5.8
1997	28.2	29.0	20.7	9.9	10.3	5.9
1998	27.9	28.7	20.2	10.0	10.5	6.0
1999	27.0	28.0	18.9	9.7	10.1	6.2
2000	26.9	27.9	18.6	9.6	10.0	6.1
2001	26.8	27.8	15.5	9.5	9.8	6.6
2002	26.6	27.5	18.3	9.2	9.6	6.0
2003	26.3	27.2	18.0	9.1	9.5	5.9
2004	25.1	27.0	14.3	8.8	9.3	5.5
2005	25.0	26.6	15.3	8.7	9.2	5.6
2006	24.6	26.1	15.4	8.7	9.2	5.8
2007	24.3	25.7	15.5	8.6	9.1	5.7
2008	23.9	25.3	15.7	8.6	9.0	5.6
2009	23.6	24.9	15.9	8.4	8.8	5.9
2010	23.2	24.4	15.8	8.2	8.6	5.8
2011	22.8	24.0	15.5	8.0	8.4	5.6
2012	22.5	23.7	15.6	7.9	8.3	5.6
2013	22.4	23.5	15.4	7.8	8.2	5.6
2014	22.4	23.6	15.5	7.2	7.6	5.3
2015	22.0	23.2	15.3	7.1	7.4	5.1
2016	21.7	22.8	15.0	6.7	7.1	4.9
2017	21.2	22.4	14.7	6.5	6.7	5.3

Source : Registrar General of India.

## ANNEXURE-2.10

## INFANT MORTALITY RATE IN ASSAM AND INDIA

SECTOR	ASSAM/ INDIA	YEARS											
		2001	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rural	Assam	77	71	66	64	60	58	58	56	52	50	46	46
	India	72	64	58	55	51	48	46	44	43	41	38	37
Urban	Assam	34	39	39	37	36	34	33	32	27	25	22	21
	India	42	40	36	34	31	29	28	27	26	25	23	23
Total	Assam	74	68	64	61	58	55	55	54	49	47	44	44
	India	66	58	53	50	47	44	42	40	39	37	34	33

Source: Registrar General of India.

## ANNEXURE-2.11

## INFANT MORTALITY RATE BY SEX IN ASSAM AND INDIA

SECTOR	ASSAM/ INDIA	YEARS												
		2001	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	Assam	69	68	64	62	58	56	55	54	53	49	47	43	41
	India	64	58	55	52	49	46	43	41	39	37	35	33	32
Female	Assam	80	69	67	65	64	60	56	57	55	49	47	45	46
	India	68	61	56	55	52	49	46	44	42	40	39	36	34
Total	Assam	74	68	66	64	61	58	55	55	54	49	47	44	44
	India	66	58	55	53	50	47	44	42	40	39	37	34	33

Source: Registrar General of India.

## ANNEXURE-2.12

## DISTRICT-WISE NUMBER OF VILLAGES, GAON PANCHAYAT, COMMUNITY DEVELOPMENT BLOCK, ANCHALIK PANCHAYAT AND ZILA PARISHADS IN ASSAM

Sl No.	District	Number of Villages (As per 2011 Census)	Number of Gaon Panchayat (as on 2011)	Number of Community Development Block (as on 2011)	Number of Anchalik Panchayat (as on 2011)	Number of Zila Parishad (as on 2011)
1.	Dhubri	777	133	11	11	1
2.	Kokrajhar	1068	-	5	-	-
3.	Bongaigaon	563	65	5	5	1
4.	Goalpara	829	81	8	8	1
5.	Barpeta	835	129	11	11	1
6.	Nalbari	456	65	7	7	1
7.	Kamrup	1068	146	16	16	1
8.	Darrang	561	76	6	6	1
9.	Sonitpur	1044	102	7	7	1
10.	Lakhimpur	1184	81	9	9	1
11.	Dhemaji	1319	65	5	5	1
12.	Morigaon	632	85	5	7	1
13.	Nagaon	1012	172	13	13	1
14.	Golaghat	1125	102	8	8	1
15.	Jorhat	600	91	6	6	1
16.	Sivasagar	531	79	4	4	1
17.	Dibrugarh	1348	93	7	7	1
18.	Tinsukia	1168	86	7	7	1
19.	Karbi Anglong	2353	-	7	7	-
20.	Dima Hasao	695	-	5	5	-
21.	Karimganj	936	96	7	7	1
22.	Hailakandi	331	62	5	5	1
23.	Cachar	1040	163	15	15	1
24.	Chirang *	508	-	2	-	-
25.	Baksa *	690	-	7	-	-
26.	Kamrup (M)*	216	14	3	3	1
27.	Udalguri *	800	-	6	-	-
28.	Biswanath*	832	56	7	7	1
29.	Majuli*	248	19	2	2	1
30.	Charaideo*	344	39	5	5	1
31.	West Karbi-Anglong*	568	-	4	4	-
32.	South Salmara*	314	35	3	3	1
33.	Hojai*	400	67	5	5	1
	Assam	26395	2202	219	189	26

N. B \* Indicates newly created Districts.

## ANNEXURE-2.13

## COMPARATIVE STATEMENT ON PERCENTAGE OF POPULATION BELOW POVERTY LINE

Sl. No.	State	Using TENDULKAR Methodology (Poverty Headcount Ratio)								
		2004-05			2009-10			2011-12		
		Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined
1	Andhra Pradesh	32.30	23.40	29.90	22.8	17.7	21.1	10.96	5.81	9.20
2	Arunachal Pradesh	33.60	23.50	31.10	26.2	24.9	25.9	38.93	20.33	34.67
3	Assam	36.40	21.80	34.40	39.9	26.1	37.9	33.89	20.49	31.98
4	Bihar	55.70	43.70	54.40	55.3	39.4	53.5	34.06	31.23	33.74
5	Chhattisgarh	55.10	28.40	49.40	56.1	23.8	48.7	44.61	24.75	39.93
6	Delhi	15.60	12.90	13.10	7.7	14.4	14.2	12.92	9.84	9.91
7	Goa	28.10	22.20	25.00	11.5	6.9	8.7	6.81	4.09	5.09
8	Gujarat	39.10	20.10	31.80	26.7	17.9	23.0	21.54	10.14	16.63
9	Haryana	24.80	22.40	24.10	18.6	23.0	20.1	11.64	10.28	11.16
10	Himachal Pradesh	25.00	4.60	22.90	901	12.6	9.5	8.48	4.33	8.06
11	Jammu & Kashmir	14.10	10.40	13.20	8.1	12.8	9.4	11.54	7.20	10.35
12	Jharkhand	51.60	23.80	45.30	41.6	31.1	39.1	40.84	24.83	36.96
13	Karnataka	37.50	25.90	33.40	26.1	19.6	23.6	24.53	15.25	20.91
14	Kerala	20.70	18.40	19.70	12.0	12.1	12.0	9.14	4.97	7.05
15	Madhya Pradesh	53.60	35.10	48.60	42.0	22.9	36.7	35.74	21.00	31.65
16	Maharashtra	47.90	25.60	38.10	29.5	18.3	24.5	24.22	9.12	17.35
17	Manipur	39.30	34.50	38.00	47.4	46.4	47.1	38.80	32.59	36.89
18	Meghalaya	14.00	24.70	16.10	15.3	24.1	17.1	12.53	9.26	11.87
19	Mizoram	23.00	7.90	15.30	31.1	11.5	21.1	35.43	6.36	20.40
20	Nagaland	10.00	4.30	9.00	19.3	25.0	20.9	19.93	16.48	18.88
21	Odisha	60.80	37.60	57.20	39.2	25.9	37.0	35.69	17.29	32.59
22	Puducherry	22.90	9.90	14.10	0.2	1.6	1.2	17.06	6.30	9.69
23	Punjab	22.10	18.70	20.90	14.6	18.1	15.9	7.66	9.24	8.26
24	Rajasthan	35.80	29.70	34.40	26.4	19.9	24.8	16.05	10.69	14.71
25	Sikkim	31.80	2.90	31.10	15.5	5.0	13.1	9.85	3.66	8.19
26	Tamil Nadu	37.50	19.70	28.90	21.2	12.8	17.1	15.83	6.54	11.28
27	Tripura	44.50	22.50	40.60	19.8	10.0	17.4	16.53	7.42	14.05
28	Uttar Pradesh	42.70	34.10	40.90	39.4	31.7	37.7	30.40	26.06	29.43
29	Uttarakhand	35.10	26.20	32.70	14.9	25.2	18.0	11.62	10.48	11.26
30	West Bengal	38.20	24.40	34.30	28.8	22.0	26.7	22.52	14.66	19.98
31	Andaman & Nicobar							1.57	0.00	1.00
32	Chandigarh							1.64	22.31	21.81
33	Dadra & Nagar Haveli							62.59	15.38	39.31
34	Daman & Diu							0.00	12.62	9.86
35	Lakshadweep							0.00	3.44	2.77
	All India	42	25.5	37.2	33.8	20.9	29.8	25.70	13.70	21.92

Source: Planning Commission, Govt. of India.

## ANNEXURE-2.14

## STATE- WISE INFORMATION ON SLUM POPULATION IN INDIA-CENSUS 2011

Sl No.	Area Name	Towns reporting Slums	Total No. of House-holds	Slum Population			% of Total slum popn. to urban popn.	Slum Population ( 0-6yrs)		
				Persons	Male	Female		Persons	Male	Female
	INDIA	2613	13920191	65494604	33968203	31526401	17.4	8082743	4204451	3878292
1	Andhra Pradesh	125	2431474	10186934	5103377	5083557	36.1	1149779	593145	556634
2	Arunachal Pr.	5	3479	15562	8029	7533	4.9	2226	1102	1124
3	Assam	31	42533	197266	101424	95842	4.5	22229	11378	10851
4	Bihar	88	216496	1237682	649475	588207	10.5	208383	107994	100389
5	Chhattisgarh	94	413831	1898931	966623	932308	32.0	254080	130178	123902
6	Delhi	22	367893	1785390	974329	811061	10.9	229029	119508	109521
7	Goa	3	5497	26247	13826	12421	2.9	3240	1691	1549
8	Gujarat	103	345998	1680095	912571	767524	6.5	240589	126331	114258
9	Haryana	75	332697	1662305	887947	774358	18.8	225889	122124	103765
10	Himachal Pradesh	22	14385	61312	32555	28757	8.9	6509	3493	3016
11	Jammu & Kashmir	40	103633	662062	342422	319640	19.3	94204	50649	43555
12	Jharkhand	31	72544	372999	192908	180091	4.7	53465	27703	25762
13	Karnataka	206	707662	3291434	1650724	1640710	13.9	418295	212928	205367
14	Kerala	19	45417	202048	97429	104619	1.3	20327	10271	10056
15	Madhya Pradesh	303	1117764	5688993	2957524	2731469	28.3	771999	403360	368639
16	Maharashtra	189	2499948	11848423	6328217	5520206	23.3	1428850	743603	685247
17	Meghalaya	6	10518	57418	28737	28681	9.6	8241	4162	4079
18	Mizoram	1	15987	78561	38861	39700	13.7	10430	5292	5138
19	Nagaland	11	17152	82324	42651	39673	14.4	11114	5569	5545
20	Odisha	76	350032	1560303	800963	759340	22.3	188962	97551	91411
21	Punjab	73	293928	1460518	776388	684130	14.0	176257	94781	81476
22	Rajasthan	107	394391	2068000	1078991	989009	12.1	307035	161872	145163
23	Sikkim	7	7203	31378	16216	15162	20.4	3229	1621	1608
24	Tamil Nadu	507	1463689	5798459	2886993	2911466	16.6	614969	314363	300606
25	Tripura	15	34143	139780	70143	69637	14.5	14755	7467	7288
26	Uttar Pradesh	293	1066363	6239965	3298339	2941626	14.0	863392	457036	406356
27	Uttarakhand	31	93911	487741	257624	230117	16.0	66176	35131	31045
28	West Bengal	122	1391756	6418594	3321700	3096894	22.1	656780	337441	319339
29	N. Islands	1	3324	14172	7386	6786	9.9	1588	788	800
30	Chandigarh	1	21704	95135	53340	41795	9.3	14720	7697	7023
31	Puducherry	6	34839	144573	70491	74082	17.0	16002	8222	7780

**ANNEXURE-2.15**  
**STATE PRIMARY CENSUS ABSTRACT FOR INDIVIDUAL SCHEDULED TRIBES,**  
**ASSAM (As per Census 2011)**

ST Name	Total	Number of HHs with at least one st member	Total Population(including institutional and houseless population)		
			Population	Male population	Female population
1	2	3	4	5	6
<b>All Schedule Tribes</b>	<b>Total</b>	<b>7,94,768</b>	<b>38,84,371</b>	<b>19,57,005</b>	<b>19,27,366</b>
Chakma	Total	430	2,032	1,043	989
Dimasa, Kachari	Total	28,211	1,22,663	61,570	61,093
Garos	Total	30,544	1,61,392	81,278	80,114
Hajong	Total	7,868	34,689	17,608	17,081
Hmar	Total	2,794	15,745	7,964	7,781
Khasi, Jaintia, Synteng, Pnar, War, Bhoi, Lyngngam	Total	3,426	15,936	7,916	8,020
Any Kuki Tribes, including:**	Total	6,223	33,399	17,220	16,179
Lakher	Total	36	37	20	17
Man (Tai speaking)	Total	324	1,269	644	625
Any Mizo (Lushai) tribes	Total	222	880	419	461
Karbi	Total	78,588	4,30,452	2,17,758	2,12,694
Any Naga tribes	Total	5,390	29,767	14,905	14,862
Pawi	Total	3	3	1	2
Syntheng	Total	5	5	2	3
Lalung	Total	41,298	2,00,915	1,00,468	1,00,447
Barmans in Cachar	Total	2,405	6,716	3,398	3,318
Boro, Borokachari	Total	2,90,517	13,61,735	6,82,931	6,78,804
Deori	Total	8,612	43,750	21,938	21,812
Hojai	Total	134	642	327	315
Kachari, Sonwal	Total	60,002	2,53,344	1,27,692	1,25,652
Mech	Total	2,380	9,883	4,968	4,915
Miri	Total	1,17,825	6,80,424	3,45,786	3,34,638
Rabha	Total	65,611	2,96,189	1,48,887	1,47,302
Singpho	Total	533	2,342	1,175	1,167
Khampati	Total	251	1,106	566	540

Notes:-(i) ST communities returned with zero population in 2011 Census are not shown.

(ii) All Scheduled Tribes includes figures for Generic Tribes, i.e. those who returned as Anusuchit jan-jati, Girijan, Adivasi, etc., iii) any kuki tribes including \*\*

\*\*Biate, Biete, Changsan, Chongloi, Doungel, Gamalhou, Gangte, Guite, Hanneng, Haokip, Haupit, Haolai, Hengna, Hongsungh, Hrangkhwal, Rangkhoh, Jongbe, Khawchung, Khawathlang, Khothalong, Khelma, Kholhou, Kipgen, Kuki, Lengthang, Lhangum, Lhoujem, Lhouvun, Lumpheng, Mangjel, Misao, Riang, Sairhem, Selnam, Singson, Sithou, Sukte, Thado, Thangngeu, Uibuh, Vaiphei

**ANNEXURE-2.16**  
**STATE PRIMARY CENSUS ABSTRACT FOR INDIVIDUAL SCHEDULED CASTE, ASSAM, 2011**  
**CENSUS**

SC Name	TOTAL	Number of HHs with at least one sc member	Total Population (including institutional and houseless population)		
			Population	Male population	Female population
1	2	3	4	5	6
<b>All Schedule Castes</b>	<b>Total</b>	<b>4,95,475</b>	<b>22,31,321</b>	<b>11,45,314</b>	<b>10,86,007</b>
Bansphor	Total	3,343	16,359	8,189	8,170
Bhuinmali, Mali	Total	15,738	69,535	35,621	33,914
Brittial Bania, Bania	Total	11,733	50,598	25,777	24,821
Dhupi, Dhobi	Total	11,910	52,431	27,029	25,402
Dugla, Dholi	Total	2,050	7,991	4,091	3,900
Hira	Total	12,829	55,300	27,860	27,440
Jalkeot	Total	5,598	24,774	12,626	12,148
Jhalo, Malo, Jhalo-Malo	Total	17,385	80,376	41,620	38,756
Kaibartta, Jaliya	Total	1,53,413	6,93,219	3,53,177	3,40,042
Lalbegi	Total	333	790	404	386
Mahara	Total	414	1,822	1,020	802
Mehtar, Bhangi	Total	2,111	8,835	4,489	4,346
Muchi, Rishi	Total	18,651	77,643	39,875	37,768
Namasudra	Total	1,33,858	6,31,542	3,26,753	3,04,789
Patni	Total	41,491	1,81,904	93,599	88,305
Sutradhar	Total	14,764	66,303	34,121	32,182
Notes:-(i) SC communities returned with zero population in 2011 Census are not shown.					
(ii) All Scheduled Castes includes figures for Generic Castes, i.e. those who returned as Anusuchit jati, Harijan, etc.					

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**CHAPTER-III****STATE INCOME**

State Domestic Product (SDP) is the total value of goods and services produced during a financial year within the geographical boundaries of a state. It is also called the state income. The SDP is always calculated or estimated in monetary terms and is instrumental in evaluation of per capita income. It serves as an indicator for measuring the economic prosperity of the state and to study the structural changes taking place in the economy. The SDP and other related macroeconomic aggregates are useful to assess financial requirement of the Government apart from planning and policy formulations. The estimate of SDP reveals the extent and direction of changes in the levels of economic development of the state over a period of time. The sectoral composition of Gross State Value Added (GSVA) gives an idea about the relative position of different sectors in the economy over a period of time, which not only indicates the real structural changes taking place in the economy, but also facilitates the formulation of plans for overall economic development.

During the period 2015-16 to 2018-19, the state of Assam achieved an impressive annual average growth rate of 7.62 percent in terms of Gross State Domestic Product (GSDP) at constant (2011-12) prices reflecting a favourable status of the state economy. During this period, industry sector attained the highest annual average growth rate of 8.42 percent in respect of GSDP at constant prices, followed by service sector (7.94%) and agriculture and allied sector (2.58%). On the other hand, the annual average growth rate in respect to GSDP at current prices during the period 2015-16 to 2018-19 is estimated at 13.97 percent.

The annual average growth rate in respect of Net State Domestic Product (NSDP) during the period 2015-16 to 2018-19 is estimated at 8.03 percent at constant prices (2011-12) as against 13.51 percent at current prices.

**3.1 GROSS STATE DOMESTIC PRODUCT (GSDP) AND NET STATE DOMESTIC PRODUCT AT CURRENT PRICES**

As per provisional estimates, GSDP of Assam at current prices is estimated at Rs. 288493.57 crore during 2017-18, and increase of 13.37 percent from Rs. 254478.25 crore in 2016-17. The NSDP of Assam at current prices for 2017-18 is estimated at Rs. 251588.11 crore as against Rs. 222733.75 in 2016-17 registering a growth of 12.95 percent.

A quick estimate of GSDP at current prices for the state shows attainment of Rs. 323555.38 crore during 2018-19 indicating a growth of 12.15 percent over the preceding year. NSDP of the state at current prices is estimated to reach Rs 280394.17 crore during 2018-19 recording a growth of 11.45 percent over the previous year.

**3.2 GROSS STATE DOMESTIC PRODUCT (GSDP) AND NET STATE DOMESTIC PRODUCT AT CONSTANT PRICES (BASE YEAR 2011-12)**

According to the provisional estimates, GSDP of Assam at constant prices is estimated at Rs. 219580.40 crore for 2017-18 reflecting a growth of 8.35 percent over the year 2016-17. As per quick estimates, the GSDP of the state at constant prices is estimated to reach Rs 234771.79 crore during 2018-19 indicating a growth of 6.92 percent.

NSDP of Assam at constant prices is estimated at Rs 193594.73 crore for 2017-18 recording a growth of 7.43 percent over the previous year. NSDP of Assam at constant prices is estimated at Rs. 208035.15 crore during 2018-19 with a growth of 7.46 percent over the preceding year.

GSDP and NSDP of Assam both at current and constant prices for the period 2011-12 to 2017-18(Q.E) is presented in **Table-3.1**.



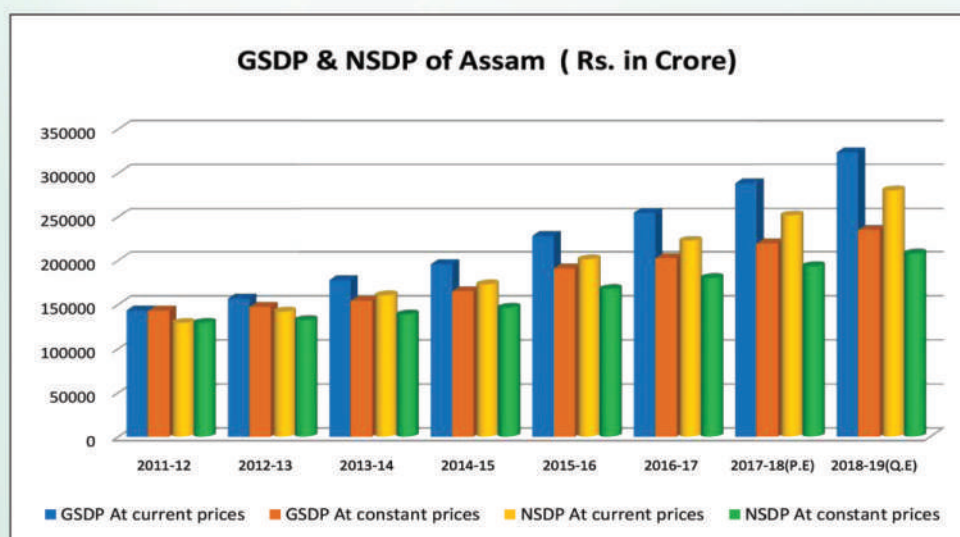
Table:3.1

GSDP and NSDP of Assam at both current and constant prices during the period 2011-12 to 2018-19(Q.E)					
Base year: 2011-12 Rs. in crore					
Sl. No	Year	GSDP		NSDP	
		At current prices	At constant prices	At current prices	At constant prices
1	2011-12	143174.91	143174.91	129354.12	129354.12
2	2012-13	156864.24	147342.38	142039.46	132517.60
3	2013-14	177745.22	154525.40	160441.53	138724.76
4	2014-15	195723.15	165212.30	172848.89	146425.39
5	2015-16	227958.83	191109.00	201308.81	167628.67
6	2016-17	254478.25	202656.33	222733.75	180201.31
7	2017-18(P.E)	288493.57	219580.40	251588.11	193594.73
8	2018-19(Q.E)	323555.38	234771.79	280394.17	208035.15

P.E-Provisional Estimates, Q.E-Quick Estimates

Source: Directorate of Economics and Statistics, Assam.

GSDP and NSDP of Assam at both current and constant prices during the period 2011-12 to 2018-19 is depicted in following bar-diagram.



The annual growth rate of GSDP and NSDP of Assam during the period 2012-13 to 2018-19(Q.E) at both current and constant prices is presented in **Table: 3.2**.

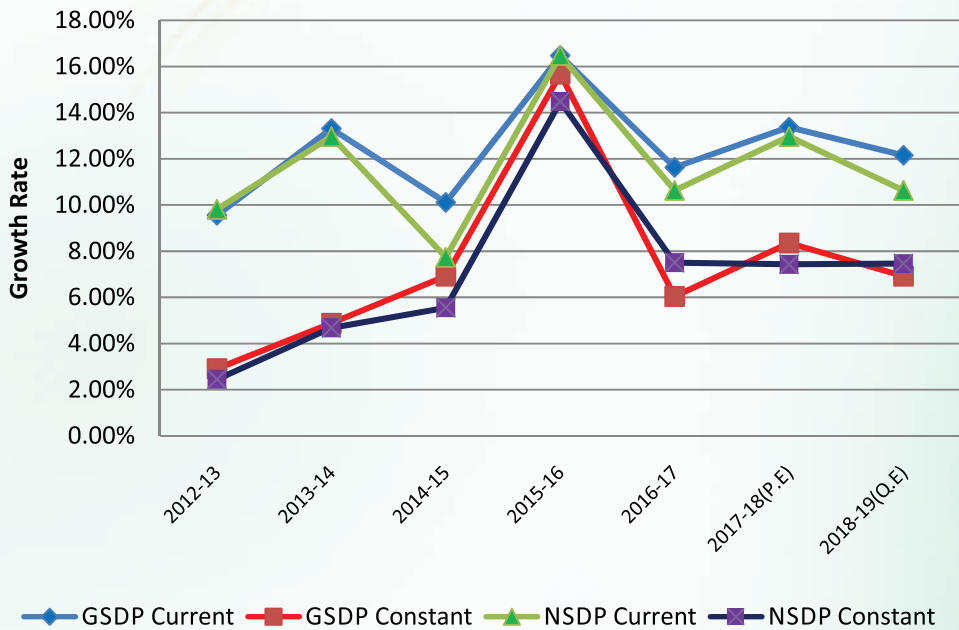
TABLE: 3.2					
Annual growth rate of GSDP and NSDP of Assam					
Base Year: 2011-12					
Sl. No	Year	GSDP		NSDP	
		Current Prices	Constant Prices	Current Prices	Constant Prices
1	2012-13	9.56%	2.91%	9.81%	2.45%
2	2013-14	13.31%	4.88%	12.96%	4.68%
3	2014-15	10.11%	6.92%	7.73%	5.55%
4	2015-16	16.47%	15.67%	16.47%	14.48%
5	2016-17	11.63%	6.04%	0.64%	7.50%
6	2017-18 (P.E)	13.37%	8.35%	12.95%	7.43%
7	2018-19 (Q.E)	12.15%	6.92%	1.45%	7.46%

Source: Directorate of Economics and Statistics, Assam

From the table-3.2, it has been observed that GSDP both at current and constant prices for 2017-18 achieved annual growth rate of 13.37 percent and 8.35 percent over the previous year 2016-17. On the other hand, NSDP at current prices has also increased from 10.64 percent in 2016-17 to 12.95 percent in 2017-18 while NSDP at constant prices has declined marginally from 7.50 percent to 7.43 percent during 2016-17 to 2017-18. During 2018-19, GSDP at current prices is estimated to grow at 12.15 percent, whereas at constant prices it estimated to grow a 6.92 percent.

The annual growth rate in terms of GSDP and NSDP of Assam for the period 2012-13 to 2017-18(Q.E) both at current and constant prices is shown in the following line-diagram.

**Average Annual Growth Rate of GSDP and NSDP of Assam**



### 3.3 SECTORAL COMPOSITION OF GSDP:

The sectoral composition of State Domestic Product (SDP) depicts contribution of different sectors in the economy over a period of time. The time series data of sectoral composition of SDP not only indicates the structural changes taking place in the economy but also facilitates formulation of various plans and programmes for overall economic development.

As per quick estimates for 2018-19, the percentage contribution of agriculture and allied sector, industry, service and taxes and subsidies to total GSDP of Assam at current prices were 15.80%, 33.51%, 45.63% and 5.06% as compared to 15.76%, 36.36%, 41.24% and 6.65% at constant prices respectively. The structural composition of the state economy witnessed significant changes during the last eight years as revealed by tables 3.3 and 3.4.

	2011-12 (Base yr.)	2017-18(P.E)	2018-19(Q.E)
Industry	19.89%	16.76%	15.80%
Agriculture and its Allied	30.63%	32.71%	33.51%
Industry	43.97%	45.36%	45.63%
Service	5.51%	5.16%	5.06%
Taxes & Subsidies			

Source: Directorate of Economics and Statistics, Assam

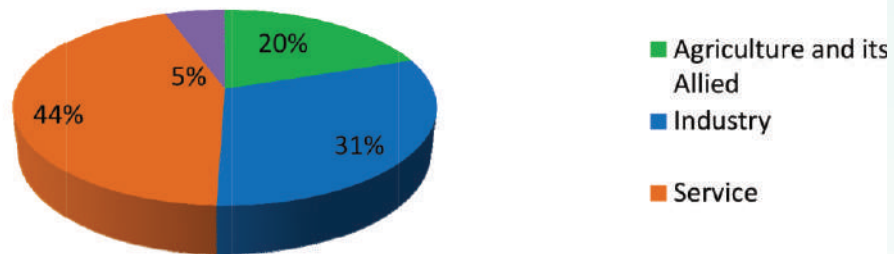
As per 2018-19 (Q.E), the services sector has the largest share in GSDP of the state both at current and constant prices, followed by the industry sector. It is evident that the service sector plays a significant role in the state economy at present. The share of agriculture and its allied activities in GSDP at current prices had marginally declined from 19.89 percent in 2011-12 to 16.76 percent in 2017-18(P.E) and 15.80 percent in 2018-19(Q.E). The similar picture has also been reflected at constant prices. During the period 2018-19, the contribution of agriculture and allied sector to total GSDP at constant prices (2011-12) has slightly declined by 0.63 percent due to decline in production of paddy, pulses and some vegetable crops. Yet the agriculture sector continues to occupy a significant place in the state economy and any deviation in the production of food grains, vegetables and fruits affect the state economy. During the period 2011-12 to 2018-19, the share of industry sector at current prices has increased gradually from 30.63 percent in 2011-12 to 32.71 percent in 2017-18(P.E) and 33.51 percent in 2018-19(Q.E). A positive trend is also reflected in service sector in terms of current prices during the same period.

Industry	2011-12 (Base yr.)	2017-18(P.E)	2018-19(Q.E)
Agriculture and its Allied	19.89%	16.39%	15.76%
Industry	30.63%	36.80%	36.36%
Service	43.97%	41.10%	41.24%
Taxes & Subsidies	5.51%	5.70%	6.65%

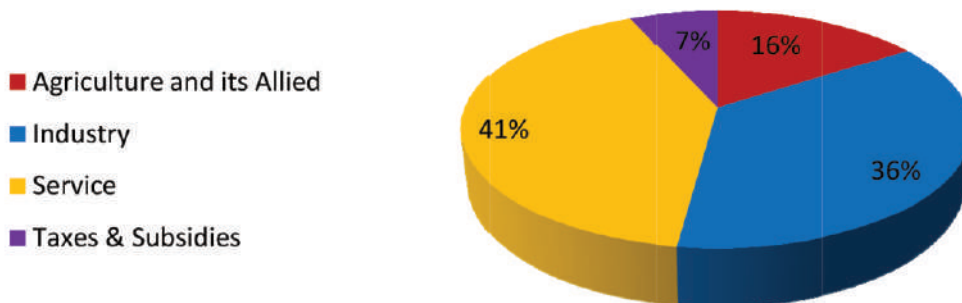
Source: Directorate of Economics and Statistics, Assam

Sectoral composition of GSDP at constant prices for the period 2011-12 and 2018-19 is shown in the following pie-diagrams.

Sectoral Contribution to GSDP at constant prices for 2011-12



Sectoral Contribution to GSDP at constant prices for 2018-19(Q.E)



## 3.4. ANNUAL GROWTH RATE OF GSDP IN AGRICULTURE AND ITS ALLIED SECTOR

Industry	Current Prices	Constant Prices
Crop	3.59%	1.70%
Livestock	12.47%	5.82%
Forestry and logging	7.74%	5.46%
Fishing and aquaculture	12.40%	5.87%
Agriculture and allied sector	5.68%	2.76%

Source: Directorate of Economics and Statistics, Assam

The industry group "Agriculture and its allied" sector consists of (i) crop sector, (ii) livestock sector, (iii) forestry & logging sector and (iv) fishing and aquaculture sector. As per quick estimates, the annual growth rate of GSDP in respect of agriculture and its allied sector at current prices for the year 2018-19 is estimated to attain a growth of 5.68 percent at current prices and 2.76 percent at constant prices. During the year 2018-19(Q.E), the annual growth of GSDP in respect of crop sector,

livestock sector, forestry & logging sector and fishing sector at constant prices is estimated at 1.70%, 5.82%, 5.46% and 5.87% respectively.

## 3.5. ANNUAL GROWTH RATE OF GSDP IN INDUSTRY SECTOR:

Industry sector comprises of mining and quarrying, manufacturing, electricity, gas, water supply and other utility services and construction. As per quick estimates for 2018-19 at constant (2011-12) prices, annual growth rate in Industry sector is estimated to attain at 6.24 percent over the previous year and 14.22 percent at current prices. At constant prices, the contribution of the sub sectors to the industry sector for 2018-19(A.E) is estimated at 4.33 percent in mining and quarrying, 4.99 percent in manufacturing, 7.72 percent in electricity, gas, water supply and other utility services and 8.01 percent in construction. All the sub sectors of the Industry sector have shown encouraging growth both at current and constant prices over the previous year.

Industry	Current Prices	Constant Prices
Mining & Quarrying	16.35%	4.33%
Manufacturing	14.95%	4.99%
Electricity, Gas, Water Supply & Other Utility Services	23.26%	7.72%
Construction	10.23%	8.01%
Industry Sector	14.22%	6.24%

Source: Directorate of Economics & Statistics, Assam

## 3.6. ANNUAL GROWTH RATE OF GSDP IN SERVICE SECTOR:

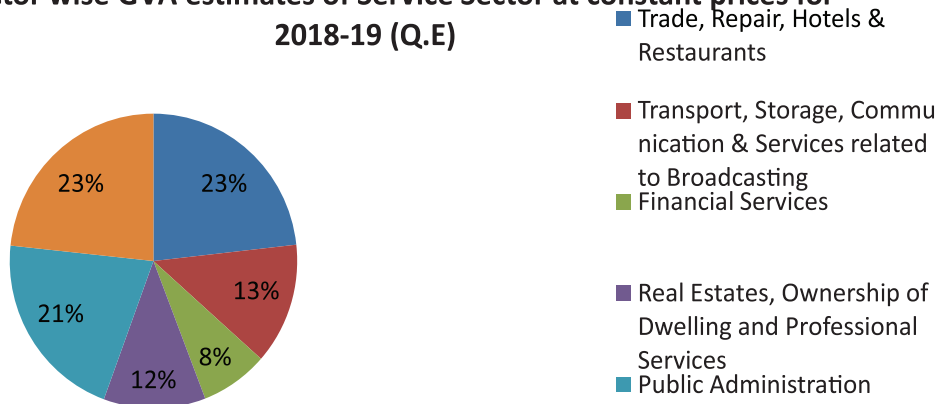
Service sector comprises of trade, repair, hotel & restaurants, transport, storage, communication and services related to broadcasting, financial services, real estate, ownership of dwelling and professional services, public administration and other services.

Industry	Current Prices	Constant Prices
Trade, Repair, Hotel & Restaurants	10.00%	1.52%
Transport, Storage, Communication & Services related to Broadcasting	9.76%	6.65%
Financial Services	9.60%	8.82%
Real Estate, Ownership of Dwelling and Professional Services	3.97%	-1.23%
Public Administration	21.60%	14.00%
Other Services	16.50%	12.22%
Service Sector	12.82%	7.27%

Source: Directorate of Economics & Statistics, Assam

As per quick estimates for 2018-19, annual average growth rate in service sector is estimated at 12.82 percent at current prices and 7.27 percent at constant prices over the previous year. During this period, the public administration attained the highest annual growth rate both at current (21.60%) and constant (14.00%) prices among all the service sectors.

**Sub-sector wise GVA estimates of Service Sector at constant prices for 2018-19 (Q.E)**



The sectoral growth rates of GSDP at constant (2011-12) prices during the period 2012-2019 is presented in **Table: 3.8**.

SECTORAL GROWTH RATES OF GSDP AT CONSTANT (2011-12) PRICES DURING 2012-2019			
(Rs. in Lakh)			
Industry	2011-12 (Base Yr.)	2018-19 (Q.E)	Average Annual Growth Rate
Agriculture, Forestry & Fishing	2848113	3699324	4.27%
Mining & Quarrying	1464989	2668897	11.74%
Manufacturing	1540255	3348792	16.77%
Electricity, Gas, Water Supply & Other utility Services	191883	533691	25.45%
Construction	1188747	1984582	9.56%
Trade, Repair, Hotels & Restaurants	2045676	2248515	1.42%
Transport, Storage, Communication & Services related to Broadcasting	810091	1289996	8.46%
Financial Services	427077	735742	10.32%
Real Estates, Ownership of Dwelling and Professional Services	1112543	1109600	-0.04%
Public Administration	821723	2038847	21.16%
Other Services	1077923	2258637	15.65%
Primary Sector	4313102	6368221	6.81%
Industry Sector	2920885	5867065	14.41%
Tertiary Sector	6295033	9681337	7.68%
Total Gross State Value Added at Basic Prices	13529020	21916623	8.86%
Gross State Domestic Product (GSDP)	14317491	23477179	9.14%
Taxes on Products -Subsidies on Products	788471	1560556	13.99%
Per capita Gross State Domestic Product (in Rs.)	45538	68384	7.17%

Source: Directorate of Economics & Statistics, Assam.

The **Table: 3.8** presents that the annual growth rate in respect of GSDP at constant prices during the period 2011-2019 was highest in electricity, gas, water supply and other utility services (25.45%) among all the sectors, followed by public administration (21.16%), manufacturing (16.77%), and other services (15.65%). On the other hand, negative growth rate was reflected in real estates, ownership of dwelling and professional services (-0.04%) during the period referred.

### 3.7. PER CAPITA INCOME

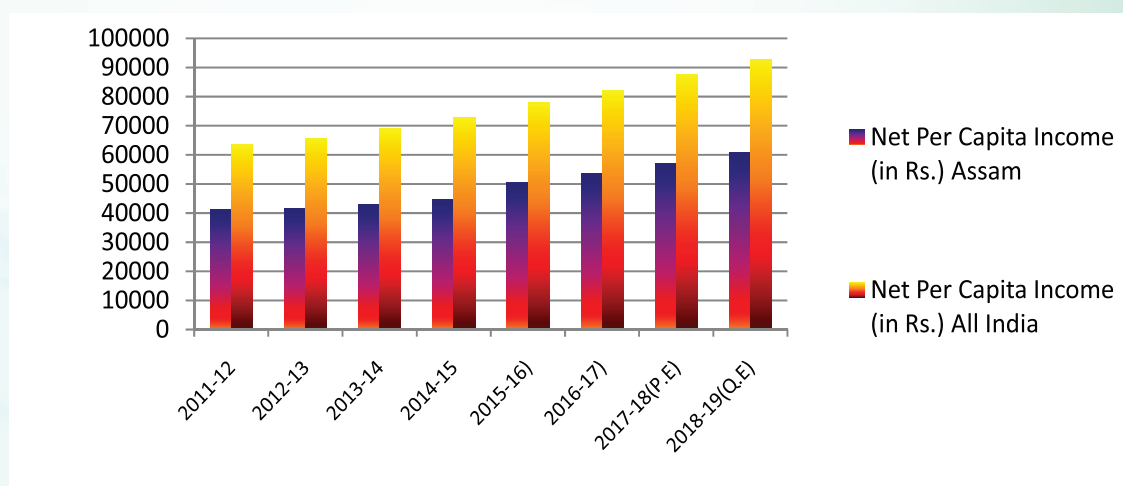
Per capita income of Assam and average of India is presented in **Table: 3.9**.

Table:3.9				
Per capita income of Assam and All India				
In Rs.				
Year	Assam		India	
	At current Prices	At constant Prices	At current Prices	At constant Prices
2011-12	41142	41142	63460	63460
2012-13	44599	41609	71050	65664
2013-14	49734	43002	79412	68867
2014-15	52895	44809	86647	72805
2015-16)	60817	50642	94731	77826
2016-17)	66430	53745	103870	82229
2017-18(P.E)	74204	57099	114958	87623
2018-19(Q.E)	81841	60721	126406	92565

Source: Directorate of Economics and Statistics, Assam and Central Statistics Office (MOSPI), Govt. of India

The per capita income of the state in terms of NSDP at constant (2011-12) prices is estimated at Rs. 60721.00 for the year 2018-19 (Q.E) as compared to Rs.57099.00 in 2017-18 (P.E) registering a growth of 6.34 percent. The average annual growth during the period 2011-12 to 2018-19 was 6.80 percent. The per capita NSDP at current prices for the year 2018-19(Q.E) is estimated to reach Rs.81841.00 as compared to Rs.74204 in 2017-18(P.E) indicating a growth of 10.29 percent. During the period 2011-12 to 2018-19, per capita income of the state as well as of the country has increased by two folds.

Net per capita income of Assam and India as a whole are shown in the following line diagram.



A comparison of annual growth rate of GSDP (sector wise) of the national accounts and state accounts for the year 2018-19 is shown in **Table-3.10**. In 2018-19, the annual growth rate of GSDP at constant (2011-12) prices in Assam is estimated at 6.92 percent as against the all India average growth of

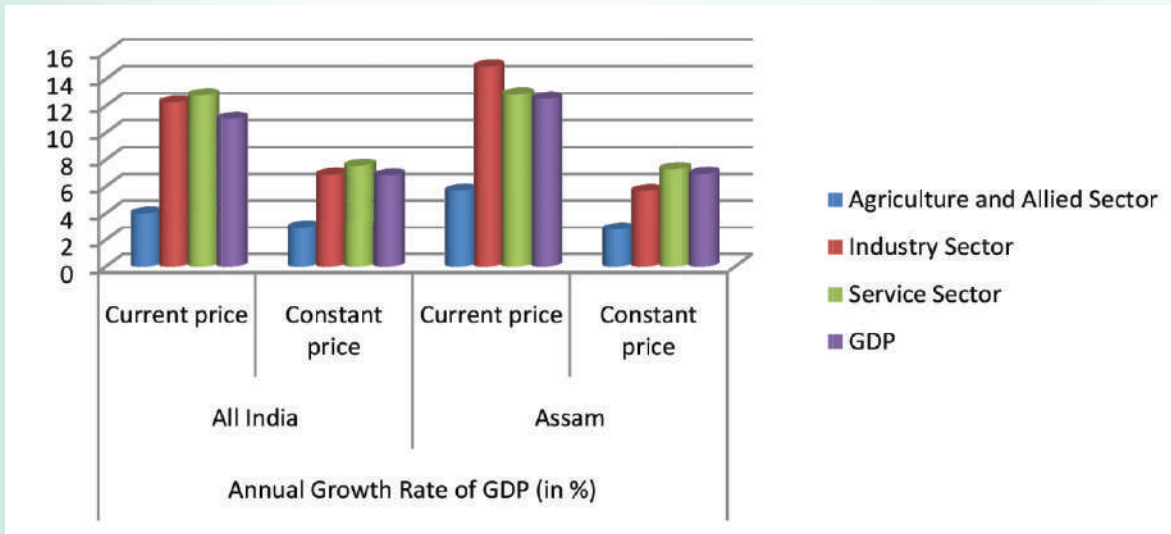
6.81 percent. During the same period, annual growth rate GSDP of Assam at current prices is estimated at 12.52 percent against all India average of 11.02 percent.

Table-3.10

Annual growth rate of GDP for 2018-19					
Sl No	Industry	Annual Growth Rate of GDP (in %)			
		All India		Assam	
		Current price	Constant price	Current price	Constant price
1	Agriculture and Allied Sector	3.96	2.92	5.67	2.76
2	Industry Sector	12.24	6.86	14.91	5.64
3	Service Sector	12.76	7.53	12.82	7.27
4	GDP	11.02	6.81	12.51	6.92

Source: Directorate of Economics and Statistics, Assam and Central Statistics Office (MOSPI), Govt. of India

A comparison of annual growth rate of GDP of all India average and state of Assam for the year 2018-19 is shown in the following line diagram.



### 3.8 District Domestic Products:

District Domestic Products (DDP) is one of the key indicators used in measuring the economic growth of the districts. It has great importance to have measure of the district economy and need for formulating development plans of a district. Significances of DDP are:

- It measures the relative shares of the different districts in generating SDP,
- It assesses the performance of the economy of a district and provides a quantitative measurement of economic activities of the district.
- It provides a base line for the districts and helps to formulate state and national policies on employment, inflation, standard of living etc.

The district income is defined as the sum total of the economic value of all goods and services produced within the district, irrespective of the fact whether the income is owned by persons inside the district or outside. The estimate of DDP is also termed as district income compiled in the similar manner as it followed in the case of State Domestic Product (SDP).

SDP is the aggregation of the DDP estimates of the districts. Conversely segregation of SDP estimates to the districts gives DDP estimates.

The methodology for compilation of DDP estimates is very much depends on availability of basic data at district level. It is seen that the data base at the district level is not adequate for estimation of DDP at the district level. Nevertheless, the data in respect of commodity producing sectors viz., primary sector and manufacturing (Registered) sector, is fairly sound, though scanty in respect of remaining sectors. In the case of non commodity producing sectors, where the district wise data are not available, the state level estimates are allocated to the districts on the basis of appropriate district wise indicators. Further, in some of the commodity producing sectors, though the district level production data are available, the corresponding prices are not available. In such cases, district wise production and state average prices are used in estimation of DDP. In addition, certain ratios, norms, yield rates, IIP, WPI etc, are in general used for the state level estimates, and normally not available at the district level, are used in compilation of district level income estimates.

Sectoral wise Gross District Domestic Products of Assam both at current and constant prices for 2017-18 (P.E) is shown in ANNEXURE: 4.10 and 4.11.

ANNEXURE: 4.12 and 4.13 shows year wise Gross District Domestic Products of Assam at current and constant prices.

Per capita Net District Domestic Products at constant prices is known as per capita income of the district. ANNEXURE-4.14, 4.15, 4.16 and 4.17 show year wise NDDP and GDDP at both constant and current prices.

Per-Capita income is found to be higher in districts of Kamrup (Metro), Sivasagar, Tinsukia, Dibrugarh, Jorhat, Dima Hasao, Charaideo, Golaghat, Kamrup and Kokrajhar as compared to the state average at both constant and current prices from 2011-12 onwards. The per capita income is found lower in the districts of South Salmara, Dhubri, Hailakandi, Morigaon, Goalpara, Baksa, Chirang, Dhemaaji Lakhimpur, Barpeta, Darrang, Sonitpur, Biswanath Chariali, Nagaon, Hojai as compared to the state average at both constant and current prices from the year 2011-12 onwards.

Contribution of Agriculture and allied sector to Gross District Domestic Products at current prices during 2018-19 was found highest in Dhemaaji (36.10%), followed by Baksa (30.28%) and Lakhimpur (29.82%) as against state contribution of 16.39 percent.

Per capita Gross District Domestic Products both at constant and current prices during 2017-18 is shown in the following bar-diagram.





ANNEXURE-3.1					
GROSS STATE DOMESTIC PRODUCTS OF ASSAM AT CURRENT PRICES					
New base (2011-12) series					
(Rs. In Lakhs)					
Sl No	Industry Sector	2011-12	2016-17	2017-18 (P.E)	2018-19 (Q.E)
1	2	3	4	5	6
<b>1</b>	<b>Agriculture, Forestry and Fishing</b>	<b>2848113</b>	<b>4576441</b>	<b>4836062</b>	<b>5110691</b>
<b>1.1</b>	Crops	2061487	3419844	3539231	3666169
<b>1.2</b>	Livestock	159289	250298	330298	371474
<b>1.3</b>	Forestry & Logging	231388	269621	286230	308377
<b>1.4</b>	Fishing and aquaculture	395949	636678	680302	764671
<b>2</b>	Mining & Quarrying	1464989	2780892	3041995	3539442
<b>A</b>	<b>Primary</b>	<b>4313102</b>	<b>7357333</b>	<b>7878057</b>	<b>8650133</b>
<b>3</b>	Manufacturing	1540255	3170604	3462872	3980446
<b>4</b>	Electricity, Gas, Water Supply and other utility services	191883	468703	705350	869388
<b>5</b>	Construction	1188747	1968864	2226314	2454130
<b>B</b>	<b>Secondary</b>	<b>2920885</b>	<b>5608171</b>	<b>6394536</b>	<b>7303965</b>
<b>6</b>	Trade, Repair, Hotels & Restaurants	2045676	3541639	3958642	4354422
<b>6.1</b>	Trade and repair services	1961211	3412068	3814901	4197943
<b>6.2</b>	Hotel and restaurants	84465	129571	143741	156478
<b>7</b>	Transport, Storage, Communication and services related to broadcasting	810091	1437617	1495953	1642005
<b>8</b>	Financial Services	427077	665033	783361	858563
<b>9</b>	Real Estate, Ownership of dwelling & Professional Services	1112543	1448680	1549002	1610446
<b>10</b>	Public Administration	821723	1358632	2434992	2960845
<b>11</b>	Other Services	1077923	2324025	2865371	3338265
<b>C</b>	<b>Tertiary</b>	<b>6295033</b>	<b>10775626</b>	<b>13087321</b>	<b>14764546</b>
<b>12</b>	Total GSVA at Basic Prices	13529020	23741130	27359914	30718644
<b>13</b>	Taxes on Products	1203476	2061573	1928736	2080351
<b>14</b>	Subsidies on Products	415005	354878	439293	443457
<b>15</b>	<b>Gross State Domestic Product</b>	<b>14317491</b>	<b>25447825</b>	<b>28849357</b>	<b>32355538</b>
<b>16</b>	Population (in '00 )	314410	335290	339050	343314
<b>17</b>	<b>Per Capita (in Rs.)</b>	<b>45538</b>	<b>75898</b>	<b>85089</b>	<b>94245</b>
<b>D</b>	Agriculture	2848113	4576441	4836062	5110691
<b>E</b>	Industry Sector	4385874	8389063	9436531	10843407
<b>F</b>	Service Sector	6295033	10775626	13087321	14764546
<b>G</b>	Taxes on Products -Subsidies on Products	788471	1706695	1489443	1636894
<b>GSDP</b>		<b>14317491</b>	<b>25447825</b>	<b>28849357</b>	<b>32355538</b>

Source: Directorate of Economics & Statistics, Assam

ANNEXURE-3.2

**GROSS STATE DOMESTIC PRODUCTS OF ASSAM AT CONSTANT PRICES**  
New base (2011-12) series

(Rs. In Lakhs)

Sl No	Industry Sector	2011-12	2016-17	2017-18 (P.E)	2018-19 (Q.E)
1	2	3	4	5	6
<b>1</b>	Agriculture, Forestry and Fishing	2848113	3500560	3599931	3699324
<b>1.1</b>	Crops	2061487	2625728	2663473	2708705
<b>1.2</b>	Livestock	159289	186202	205035	216963
<b>1.3</b>	Forestry & Logging	231388	167815	175224	184794
<b>1.4</b>	Fishing and aquaculture	395949	520814	556199	588862
<b>2</b>	Mining & Quarrying	1464989	2437241	2558056	2668897
<b>A</b>	<b>Primary</b>	<b>4313102</b>	<b>5937801</b>	<b>6157987</b>	<b>6368221</b>
<b>3</b>	Manufacturing	1540255	2944863	3189723	3348792
<b>4</b>	Electricity, Gas, Water Supply and other utility services	191883	343775	495434	533691
<b>5</b>	Construction	1188747	1725258	1837348	1984582
<b>B</b>	<b>Secondary</b>	<b>2920885</b>	<b>5013896</b>	<b>5522505</b>	<b>5867065</b>
<b>6</b>	Trade, Repair, Hotels & Restaurants	2045676	2206094	2214749	2248515
<b>6.1</b>	Trade and repair services	1961211	2127332	2134330	2161800
<b>6.2</b>	Hotel and restaurants	84465	78762	80419	86715
<b>7</b>	Transport, Storage, Communication and services related to broadcasting	810091	1152819	1209520	1289996
<b>8</b>	Financial Services	427077	617944	676118	735742
<b>9</b>	Real Estate, Ownership of dwelling & Professional Services	1112543	1094831	1123442	1109600
<b>10</b>	Public Administration	821723	1041880	1788410	2038847
<b>11</b>	Other Services	1077923	1704580	2012623	2258637
<b>C</b>	<b>Tertiary</b>	<b>6295033</b>	<b>7818148</b>	<b>9024862</b>	<b>9681337</b>
<b>12</b>	Total GSVA at Basic Prices	13529020	18769845	20705354	21916623
<b>13</b>	Taxes on Products	1203476	1806812	1622150	1862862
<b>14</b>	Subsidies on Products	415005	311024	369464	302306
<b>15</b>	<b>Gross State Domestic Product</b>	<b>14317491</b>	<b>20265633</b>	<b>21958040</b>	<b>23477179</b>
<b>16</b>	Population (in '00 )	314410	335290	339050	343314
<b>17</b>	<b>Per Capita (in Rs.)</b>	<b>45538</b>	<b>60442</b>	<b>64763</b>	<b>68384</b>
<b>D</b>	Agriculture	2848113	3500560	3599931	3699324
<b>E</b>	Industry Sector	4385874	7451137	8080561	8535962
<b>F</b>	Service Sector	6295033	7818148	9024862	9681337
<b>G</b>	Taxes on Products -Subsidies on Products	788471	1495788	1252686	1560556
<b>GSDP</b>		<b>14317491</b>	<b>20265633</b>	<b>21958040</b>	<b>23477179</b>

Source: Directorate of Economics & Statistics, Assam

**Economic Survey, Assam, 2019-20**

ANNEXURE-3.3

NET STATE DOMESTIC PRODUCTS(NSDP) OF ASSAM AT CURRENT PRICES

New base (2011-12) series

*(Rs. In Lakhs)*

Sl No	Industry Sector	2011-12	2016-17	2017-18 (P.E)	2018-19 (Q.E)
1	2	3	4	5	6
<b>1</b>	<b>Agriculture, Forestry and Fishing</b>	<b>2620851</b>	<b>4061751</b>	<b>4290792</b>	<b>4539728</b>
<b>1.1</b>	Crops	1888760	2967137	3054707	3205127
<b>1.2</b>	Livestock	153834	242439	321798	365315
<b>1.3</b>	Forestry & Logging	228850	267511	283604	293020
<b>1.4</b>	Fishing and aquaculture	349407	584664	630683	676266
<b>2</b>	Mining & Quarrying	1288077	2315492	2548294	2945930
<b>A</b>	<b>Primary</b>	<b>3908928</b>	<b>6377242</b>	<b>6839087</b>	<b>7485658</b>
<b>3</b>	Manufacturing	1274688	2653234	2899251	3325908
<b>4</b>	Electricity, Gas, Water Supply and other utility services	130994	291398	457125	563790
<b>5</b>	Construction	1131858	1774376	2008848	2193553
<b>B</b>	<b>Secondary</b>	<b>2537540</b>	<b>4719009</b>	<b>5365224</b>	<b>6083251</b>
<b>6</b>	Trade, Repair, Hotels & Restaurants	2002198	<b>3323954</b>	<b>3711065</b>	4050622
<b>6.1</b>	Trade and repair services	1919528	3209308	3583797	3915763
<b>6.2</b>	Hotel and restaurants	82670	114646	127268	134859
<b>7</b>	Transport, Storage, Communication and services related to broadcasting	654962	1054308	1057919	1101921
<b>8</b>	Financial Services	420333	650360	766103	839313
<b>9</b>	Real Estate, Ownership of dwelling & Professional Services	942080	1163133	1232841	1271592
<b>10</b>	Public Administration	634052	1099300	2002626	2463534
<b>11</b>	Other Services	1046848	2179375	2694503	3123002
<b>C</b>	<b>Tertiary</b>	<b>5700473</b>	<b>9470429</b>	<b>11465057</b>	12849984
<b>12</b>	Total GSVA at Basic Prices	12146941	<b>20566680</b>	<b>23669368</b>	26418893
<b>13</b>	Taxes on Products	1203476	2061573	1928736	2053980
<b>14</b>	Subsidies on Products	415005	354878	439293	433456
<b>15</b>	<b>Gross State Domestic Product</b>	<b>12935412</b>	<b>22273375</b>	<b>25158811</b>	<b>28039417</b>
<b>16</b>	Population (in '00 )	314410	335290	339050	342609
<b>17</b>	<b>Per Capita (in Rs.)</b>	<b>41142</b>	<b>66430</b>	<b>74204</b>	<b>81841</b>
<b>D</b>	Agriculture	2620851	4061751	4290792	4539728
<b>E</b>	Industry Sector	3825617	7034500	7913518	9029181
<b>F</b>	Service Sector	5700473	9470429	11465057	12849984
<b>G</b>	Taxes on Products -Subsidies on Products	788471	1706695	1489443	1620524
	<b>NSDP</b>	<b>12935412</b>	<b>22273375</b>	<b>25158811</b>	<b>28039417</b>

Source: Directorate of Economics & Statistics, Assam

**Economic Survey, Assam, 2019-20**

ANNEXURE-3.4

**NET STATE DOMESTIC PRODUCTS (NSDP) OF ASSAM AT CONSTANT PRICES**

**New base (2011-12) series**

*(Rs. In Lakhs)*

Sl No	Industry Sector	2011-12	2016-17	2017-18 (P.E)	2018-19 (Q.E)
1	2	3	4	5	6
<b>1</b>	<b>Agriculture, Forestry and Fishing</b>	<b>2620851</b>	<b>3210481</b>	<b>3296881</b>	<b>3349300</b>
<b>1.1</b>	Crops	1888760	2390436	2418486	2441528
<b>1.2</b>	Livestock	153834	179421	198573	204903
<b>1.3</b>	Forestry & Logging	228850	166006	172754	165829
<b>1.4</b>	Fishing and aquaculture	349407	474617	507068	537039
<b>2</b>	Mining & Quarrying	1288077	2073306	2180856	2294478
<b>A</b>	<b>Primary</b>	<b>3908928</b>	<b>5283787</b>	<b>5477737</b>	<b>5643778</b>
<b>3</b>	Manufacturing	1274688	2586928	2804807	3246180
<b>4</b>	Electricity, Gas, Water Supply and other utility services	130994	212875	314861	370552
<b>5</b>	Construction	1131858	1624651	1708967	1836553
<b>B</b>	<b>Secondary</b>	<b>2537540</b>	<b>4424454</b>	<b>4828635</b>	<b>5453285</b>
<b>6</b>	Trade, Repair, Hotels & Restaurants	2002198	2101545	2097438	2107984
<b>6.1</b>	Trade and repair services	1919528	2031107	2025995	2038243
<b>6.2</b>	Hotel and restaurants	82670	70438	71443	69740
<b>7</b>	Transport, Storage, Communication and services related to broadcasting	654962	827123	846701	895701
<b>8</b>	Financial Services	420333	605106	661401	710000
<b>9</b>	Real Estate, Ownership of dwelling & Professional Services	942080	857941	875120	868181
<b>10</b>	Public Administration	634052	806293	1406635	1657873
<b>11</b>	Other Services	1046848	1618095	1913120	2126172
<b>C</b>	<b>Tertiary</b>	<b>5700473</b>	<b>6816103</b>	<b>7800415</b>	<b>8365911</b>
<b>12</b>	Total GSVA at Basic Prices	12146941	16524344	18106787	19462974
<b>13</b>	Taxes on Products	1203476	1806812	1622150	1700483
<b>14</b>	Subsidies on Products	415005	311024	369464	359942
<b>15</b>	<b>Net State Domestic Product</b>	<b>12935412</b>	<b>18020132</b>	<b>19359473</b>	<b>20803515</b>
<b>16</b>	Population (in '00 )	314410	335290	339050	342609
<b>17</b>	Per Capita (in Rs.)	41142	53745	57099	60721
<b>D</b>	Agriculture	2620851	3210481	3296881	3349300
<b>E</b>	Industry Sector	3825617	6497760	7009491	7747763
<b>F</b>	Service Sector	5700473	6816103	7800415	8365911
<b>G</b>	Taxes on Products -Subsidies on Products	788471	1495788	1252686	1340541
	<b>NSDP</b>	<b>12935412</b>	<b>18020132</b>	<b>19359473</b>	<b>20803515</b>

*Source: Directorate of Economics & Statistics, Assam*

**Economic Survey, Assam, 2019-20**

ANNEXURE-3.5				
Movement of Gross State Domestic Products (GSDP) of Assam both at current and constant (2011-12) prices				
Year	Gross State Domestic Products (Rupees in Lakh)		Per Capita Gross State Domestic Product (in Rupees)	
	At Current Prices	At Constant Prices	At Current Prices	At Constant Prices
2011-12	14317491	14317491	45538	45538
2012-13	15686424	14734238	49254	46264
2013-14	17774522	15452540	55098	47900
2014-15	19572315	16521230	59894	53922
2015-16	22795883	19110900	68868	57735
2016-17	25447825	20265633	75898	60442
2017-18(P.E)	28849357	21958040	85089	64763
2018-19(Q.E)	32355538	23477179	94245	68384

*Source: Directorate of Economics & Statistics, Assam*

ANNEXURE-3.6				
Movement of Net State Domestic Products (NSDP) of Assam at Current and Constant (2011-12) Prices				
Year	Net State Domestic Products (Rupees in Lakh)		Per Capita Net State Domestic Product (in Rupees)	
	At Current Prices	At Constant Prices	At Current Prices	At Constant Prices
2011-12	12935412	12935412	41142	41142
2012-13	14203946	13251760	44599	41609
2013-14	16044153	13872476	49734	43002
2014-15	17284889	14642539	52895	44809
2015-16	20130881	16762867	60817	50642
2016-17	22273375	18020132	66430	53745
2017-18(P.E)	25158811	19359473	74204	57099
2018-19(Q.E)	28039417	20803515	81841	60721

*Source: Directorate of Economics & Statistics, Assam*

ANNEXURE-3.7					
Gross Domestic Product (GDP)					
Rs. in crore					
Sl. No.	Year	All India		Assam	
		At current prices	At basic prices	At current prices	At basic prices
1	2011-12	8736329	8736329	143175	143175
2	2012-13	9944013	9213017	156864	147342
3	2013-14	11233522	9801370	177745	154525
4	2014-15	12467959	10527674	195723	165212
5	2015-16	13764037	11386145	227959	191109
6	2016-17	15362386	12298327	254478	202656
7	2017-18(P.E)	17095005	13179857	288494	219580
8	2018-19(Q.E)	19010164	14077586	323555	234772

*Source: Directorate of Economics and Statistics, Assam & Ministry of Statistics and Programme Implementation (MOSPI)*

ANNEXURE-3.8

Sector-wise contribution of GVA at constant for 2018-19

Rs. in Crore

Sl No	Sector	All India		Assam	
		GVA at constant prices	Share (in %)	GVA at constant prices	Share (in %)
<b>1</b>	<b>Primary Sector</b>	<b>2228008</b>	<b>17.39</b>	<b>63682</b>	<b>29.06</b>
1.1	Agriculture, Forestry and Fishing	1842873	14.39	36993	16.88
1.2	Mining & quarrying	385135	3.01	26689	12.18
<b>2</b>	<b>Secondary Sector</b>	<b>3644647</b>	<b>28.45</b>	<b>58671</b>	<b>26.77</b>
2.1	Manufacturing	2346216	18.32	33488	15.28
2.2	Electricity, gas, water supply & other utility services	287109	2.24	5337	2.44
2.3	Construction	1011322	7.90	19846	9.06
<b>3</b>	<b>Tertiary Sector</b>	<b>6936122</b>	<b>54.15</b>	<b>96813</b>	<b>44.17</b>
3.1	Trade, hotels, transport, communication and services related to broadcasting	2467622	19.27	35385	16.15
3.2	Financial, real estate & professional services	2775970	21.67	18453	8.42
3.3	Public Administration, defence and other services	1692530	13.21	42975	19.61
	<b>GVA at basic prices</b>	<b>12808778</b>	<b>100.00</b>	<b>219166</b>	<b>100.00</b>

Source: Ministry of Statistics and Programme Implementation and Directorate of Economics & Statistics, Assam

ANNEXURE-3.9

Sector-wise contribution of GVA at current prices for 2018-19

Rs. In Crore

Sl No	Sector	All India		Assam	
		GVA at current Prices	Share (in %)	GVA at current Prices	Share (in %)
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>1</b>	<b>Primary Sector</b>	<b>3149734</b>	<b>18.57</b>	<b>86501</b>	<b>28.16</b>
1.1	Agriculture, Forestry and Fishing	2692433	15.87	51107	16.64
1.2	Mining & quarrying	457301	2.70	35394	11.52
<b>2</b>	<b>Secondary Sector</b>	<b>4585286</b>	<b>27.03</b>	<b>73039</b>	<b>23.78</b>
2.1	Manufacturing	2853986	16.83	39804	12.96
2.2	Electricity, gas, water supply & other utility services	452683	2.67	8694	2.83
2.3	Construction	1278617	7.54	24541	7.99
<b>3</b>	<b>Tertiary Sector</b>	<b>9226346</b>	<b>54.40</b>	<b>147645</b>	<b>48.06</b>
3.1	Trade, hotels, transport, communication and services related to broadcasting	3157709	18.62	59964	19.52
3.2	Financial, real estate & professional services	3555780	20.96	24690	8.04
3.3	Public Administration, defence and other services	2512857	14.82	62991	20.51
	<b>GVA at basic prices</b>	<b>16961365</b>	<b>100.00</b>	<b>307186</b>	<b>100.00</b>

Source: Ministry of Statistics and Programme Implementation and Directorate of Economics & Statistics, Assam

ANNEXURE-3.10								
Gross District Domestic Products of Assam at current prices for 2017-18 (Fully Provisional)								
Base year:2011-12								
<i>Rs. in Lakh</i>								
Sl No.	District	Primary sector	Secondary Sector	Tertiary Sector	Gross District Value Added	Taxes-Subsidies	Gross District Domestic Product (GDDP)	Per capita DDP (in Rs.)
1	Chirang	106065	50457	124912	281434	13864	295298	57151
2	Baksa	177929	82313	274014	534256	31032	565288	55766
3	Kokrajhar	214399	153995	432321	800715	49416	850131	90940
4	Udalguri	215509	91566	319637	626712	34713	661425	74560
5	South Salmara	68147	30016	103546	201709	13060	214769	35092
6	Dhubri	160575	104863	241364	506802	30472	537274	34821
7	Goalpara	171125	91870	308540	571535	33616	605151	54459
8	Bongaigaon	120158	211915	392545	724618	35765	760383	93837
9	Barpeta	282963	187201	350499	820663	51828	872491	46952
10	Nalbari	151802	109086	336583	597471	31414	628885	75956
11	Kamrup	280700	350112	925188	1556000	96565	1652565	100808
12	Kamrup (M)	79049	828919	1704326	2612294	118842	2731136	200327
13	Darrang	163908	140140	401488	705536	37937	743473	72896
14	Sonitpur	210044	254794	359053	823891	40978	864869	67131
15	Biswanath	132484	110280	217337	460101	25222	485323	61202
16	Lakhimpur	244470	107903	296067	648440	31905	680345	60158
17	Dhemaji	149372	53069	146598	349039	17265	366304	48764
18	Dibrugarh	894367	500103	874713	2269183	114652	2383835	167706
19	Tinsukia	930725	526486	723674	2180885	105553	2286438	159111
20	Majuli	66590	44443	150869	261902	10426	272328	80667
21	Jorhat	170482	271761	612442	1054685	59064	1113749	134750
22	Sivasagar	653638	278122	451358	1383118	78542	1461660	196397
23	Charaideo	198733	149998	289207	637938	50884	688822	142867
24	Golaghat	309093	220124	397337	926554	52208	978762	85293
25	Nagaon	325064	360187	451960	1137211	52734	1189945	55590
26	Hojai	182263	227450	201098	610811	23691	634502	65977
27	Morigaon	177925	88990	326461	593376	31851	625227	59195
28	Cachar	268163	362810	641783	1272756	69548	1342304	70695
29	Hailakandi	104660	79213	237426	421299	26958	448257	61896
30	Karimganj	140242	135738	379488	655468	47221	702689	51897
31	Dima Hasao	138130	70984	117493	326607	21994	348601	151345
32	East Karbi Anglong	256493	89135	235814	581442	22986	604428	89267
33	West Karbi Anglong	132787	30489	62340	225616	27237	252854	69352
	<b>ASSAM</b>	<b>7878056</b>	<b>6394536</b>	<b>13087321</b>	<b>27359913</b>	<b>1489443</b>	<b>28849357</b>	<b>85089</b>

ANNEXURE-3.11								
Gross District Domestic Products of Assam at constant prices for 2017-18 (Fully Provisional)								
Base year:2011-12								
<i>Rs. in Lakh</i>								
Sl No.	District	Primary sector	Secondary Sector	Tertiary Sector	Gross District Value Added	Taxes-Subsidies	Gross District Domestic Product (GDDP)	Per capita DDP (in Rs.)
1	Chirang	81482	59432	88009	228923	12027	240950	46606
2	Baksa	131494	76158	145009	352661	23799	376460	37126
3	Kokrajhar	160248	107128	285690	553066	44012	597078	63859
4	Udalguri	160108	68814	201500	430422	25641	456063	51416
5	South Salmara	48408	26587	75561	150556	10360	160916	26294
6	Dhubri	118745	88415	203723	410883	21940	432823	28051
7	Goalpara	129179	81703	240585	451467	27648	479115	43125
8	Bongaigaon	91797	178186	296667	566650	33376	600026	74078
9	Barpeta	238141	126637	385053	749831	45296	795127	42795
10	Nalbari	115126	74478	246844	436448	27279	463727	56006
11	Kamrup	203917	301831	533418	1039166	78132	1117298	68170
12	Kamrup (M)	66864	730759	1377536	2175159	94881	2270040	166551
13	Darrang	121895	139910	228269	490074	29595	519669	50948
14	Sonitpur	149437	231041	242811	623289	32086	655375	50883
15	Biswanath	91900	114525	146468	352893	19749	372642	46992
16	Lakhimpur	178076	92651	243331	514058	29978	544036	48102
17	Dhemaji	114417	47483	104402	266302	15474	281776	37520
18	Dibrugarh	732098	466612	447254	1645964	95902	1741866	122581
19	Tinsukia	759253	485762	386559	1631574	91926	1723500	119938
20	Majuli	44648	45131	113301	203080	8889	211969	62713
21	Jorhat	140415	250869	385017	776301	50372	826673	99961
22	Sivasagar	533936	268332	249526	1051794	69067	1120861	150654
23	Charaideo	158375	146104	154910	459389	44744	504133	104592
24	Golaghat	224638	212611	281791	719040	43417	762457	66416
25	Nagaon	232652	296351	315871	844874	56855	901729	42117
26	Hojai	144995	207358	149929	502282	24366	526648	54745
27	Morigaon	133484	81582	235733	450799	19335	470134	44520
28	Cachar	211357	272250	494424	978031	60662	1038693	54697
29	Hailakandi	79746	56078	154938	290762	19986	310748	42921
30	Karimganj	109067	102855	313229	525151	37675	562826	41568
31	Dima Hasao	127100	31486	75586	234172	20012	254184	110515
32	East Karbi Anglong	211246	39579	179384	430209	28743	458952	67792
33	West Karbi-Anglong	113744	13807	42535	170086	9461	179548	49191
	<b>ASSAM</b>	<b>6157987</b>	<b>5522505</b>	<b>9024861</b>	<b>20705354</b>	<b>1252686</b>	<b>21958040</b>	64764



ANNEXURE-3.12								
YEAR WISE GROSS DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CURRENT PRICES								
Base year:2011-12								
Rs. in Lakh								
Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	153909	175253	194553	212931	242791	262430	295298
2	Baksa	265708	291501	327463	360458	417761	460082	565288
3	Kokrajhar	386609	434375	504793	555207	604595	651176	850131
4	Udalguri	290203	334084	365722	394018	460709	496596	661425
5	South Salmara	121764	127104	142093	159271	172997	177981	214769
6	Dhubri	312669	333932	397675	437741	478659	576670	537274
7	Goalpara	343514	352015	416891	461804	486539	595149	605151
8	Bongaigaon	366491	398375	496300	547789	610753	639254	760383
9	Barpeta	632577	637936	713630	793875	845058	1112804	872491
10	Nalbari	322183	356144	394735	438274	469760	550913	628885
11	Kamrup	654977	763499	879661	972016	1121097	1157123	1652565
12	Kamrup (M)	1453153	1593191	1767567	1955849	2168791	2555478	2731136
13	Darrang	299907	336537	362845	400415	459558	534067	743473
14	Sonitpur	459571	492247	578119	636979	712788	816928	864869
15	Biswanath	230505	257003	297192	327466	378456	407358	485323
16	Lakhimpur	384742	415998	462876	512258	554034	670504	680345
17	Dhemaji	210611	231757	253908	280705	302628	365920	366304
18	Dibrugarh	1029354	1100823	1246203	1362514	1833778	1910287	2383835
19	Tinsukia	1054293	1077212	1260377	1362332	1880845	1960481	2286438
20	Majuli	133621	146461	166070	183150	206585	232505	272328
21	Jorhat	469671	521399	666505	737820	837547	851242	1113749
22	Sivasagar	689126	714449	808047	895303	1194798	1295845	1461660
23	Charaideo	294007	311946	362911	397398	522868	534650	688822
24	Golaghat	485155	524494	678954	748073	852117	870441	978762
25	Nagaon	684296	708954	822553	907972	1020353	1241573	1189945
26	Hojai	419509	434091	494442	542792	623841	746803	634502
27	Morigaon	284860	330307	359459	391275	435290	490554	625227
28	Cachar	680648	727926	934695	1033997	1150195	1201929	1342304
29	Hailakandi	199747	225696	238950	265312	282302	355783	448257
30	Karimganj	381944	403382	455421	507118	565364	679929	702689
31	Dima Hasao	173355	186157	196559	215615	248353	300901	348601
32	East Karbi Anglong	299962	328034	360242	393379	439605	509165	604428
33	West Karbi- Anglong	148934	162177	167212	181319	215195	265436	252853
	<b>ASSAM</b>	<b>14317491</b>	<b>15686425</b>	<b>17774522</b>	<b>19572315</b>	<b>22795882</b>	<b>25447825</b>	<b>28849356</b>

Source: Directorate of Economics &amp; Statistics, Assam

ANNEXURE-3.13								
YEAR WISE GROSS DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CONSTANT PRICES								
Base Year:2011-12								
Rs. in Lakh								
Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	153909	160831	176111	187515	197351	222436	240952
2	Baksa	265708	278297	300589	322527	323210	350498	376461
3	Kokrajhar	386609	402262	435036	475105	544181	552281	597080
4	Udalguri	290203	302446	327684	351727	401130	417855	456064
5	South Salmara	121764	129929	136378	144348	142834	151779	160917
6	Dhubri	312669	326728	341498	356254	374682	398424	432825
7	Goalpara	343514	363965	374383	380062	419167	446329	479116
8	Bongaigaon	366491	371404	396405	427661	520804	554867	600028
9	Barpeta	632577	650604	676487	723620	728142	743993	795131
10	Nalbari	322183	333442	351489	383101	411545	419469	463730
11	Kamrup	654977	673351	716581	783489	971393	1014185	1117301
12	Kamrup (M)	1453153	1473881	1544472	1662244	1904928	2026658	2270087
13	Darrang	299907	311115	332444	356893	422481	472682	519670
14	Sonitpur	459571	471823	502003	518904	572273	604610	655379
15	Biswanath	230505	243272	257356	269050	310561	344779	372643
16	Lakhimpur	384742	407814	427057	461189	470988	501932	544038
17	Dhemaji	210611	224220	232694	238575	241656	261835	281777
18	Dibrugarh	1029354	1034845	1062772	1140919	1508746	1624088	1741874
19	Tinsukia	1054293	1073843	1094523	1167939	1523869	1627401	1723505
20	Majuli	133621	138768	146885	160344	173951	192794	211971
21	Jorhat	469671	476333	510709	568508	707107	759756	826679
22	Sivasagar	689126	701175	713691	757899	988633	1058220	1120866
23	Charaideo	294007	300303	309948	336701	440997	474642	504135
24	Golaghat	485155	502523	519605	554944	650347	710572	762460
25	Nagaon	684296	705773	751665	796012	793825	842085	901735
26	Hojai	419509	425327	440866	455078	470090	492098	526651
27	Morigaon	284860	298420	311635	334288	397630	421063	470136
28	Cachar	680648	697639	739261	801840	940842	961838	1038699
29	Hailakandi	199747	214311	228178	241618	267754	277564	310749
30	Karimganj	381944	400903	423866	460047	492229	508386	562829
31	Dima Hasao	173355	176503	182969	193915	226411	235823	254184
32	East Karbi Anglong	299962	309761	320517	342086	418357	424222	458953
33	West Karbi- Anglong	148934	152513	166875	166925	162905	170470	179549
	<b>ASSAM</b>	<b>14317491</b>	<b>14734327</b>	<b>15452634</b>	<b>16521326</b>	<b>19121020</b>	<b>20265633</b>	<b>21958174</b>

Source: Directorate of Economics &amp; Statistics, Assam

ANNEXURE-3.14								
YEAR WISE PER CAPITA NET DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CONSTANT PRICES								
Base Year:2011-12								
(in Rs.)								
Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	32623	33013	35614	35656	39553	40903	42135
2	Baksa	28226	28868	30813	31034	33820	35198	38486
3	Kokrajhar	48881	49081	49876	53717	57343	61662	63333
4	Udalguri	36971	37244	38082	40277	44219	46859	48058
5	South Salmara	19404	20278	21280	21483	24782	25361	26706
6	Dhubri	19043	19738	20975	21079	23193	23588	24579
7	Goalpara	30240	30312	30797	31921	33649	36472	37955
8	Bongaigaon	52626	52838	53188	56438	59126	62715	64981
9	Barpeta	26214	26695	26878	29197	31526	32978	34068
10	Nalbari	37599	37069	37709	41613	44915	47135	51133
11	Kamrup	48095	48328	51279	52813	59493	64124	68946
12	Kamrup (M)	88716	88906	89392	90351	102341	109586	115053
13	Darrang	32079	32327	33635	33728	36512	40972	44003
14	Sonitpur	33083	33877	35163	36916	39273	39759	41829
15	Biswanath Chariali	29832	31034	33288	33855	36455	37282	39398
16	Lakhimpur	30002	30113	31995	32157	35979	38134	40015
17	Dhemaji	23504	24037	24569	24849	28061	29980	31846
18	Dibrugarh	73183	72787	73274	74685	95733	100570	115928
19	Tinsukia	73931	73362	74828	75570	97098	100652	98743
20	Majuli	39014	39654	42372	42812	46852	50891	55254
21	Jorhat	74048	74024	78870	80956	85641	93889	99272
22	Sivasagar	75386	75435	78462	78821	102228	108789	148250
23	Charaideo	59894	59814	65000	64997	78722	88278	116045
24	Golaghat	38237	38786	42679	43315	48020	50541	50294
25	Nagaon	31800	32219	34324	35309	39580	39589	38659
26	Hojai	37400	37959	39423	40383	45604	46874	43617
27	Morigaon	26362	26532	27181	27415	30053	33750	35639
28	Cachar	38853	39040	39576	42506	46778	49738	50578
29	Hailakandi	27620	28070	28146	29654	33259	36734	39634
30	Karimganj	27626	27748	27801	30346	32984	38192	40510
31	Dima Hasao	63029	63872	65270	85056	92779	92988	106089
32	East Karbi Anglong	38210	38436	39270	47888	52912	59554	58472
33	West Karbi-Anglong	30109	30324	31319	31359	40602	41150	33635
	<b>ASSAM</b>	<b>41145</b>	<b>41609</b>	<b>43002</b>	<b>44809</b>	<b>50623</b>	<b>53715</b>	<b>57099</b>

Source: Directorate of Economics &amp; Statistics, Assam

## ANNEXURE-3.15

YEAR WISE PER CAPITA NET DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CURRENT PRICES  
Base Year:2011-12

(in Rs.)

Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	32623	32400	35466	37541	42466	45444	50449
2	Baksa	28226	25010	30505	32456	37247	40185	45631
3	Kokrajhar	48881	42289	50240	53390	57876	64035	70862
4	Udalguri	36971	33537	38565	40155	46457	49757	55406
5	South Salmara	19404	15840	21264	23083	24865	28238	31705
6	Dhubri	19043	19054	24180	25738	28026	31653	35468
7	Goalpara	30240	29113	36530	39116	40994	43885	48663
8	Bongaigaon	52626	46046	58497	62256	68304	74128	82142
9	Barpeta	26214	28561	37604	40461	42994	47289	53202
10	Nalbari	37599	38566	44814	48089	51635	57078	64188
11	Kamrup	48095	41472	51162	54519	62051	68104	77156
12	Kamrup (M)	88716	154695	125710	134512	147057	161666	182553
13	Darrang	32079	30352	34290	36550	41542	44394	50046
14	Sonitpur	33083	36900	42945	45648	50574	55836	61742
15	Biswanath Chariali	29832	28601	35329	37597	42837	46707	52376
16	Lakhimpur	30002	33453	38894	41681	44901	47954	53479
17	Dhemaji	23504	28727	32494	34783	37419	39408	43689
18	Dibrugarh	73183	75757	81477	85984	113349	122471	135849
19	Tinsukia	73931	70515	82424	85864	115855	124264	137986
20	Majuli	39014	33815	44848	47871	53337	58672	66822
21	Jorhat	74048	62237	75845	81020	90595	101689	113853
22	Sivasagar	75386	90252	100008	107278	140135	151175	167872
23	Charaideo	59894	60142	69320	73298	94491	102949	116278
24	Golaghat	38237	41241	56222	59730	67100	73978	82190
25	Nagaon	31800	30113	37157	39559	43988	48034	53748
26	Hojai	37400	39715	49004	51876	58736	64109	70534
27	Morigaon	26362	28451	33097	34817	38408	40689	45314
28	Cachar	38853	37971	48085	51295	56614	62362	69749
29	Hailakandi	27620	28725	31933	34244	36292	38654	43522
30	Karimganj	27626	26093	33230	35743	39614	43525	49710
31	Dima Hasao	63029	76940	81087	85860	98361	103017	114333
32	East Karbi Anglong	38210	47413	51560	54499	60777	63773	69189
33	West Karbi-Anglong	30109	38815	43271	45433	53871	56588	60735
	<b>ASSAM</b>	<b>41145</b>	<b>44599</b>	<b>49734</b>	<b>52895</b>	<b>60817</b>	<b>66430</b>	<b>74204</b>

Source: Directorate of Economics &amp; Statistics, Assam

## ANNEXURE-3.16

## YEAR WISE PER CAPITA GROSS DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CONSTANT PRICES

Base Year:2011-12

(in Rs.)

Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	31931	32941	35610	37431	38891	43277	46606
2	Baksa	27969	28920	30838	32665	32316	34598	37126
3	Kokrajhar	43586	44771	47801	51536	58274	58388	63859
4	Udalguri	34922	35930	38431	40724	45850	47152	51416
5	South Salmara	21007	22129	22931	23960	23406	24554	26294
6	Dhubri	21396	22072	22775	23455	24354	25567	28051
7	Goalpara	34079	35646	36198	36277	39499	41521	43125
8	Bongaigaon	49593	49615	52279	55680	66940	70408	74078
9	Barpeta	37342	37916	38920	41100	40828	41184	42795
10	Nalbari	41734	42640	44374	47746	50636	50952	56006
11	Kamrup	43147	43791	46007	49659	60783	62650	68170
12	Kamrup (M)	115881	116032	120037	127538	144290	151551	166551
13	Darrang	32283	33061	34877	36963	43196	47712	50948
14	Sonitpur	38588	39111	41081	41921	45642	47605	50883
15	Biswanath Chariali	31445	32762	34217	35314	40241	44105	46992
16	Lakhimpur	36923	38637	39944	42585	42934	45170	48102
17	Dhemaji	30701	32267	33059	33461	33460	35791	37520
18	Dibrugarh	77629	77045	78114	82785	108076	114854	122581
19	Tinsukia	79389	79828	80326	84618	108995	114914	119938
20	Majuli	42194	43260	45205	48716	52175	57089	62713
21	Jorhat	60578	60652	64198	70550	86628	91893	99961
22	Sivasagar	98659	99101	99582	104398	134440	142069	150654
23	Charaideo	64973	65516	66757	71591	92569	98359	104592
24	Golaghat	45469	46495	47461	50041	57894	62448	66416
25	Nagaon	35118	35757	37596	39305	38696	40526	42117
26	Hojai	47920	47964	49081	50015	51005	52711	54745
27	Morigaon	29766	30784	31737	33609	39466	41258	44520
28	Cachar	39185	39650	41479	44415	51448	51925	54697
29	Hailakandi	30311	32105	33746	35276	38593	39496	42921
30	Karimganj	31078	32203	33613	36016	38043	38790	41568
31	Dima Hasao	81007	81424	83329	87184	100494	103335	110515
32	East Karbi Anglong	48303	49244	50303	53001	63990	64059	67792
33	West Karbi-Anglong	44458	44944	48549	47942	46190	47718	49191
	<b>ASSAM</b>	<b>45538</b>	<b>46265</b>	<b>47900</b>	<b>50558</b>	<b>57766</b>	<b>60442</b>	<b>64764</b>

Source: Directorate of Economics &amp; Statistics, Assam

**ANNEXURE-3.17**

**YEAR WISE PER CAPITA GROSS DISTRICT DOMESTIC PRODUCTS OF ASSAM AT CURRENT PRICES**

Base Year::2011-12

(in Rs.)

Sl No	District	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Chirang	31931	35730	39463	42757	48130	51359	57151
2	Baksa	27969	30153	33690	36894	42213	45896	55766
3	Kokrajhar	43586	48124	56213	61621	66245	70438	90940
4	Udalguri	34922	39507	43128	46084	53195	56607	74560
5	South Salmara	21007	21549	24514	27001	28953	29407	35092
6	Dhubri	21396	22455	27213	29435	31775	37793	34821
7	Goalpara	34079	34318	39704	43119	44848	54159	54459
8	Bongaigaon	49593	52975	64707	70139	77202	79773	93837
9	Barpeta	37342	37007	40409	44326	46581	60556	46952
10	Nalbari	41734	45335	50030	54922	58115	67285	75956
11	Kamrup	43147	49426	56208	61520	70049	71377	100808
12	Kamrup (M)	115881	124851	136176	148847	162943	189545	200327
13	Darrang	32283	35599	37523	40734	46153	52951	72896
14	Sonitpur	38588	40617	47027	51298	56670	64121	67131
15	Biswanath Chariali	31445	34453	39276	42846	48885	51946	61202
16	Lakhimpur	36923	39232	42938	46996	50179	59953	60158
17	Dhemaji	30701	33199	35711	38771	41265	49259	48764
18	Dibrugarh	77629	81582	91633	99454	132142	135898	167706
19	Tinsukia	79389	79712	92268	98363	134066	137958	159111
20	Majuli	42194	45449	51405	56288	62679	69643	80667
21	Jorhat	60578	66086	84267	92619	103794	104145	134750
22	Sivasagar	98659	100515	113418	124815	164439	176069	196397
23	Charaideo	64973	67745	78629	85518	111081	112134	142867
24	Golaghat	45469	48306	62118	67638	76060	76704	85293
25	Nagaon	35118	35754	40506	44010	48825	58653	55590
26	Hojai	47920	48728	54196	58560	66444	78525	65977
27	Morigaon	29766	33918	36018	38436	42213	46965	59195
28	Cachar	39185	41182	51784	56503	62049	64012	70695
29	Hailakandi	30311	33656	34883	38010	39928	49678	61896
30	Karimganj	31078	32254	35469	38860	42769	50779	51897
31	Dima Hasao	81007	85484	89345	97124	110441	132101	151345
32	East Karbi Anglong	48303	51910	56038	60279	66501	76041	89267
33	West Karbi-Anglong	44458	47573	48306	51599	60457	73620	69352
	<b>ASSAM</b>	<b>45538</b>	<b>49254</b>	<b>55098</b>	<b>59894</b>	<b>68868</b>	<b>75898</b>	<b>85089</b>

Source: Directorate of Economics & Statistics, Assam

ANNEXURE-3.18

Contribution of Agriculture and allied sector to Gross District Domestic Products at constant prices for 2017-18

Sl. No.	District	Agriculture and Allied Sector (Rs. in Lakh)	GDDP at constant prices (Rs. in Lakh)	% Contribution
1	2	3	4	5
1	Chirang	70192	240952	29.13
2	Baksa	113989	376461	30.28
3	Kokrajhar	139102	597080	23.30
4	Udalguri	130641	456064	28.65
5	South Salmara	45897	160917	28.52
6	Dhubri	106327	432825	24.57
7	Goalpara	113564	479116	23.70
8	Bongaigaon	75887	600028	12.65
9	Barpeta	225024	795131	28.30
10	Nalbari	100751	463730	21.73
11	Kamrup	154921	1117301	13.87
12	Kamrup (M)	44976	2270087	1.98
13	Darrang	110301	519670	21.23
14	Sonitpur	133308	655379	20.34
15	Biswanath Chariali	84050	372643	22.56
16	Lakhimpur	162226	544038	29.82
17	Dhemaji	101730	281777	36.10
18	Dibrugarh	134130	1741874	7.70
19	Tinsukia	131663	1723505	7.64
20	Majuli	40219	211971	18.97
21	Jorhat	100556	826679	12.16
22	Sivasagar	91035	1120866	8.12
23	Charaideo	42263	504135	8.38
24	Golaghat	152540	762460	20.01
25	Nagaon	180531	901735	20.02
26	Hojai	96229	526651	18.27
27	Morigaon	118249	470136	25.15
28	Cachar	172856	1038699	16.64
29	Hailakandi	73912	310749	23.79
30	Karimganj	97567	562829	17.34
31	Dima Hasao	53099	254184	20.89
32	East Karbi Anglong	133330	458953	29.05
33	West Karbi Anglong	68867	179549	38.36
	<b>ASSAM</b>	<b>3599931</b>	<b>21958174</b>	<b>16.39</b>

## CHAPTER-IV

### STATE FINANCE

Public finance has undergone major changes during 2001-17. Compared to earlier two decades (1980s and 1990s), States in India experienced relatively comfortable fiscal situation during 2001-16. Major reforms were initiated in revenue and expenditure fronts during the period notable among them are introduction of Value Added Tax (VAT) and adoption of Fiscal Responsibility and Budget Management (FRBM) Act at state level. VAT while FRBM Act helped in adoption of fiscal management practices. With implementation of GST in 2017, the principle of indirect taxation for many goods and services changed from origin-based to destination-based. As a result, ability to tax goods and services and raise revenue shifted from origin or producing states to destination or consuming states. Together with this, changes in the GST rates from the earlier tax rates, added to the un certainty for states to raise revenue. This was addressed through a constitutional amendment and the GST (Compensation to States) Act, 2017 that guarantees states compensation for five years for any loss of revenue arising due to GST implementation. The compensation to states is to be given out of the GST Compensation Fund, which consists of collections of a cess levied specifically to generate funds for this purpose.

Assam enacted and implemented its version of the FRBM Act in 2005 which helped in reversing the fiscal situation and enabled the state to achieve a fiscal surplus after eleven long years.

The Budget estimate of Assam for the F.Y 2019-20 expects a fiscal deficit of Rs.11113.46 crore. During the F.Y 2017-18, the fiscal deficit of Assam was 3.33% of Gross State Domestic Products (GSDP) which is expected to come down to 2.97% of GSDP in the F.Y 2019-20(B.E). The Budget estimate for F.Y 2019-20 expects a revenue surplus of Rs. 3405.73 crore.

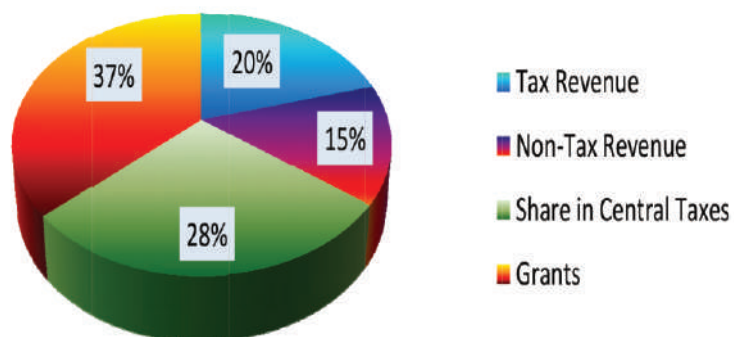
#### 4.1 Revenue of State Government

##### 4.1.1 Revenue Receipt

The total revenue receipt of Assam comprises of State Taxes plus the State Non-Tax Revenues which is known as State's Own Revenue Receipt, transfer from the centre which includes the State Share in Central Taxes and Grants-In-Aid from the Government of India. Component wise revenue receipts are shown in Table:4.1. During 2019-20 (B.E), the total revenue receipts of the state is expected to be Rs. 83147.99 crore as against Rs. 89854.30 crore in 2018-19(R.E) with a deficit of Rs.6706.31 crore in Revenue Receipt Account.

The total revenue receipts of the State almost doubled during the period 2011-12 to 2017, 18 when total revenue receipts of the State government increased form Rs.27455.40 crore in F.Y. 2011-12, to Rs.54130.94 crore in F.Y 2017-18. The revenue receipts for the year 2019-20 (BE) Rs. 83147.99 crore, is however is expected to be less than the previous fiscal year (2018-19) which stood at Rs. 89854.30 crore (BE, 2018-19).

The revenue receipts position of the State for Financial Year 2018-19 (R.E) is shown in the following pie diagram.





#### 4.1.2 State's Own Resources

The bulk of the Assam's revenue receipts comprise of grants from the Central Government and share in Central taxes. The total own tax revenue of the State was Rs. 10505.00 crore in F.Y 2011-12 which increased to Rs. 17287.49 in F.Y 2017-18 with an annual growth rate of 12.9%. It is further expected that the State's own revenue resources would increase from Rs. 17287.49 crore in F.Y 2017-18 to Rs. 31667.80 crore in F.Y 2018-19 (R.E). However, the revenue mobilization is likely to fall during the next fiscal year and is expected to Rs. 26525.80 crore in F.Y 2019-20 (B.E). During the F.Y 2019-20 (B.E), an amount of Rs. 17994.15 crore is expected to be realized as state's own tax revenue and Rs.8531.65 crore as non-tax revenue. The own tax revenue accounted for 20.6% of total revenue receipts for F.Y 2018-19 (R.E) and it is expected to increase to 21.6% in Financial Year 2019-20 (B.E).

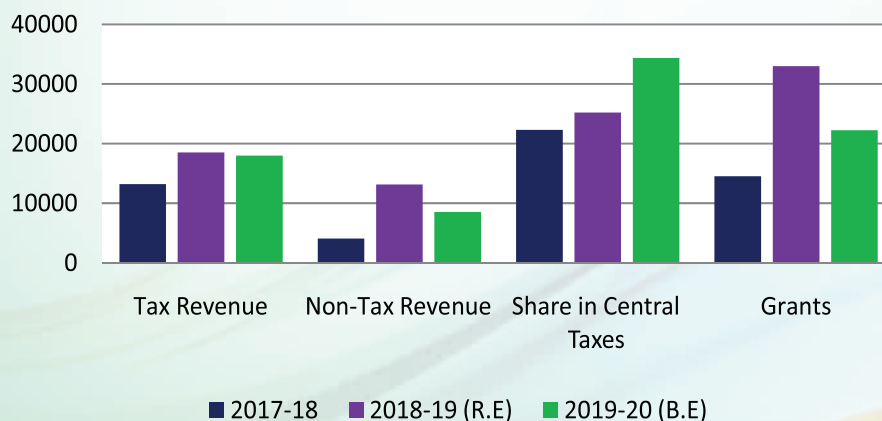
Year	State's Own Resources			Transfer from the Centre				Total Revenue Receipt
	Tax Revenue	Non-Tax Revenue	Total	Share in Central Taxes	Plan Grants	Non-Plan Grants	Total	
<b>2011-12</b>	7638.24	2866.76	10505.00	9283.53	6876.55	790.32	16950.40	27455.40
<b>2015-16</b>	10106.50	2741.57	12848.07	16784.88	9494.27	3330.48	29609.63	42457.70
<b>2016-17</b>	12079.56	4353.12	16432.68	20188.64	10444.07	2154.41	32787.12	49219.81
		Grants						
<b>2017-18</b>	13215.52	4071.97	17287.49	22301.54	14541.91		36843.45	54130.94
<b>2018-19 (R.E)</b>	18508.01	13159.79	31667.80	25215.85	32970.65		58186.50	89854.30
<b>2019-20 (B.E)</b>	17994.15	8531.65	26525.80	34374.20	22247.99		56622.19	83147.99

Source: Department of Finance (Economic Affairs), Govt. of Assam 12598.48

#### 4.1.3 Transfer from the Centre

Resource flow from the Centre was Rs. 58186.50 crore in the F.Y 2018-19(R.E) as against Rs. 36843.45 crore in 2017-18 an increase of 57.9%. During the F.Y 2019-20 (B.E), it is expected that State would receive Rs. 56622.19 crore as transfer from Central fund as against Rs.58186.50 crore in F.Y 2018-19(R.E). The share of Central taxes is estimated to be Rs. 34374.20 crore in F.Y 2019-20(B.E) as against Rs. 25215.85 crore in F.Y 2018-19(R.E) showing an increase of 36.3 %. During the F.Y 2019-20 (B.E), the transfer of Grants from centre is estimated at Rs. 22247.99 crore with a deficit of 32.52% over the previous F.Y year.

**Component wise revenue receipts during last three years**



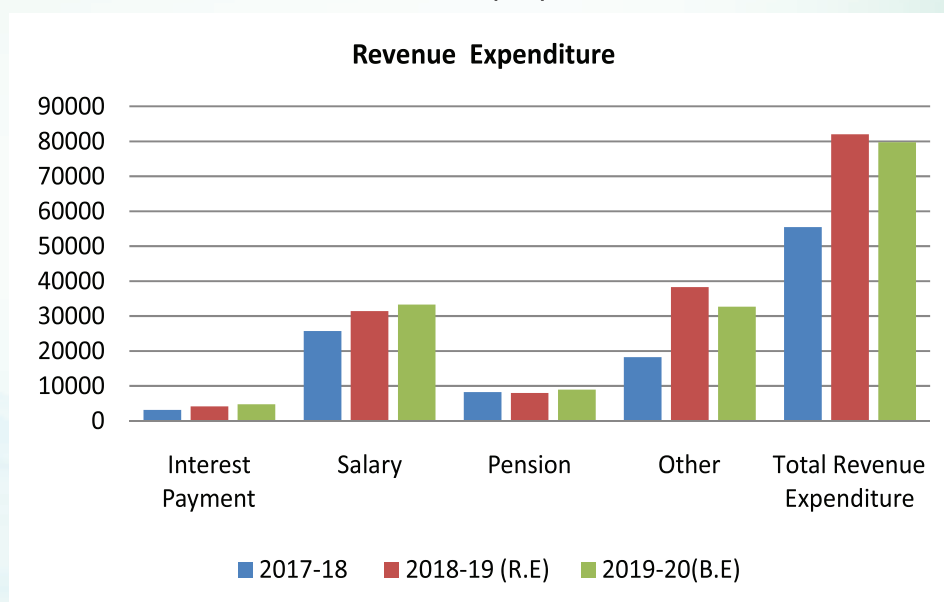
## 4.2 Revenue Expenditure

Total revenue expenditure of State Government was Rs.26528.55 crore in F.Y 2011-12 and it increased to Rs.55480.94 crore in 2017-18. The salary expenditure is major revenue expenditure of the government. The proportion of salary expenditure was 24.5% to total expenditure in F.Y 2011-12 and it increased to 46.4% in F.Y 2017-18. The share of salary expenditure to total revenue expenditure for the year F.Y 2019-20(B.E) is estimated to grow to 41.8% as against 38.4% in F.Y 2018-19(R.E). The During the period from F.Y 2011-12 to F.Y 2017-18, the salary expenditure (Revenue) had increased by 2.21 times.

Revenue Expenditure							
<b>(Rs. in crore)</b>							
Year	Plan Expenditure		Non-Plan Expenditure			Total Revenue Expenditure	
	Total	Salary	Total	Interest Payment	Salary		Pension
<b>2011-12</b>	6487.76	668.89	20040.79	2074.50	10978.54	3136.07	26528.55
<b>2015-16</b>	9435.57	1381.55	27575.85	2618.44	17102.92	5985.23	37011.42
<b>2016-17</b>	13433.64	1450.04	35929.08	2963.75	17759.09	6564.64	49362.72
	Interest Payment	Salary	Pension	Other		Total Revenue Expenditure	
<b>2017-18</b>	3205.32	25751.61	8287.34	18236.67		55480.94	
<b>2018-19 (R.E)</b>	4193.35	31453.71	8028.49	38329.26		82004.81	
<b>2019-20 (B.E)</b>	4792.92	33306.25	8982.01	32661.08		79742.26	

Source: Department of Finance (Economic Affairs), Govt. of Assam

Another component of revenue expenditure is interest payment. The share of interest payment expenditure to the total revenue expenditure has gradually come down from 7.8% in F.Y 2011-12 to 6.0% in F.Y 2016-17 and further down to 5.8% in F.Y 2017-18. It is expected to be 5.1% in F.Y 2018-19(R.E). The share of pension expenditure to total revenue expenditure was about 11.8% in F.Y 2011-12 and it is expected to decline to 9.8 % in F.Y 2018-19(R.E).



### 4.2.1 Revenue Expenditure under Different Heads

Out of the total revenue outlay for F.Y 2019-20(B.E), Social Services accounted for 45.7%, General Services (33.3%), Economic Services (20.4%) and Grants in Aid (0.6%) respectively. The relative shares

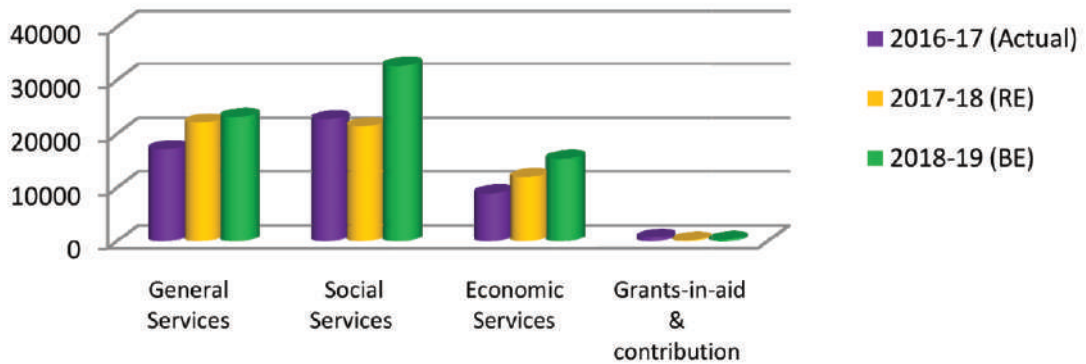
of expenditures in F.Y 2011-12 under the four heads viz. General Service, Social and Community Services, Economic Services and Grants-in-aid were 36.7 %, 43.2%, 17.6% and 2.5% respectively.

**Table:4.3**  
**Revenue Expenditure under Different Heads**

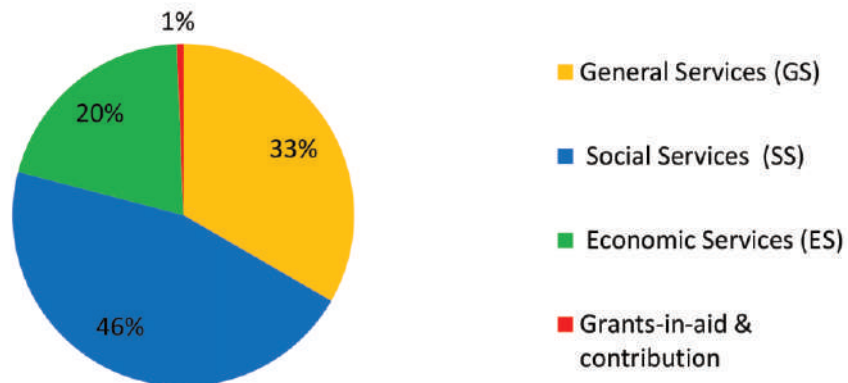
Sources of Revenue	2011-12	2016-17	2017-18	2018-19 (R.E)	2019-20(B.E)
General Services (GS)	9743.67 (36.7%)	17123.19 (34.8%)	22057.80 (39.8%)	25498.08 (31.1%)	26591.73 (33.3%)
Social Services (SS)	11465.79 (43.2%)	22673.14 (45.9%)	21373.17 (38.5%)	37647.03 (45.9%)	36449.23 (45.7%)
Economic Services (ES)	4663.27 (17.6%)	8914.03 (18.1%)	11924.92 (21.5%)	18411.01 (22.5%)	16215.22 (20.4%)
Compensation & Assignment to Local Bodies & PRIs (Grants-in-aid & contribution)	655.83 (2.5%)	652.36 (1.32%)	125.05 (0.2%)	448.68 (0.5%)	486.08 (0.6%)
<b>Total Expenditure (1+2+3+4)</b>	<b>26528.56</b>	<b>49362.72</b>	<b>55480.94</b>	<b>82004.81</b>	<b>79742.26</b>

Source: Department of Finance (Economic Affairs), Govt. of Assam

**Head wise Revenue Expenditure ( Rs. in crore)**



The revenue expenditure position during F.Y 2019-20(B.E) is shown in the following pie diagram.



#### 4.2.2. Trend of Revenue Expenditure

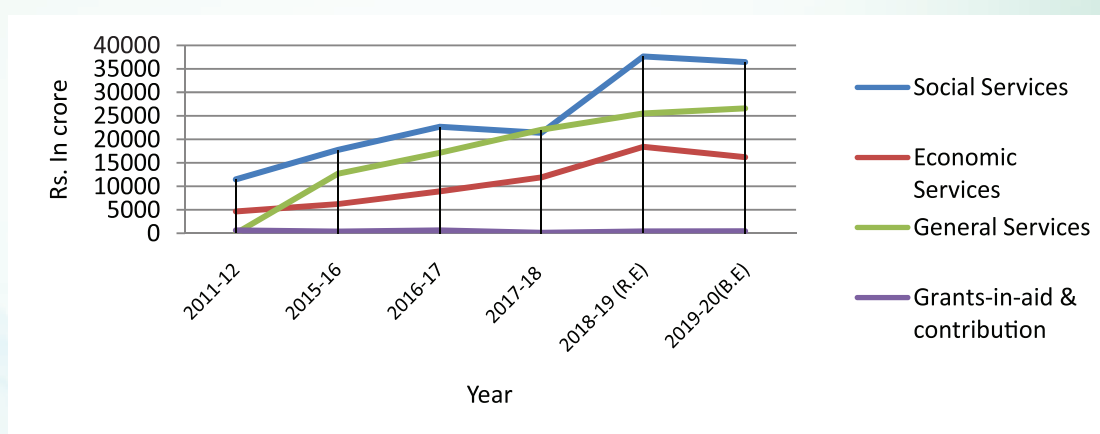
The trend of revenue expenditure is shown in **Table: 4.4**.

Year	Development Expenditure			Non-Development Expenditure	Grants-in-Aid & Contributions	Total
	Social Services	Economic Services	Total	General Services		
	Rs. in crore					
2011-12	11465.79 (43.22%)	4663.27 (17.58%)	16129.06 (60.80%)	9743.67 (36.73%)	655.83 (2.47%)	26528.56 (100.00%)
2015-16	17740.36 (47.93%)	6239.87 (16.86%)	23980.23 (64.79%)	12656.03 (34.19%)	375.16 (1.01%)	37011.42 (100.00%)
2016-17	22673.14 (45.93%)	8914.03 (18.06%)	31587.17 (63.99%)	17123.19 (34.69%)	652.36 (1.32%)	49362.72 (100.00%)
2017-18	21373.17 (38.52%)	11924.92 (21.49%)	33298.09 (60.01%)	22057.80 (39.76%)	125.05 (0.23%)	55480.94 (100%)
2018-19 (R.E)	37647.03 (45.91%)	18411.01 (22.45%)	56058.04 (68.36%)	25498.08 (31.09%)	448.68 (0.55%)	82004.80 (100%)
2019-20 (B.E)	36449.23 (45.71%)	16215.22 (20.33%)	52664.45 (66.04%)	26591.73 (33.35%)	486.08 (0.61%)	79742.26 (100%)

Source: Department of Finance (Economic Affairs), Govt. of Assam

The share of expenditure on social services to total revenue expenditure has decreased from 43.22% in F.Y 2011-12 to 38.52% in F.Y 2017-18. The revised estimate for 2018-19, projects an increase in share of social service expenditure up to 45.91% of total revenue expenditure. On the other hand, the share of expenditure on economic services to total revenue expenditure has increased from 17.58% in F.Y 2011-12 to 22.45% in F.Y 2018-19 (R.E). The share of non-development expenditure to total revenue expenditure was almost at the same level during F.Y 2011-12 (60.80%) and F.Y 2017-18 (60.02%) but is expected to increase sharply (68.36%) in F.Y 2018-19 as per revised estimate.. Also the grant-in-aid and contributions under revenue expenditure is on a decreasing trend since Financial Year 2011-12.

The trend of Revenue expenditure is shown in the following line diagram.



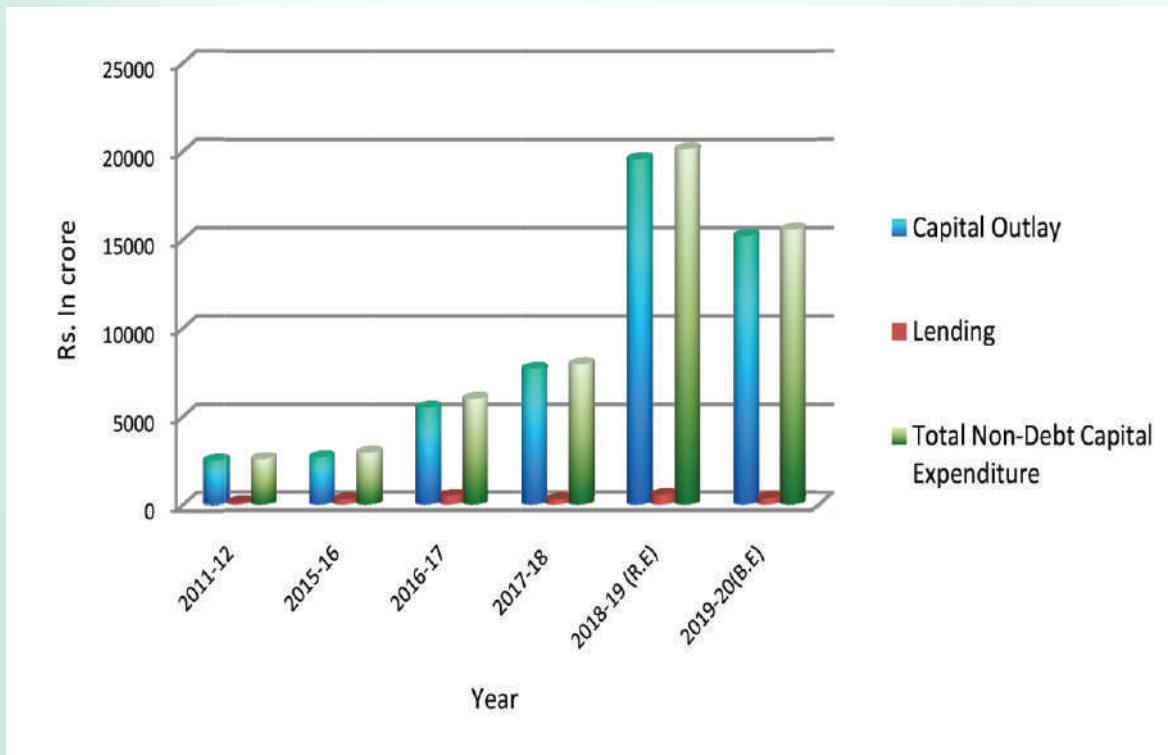
#### 4.3 Non-Debt Capital Expenditure:

Non-debt capital expenditure consists of capital outlay and lending. This excludes loan repayment. The total capital out lay to total expenditure has increased from 8.60% in 2011-12 to 12.13% in F.Y 2017-18 and it is expected to reach around 15.97% in F.Y 2019-20 (B.E). During the period from F.Y 2011-12 to F.Y 2018-19, the share of lending to total expenditure of the state has marginally increased from 0.30 % to 0.54%. The share of total non-debt capital expenditure to total expenditure was around 12.53% in F.Y 2017-18 and it is expected to increase 16.33% for F.Y 2019-20(B.E).

<b>Rs. in crore</b>									
<b>Year</b>	<b>Capital Outlay</b>			<b>Lending</b>			<b>Total Non-Debt Capital Expenditure</b>	<b>Total Revenue Expenditure</b>	<b>Total Expenditure</b>
	Plan	Non-Plan	Total	Plan	Non-Plan	Total			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>2011-12</b>	2431.34	74.67	2506.01	81.81	6.47	88.28	2594.29	26528.55	29122.84
<b>2015-16</b>	2704.05	-13.14	2690.91	108.30	151.79	260.09	2951.00	37011.42	39962.42
<b>2016-17</b>	5270.25	231.83	5502.08	227.97	271.41	499.38	6001.46	49362.72	55364.18
<b>2017-18</b>			7692.84			254.07	7946.91	55480.94	63427.85
<b>2018-19 (R.E)</b>			19604.65			550.58	20155.23	82004.81	102160.04
<b>2019-20 (B.E)</b>			15219.20			348.32	15567.52	79742.26	95309.78

Source: Department of Finance (Economic Affairs), Govt. of Assam

The capital outlay, lending and total non-debt capital expenditure is shown in the bar-diagram given below.



#### 4.3.1. Receipts and Expenditure on Capital Account

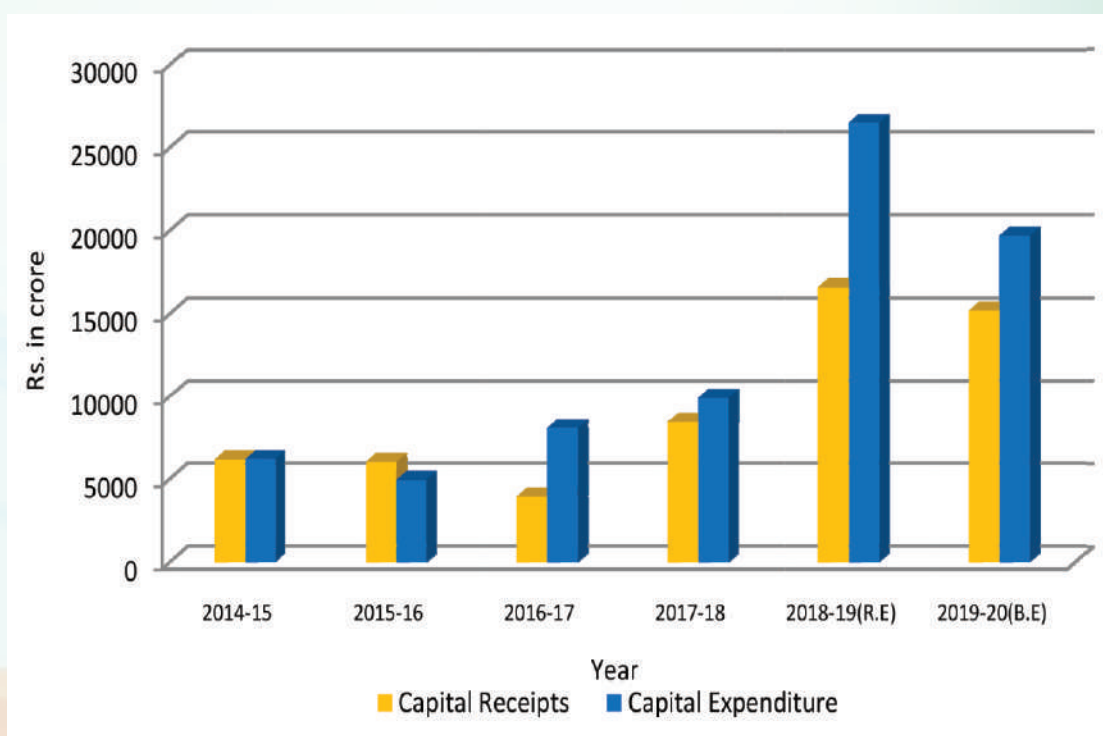
Total capital receipts increased from Rs. 6155.59 crore in F.Y 2014-15 to Rs. 8451.78 crore in F.Y 2017-18. It is expected to increase further to Rs. 15191.06 crore in F.Y 2019-20(B.E) as against Rs.16587.64 crore in F.Y 2018-19(R.E) . During the F.Y 2019-20 (B.E), internal debt decreased by 0.3% as against the previous fiscal year.

Table: 4.6

Receipt and Expenditure on Capital Account						
Rs. in crore						
Year	Receipts		Expenditure			
	Total	Of which Internal Debt	Total	Of which		
				Capital Outlay	Disbursement of Loans and Advances	Repayment of Public Debt
2014-15	6155.59	6095.80	6170.02	3912.28	630.71	1627.03
2015-16	6008.18	5447.50	4919.90	2690.91	260.09	1968.90
2016-17	3920.31	3844.36	8044.09	5502.08	499.38	2042.63
2017-18	8451.78	8377.51	9955.51	7692.84	254.07	1958.60
2018-19 (R.E)	16587.64	13926.45	26485.54	19604.65	550.58	6330.31
2019-20 (B.E)	15191.06	13890.48	19676.65	15219.20	348.32	4109.13

Source: Department of Finance (Economic Affairs), Govt. of Assam

A reading of Assam state budget shows that capital receipts increased from Rs.6170.02 crore in F.Y 2014-15 to Rs. 26485.54 crore in F.Y 2018-19(R.E). During the period from F.Y 2014-15 to F.Y 2018-19(R.E), capital outlay had increased by 5 times and repayment of public debt by almost 4 times. During the same period, disbursement of loans and advances showed a fluctuating trend. Internal debt of the state government also increased during the period by 2.3 times.



4.3.2 Ratio of Revenue and Capital Expenditure to Total Expenditure

Table:4.7

							Rs. in crore
Year	Revenue Expenditure	Non-Debt Capital Expenditure	Total Expenditure	% share of Revenue Expenditure	% share of Non-debt Capital Expenditure	Capital Expenditure as % of GSDP	GSDP at Current Prices
2014-15	39078.17	4542.98	43621.15	89.59	10.41	2.32	195723.15
2015-16	37011.42	2951.00	39962.42	92.62	7.38	1.29	227958.83
2016-17	49362.72	6001.46	55364.18	89.16	10.84	2.36	254478.25
2017-18	55480.94	7946.91	63427.85	87.47	12.53	2.75	288493.57
2018-19 (R.E)	82004.81	20155.23	102160.04	80.27	19.73	6.23	323555.38
2019-20 (B.E)	79742.26	15567.52	95309.78	83.67	16.33	*NA	*NA

Compilation of advance estimates of GSDP for 2019-20 is not completed till preparation of the report. **Source:** Department of Finance (Economic Affairs), Govt. of Assam & Directorate of Economics & Statistics, Assam

An important indicator of state government’s trend of public finance is the ratio of revenue expenditure to total expenditure. The ratio of revenue expenditure to total expenditure was 89.59% in F.Y 2014-15 and it has gradually come down to 89.16% in F.Y 2016-17, 87.47% in F.Y 2017-18 and 80.27% in F.Y 2018-19(R.E) . On the other hand, ratio of Non-debt capital expenditure to total expenditure has increased from 10.84% in F.Y 2016-17 to 12.53% in F.Y 2017-18 and 19.73% in F.Y 2018-19(R.E).

4.3.3. Borrowings and Repayment

The sources of borrowings for the State Governments are open market borrowing, loans from financial institutions like NABARD (under RIDF, WIF schemes etc.), loans from Government of India against EAPs.

**Table:4.8**

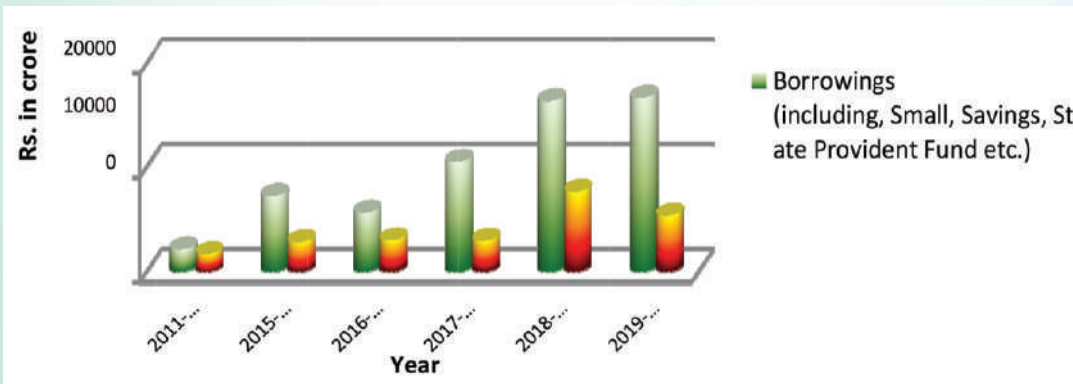
**Borrowings and Repayment**

			Rs. in crore
Year	Borrowings (including, Small Savings, State Provident Fund etc.)	Repayment of loans (including Small Savings, State Provident Fund etc.)	Net Loans
2011-12	2114.47	1673.26	441.21
2015-16	7205.80	2816.57	4389.23
2016-17	5649.45	2993.91	2655.54
2017-18	10476.20	2960.07	7516.13
2018-19(R.E)	16272.95	7619.51	8653.44
2019-20(B.E)	16597.98	5375.28	11222.70

Source: Department of Finance (Economic Affairs), Govt. of Assam

The borrowings by government of Assam was Rs.2114.47 crore in F.Y 2011-12 and it increased to Rs.16272.95 crore in F.Y 2018-19(R.E). During this period, repayment of loans was increased by 4.5 times.

Borrowing and repayment of loans is shown in the following bar-graph.



#### 4.3.4. Debt Position

Debt Position of Assam is shown in the **Table: 4.9**

<b>Table:4.9</b>			
<b>Debt Position of Assam</b>			
	<b>Rs. in crore</b>		
<b>Year</b>	<b>Outstanding Debt</b>	<b>GSDP at Current Prices</b>	<b>Debt-GSDP Ratio (%)</b>
<b>2011-12</b>	25936.49	143174.91	18.12
<b>2015-16</b>	35690.22	227958.83	15.65
<b>2016-17</b>	38345.77	254478.25	15.07
<b>2017-18</b>	45861.90	288493.57	15.90
<b>2018-19(R.E)</b>	54515.34	323555.38	16.85
<b>2019-20(B.E)</b>	65738.04	*NA	*NA

\*Compilation of advance estimates of GSDP for 2019-20 is not completed till preparation of the report.  
**Source:** Department of Finance (Economic Affairs), Govt. of Assam & Directorate of Economics & Statistics, Assam.

The outstanding debt position of Assam was Rs. 25936.49 crore in F.Y (2011-12) and it increased to Rs. 65738.04 crore in F.Y 2019-20 (B.E). The outstanding debt position of state government increased almost 2.5 times during the period 2011-12 to 2019-20. The Debt-GSDP Ratio and the Ratio of interest payment to total revenue receipts are the standard criteria for determining the debt sustainability of a State.

#### 4.3.5. Debt Stock and Interest Payment

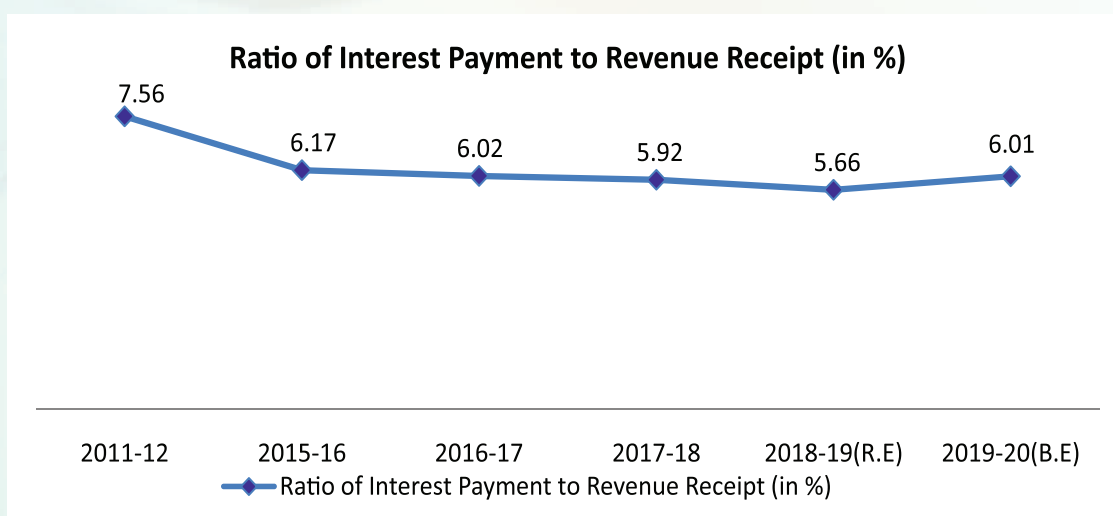
The total debt stock and interest to total revenue receipts in terms of percentage is shown in **Table: 4.10**.

<b>Table:4.10</b>				
<b>Interest Payment to Revenue Receipt</b>				
	<b>Rs. in crore</b>			
<b>Year</b>	<b>Total Revenue Receipt</b>	<b>Debt Stock</b>	<b>Interest Payment</b>	<b>Ratio of Interest Payment to Revenue Receipt (in %)</b>
<b>2011-12</b>	27455.40	25936.49	2074.40	7.56
<b>2015-16</b>	42457.70	35690.22	2618.44	6.17
<b>2016-17</b>	49219.81	38345.77	2963.75	6.02
<b>2017-18</b>	55130.94	45861.90	3205.32	5.81
<b>2018-19(R.E)</b>	89854.30	54515.34	4193.35	4.67
<b>2019-20(B.E)</b>	83147.99	65738.04	4792.92	5.76

Source: Department of Finance (Economic Affairs), Govt. of Assam

The ratio of interest payment to total revenue receipt has been gradually decreasing over the years; from 7.56% in F.Y 2011-12 to 5.81% in F.Y 2017-18 and 4.67% in F.Y 2018-19(R.E). However the budget estimate for 2019-20 has projected an increase and the ratio is expected to be 5.76





#### 4.3.6. FISCAL SECNARIO OF THE STATE:

The trend of fiscal parameters of the State is shown in Table: 4.11.

**Table:4.11**

FISCAL PARAMETERS					
					(Rs. in crore)
Year	Revenue Deficit(+)/ Surplus(-)	Fiscal Deficit(+)/ Surplus(-)	Primary Deficit(+)/ Surplus(-)	Fiscal Deficit(+)/ Surplus(-) as % of GSDP	GSDP at Current Price
<b>2011-12</b>	(-)926.85	(+)1646.05	(-)428.44	(+)1.15	143174.91
<b>2015-16</b>	(-)5446.28	(-)3005.47	(-)5623.91	(-)1.31	227958.83
<b>2016-17</b>	(+)142.92	(+)6125.78	(+)3162.03	(+)2.41	254478.25
<b>2017-18</b>	(+)1350.01	(+)9292.21	(+)6086.89	(+)3.33	288493.57
<b>2018-19 (R.E)</b>	(-)7849.50	(+)9759.00	(+)5565.65	(+)3.00	323555.38
<b>2019-20 (B.E)</b>	(-)3405.73	(+)11113.46	(+)6320.54	(+)2.97	*NA

Compilation of advance estimates of GSDP for 2019-20 is not completed till preparation of the report, **Source:** Department of Finance (Economic Affairs), Govt. of Assam & Directorate of Economics & Statistics, Assam.

During 2017-18 F.Y, the state had faced revenue deficit of Rs. 1350.01 crore and a fiscal deficit of Rs. 9292.21 crore. The budget estimate for 2019-20 projects a revenue surplus of Rs. 3405.73 crore against a fiscal deficit of Rs.11113.465 crore. During the F.Y 2017-18, the fiscal deficit of Assam was 3.33% of GSDP and it is expected that the fiscal deficit would decline to 2.97% of GSDP in F.Y 2019-20(B.E).

#### 4.4. Collection of Tax Revenue

During F.Y 2018-19, the Finance (Taxation) Department had collected Rs. 14050.02 crore (including GST revenue) against Rs 12055.87 Crore in F.Y 2017-18 with a growth of 16.5%. During the period from F.Y 2011-12 to F.Y 2018-19, the collection of taxes under the different taxation acts has increased from Rs. 6604.31 crore to Rs. 14050.02 crore, an increase of 2.13 times .

Collection of taxes under different taxation acts for the F.Y 2011-12 and from Financial Year 2015-16 to F.Y 2018-19 is shown in Table: 4.11.

<b>Table:4.11</b>					
<b>Collection of Taxes Under Different Taxation Act</b>					
<b>Rs. in crore</b>					
Taxation Act	2011-12	2015-16	2016-17	2017-18	2018-19
The Assam Value Added Tax Act, 2003	5181.44	7013.93	8176.31	6027.42	4607.05
The Central Sales Tax Act, 1956	512.51	474.05	558.26	338.52	206.44
Assam Health Infrastructure and Services Development Fund, 2009 (w.e.f 01-07-2015)	-	5.74	17.07	6.93	-
The Assam Entry Tax Act, 2008	518.75	580.93	1015.49	260.58	6.90
The Assam Professions, Trades Calling & Employment Tax Act, 1947	164.27	183.05	184.27	193.38	232.02
The Assam Electricity Duty Act, 1964	36.67	48.68	49.44	60.19	72.75
The Assam Amusement and Betting Tax Act, 1939	5.87	64.87	153.18	28.61	0.04
The Assam Taxation on Luxuries (Hotels & Lodging Houses ) At, 1989	5.89	9.74	14.49	5.83	0.74
The Assam Taxation (on Specified Land) Act, 1990	95.64	91.14	102.02	63.84	53.51
The Assam Agriculture Income Tax Act, 1939	83.27	32.45	23.22	13.52	13.45
<b>Sub Total:</b>	<b>6604.31</b>	<b>8504.57</b>	<b>10293.75</b>	<b>6998.82</b>	<b>5192.90</b>
The Goods and Service Tax, 2017 w.e.f August'2017 ( GST )					
SGST	-	-	-	1837.47	3560.80
CGST	-	-	-	1181.96	-
IGST	-	-	-	1977.58	3867.32
Provisional /advance settlement of IGST				262.00	974.00
<b>Sub Total (SGST &amp; IGST)</b>				<b>4077.05</b>	<b>8402.12</b>
<b>Total without GST Compensation</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11075.87</b>	<b>13595.02</b>
<b>Compensation under GST</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>980.00</b>	<b>455.00</b>
<b>Total with GST Compensation</b>				<b>12055.87</b>	<b>14050.02</b>

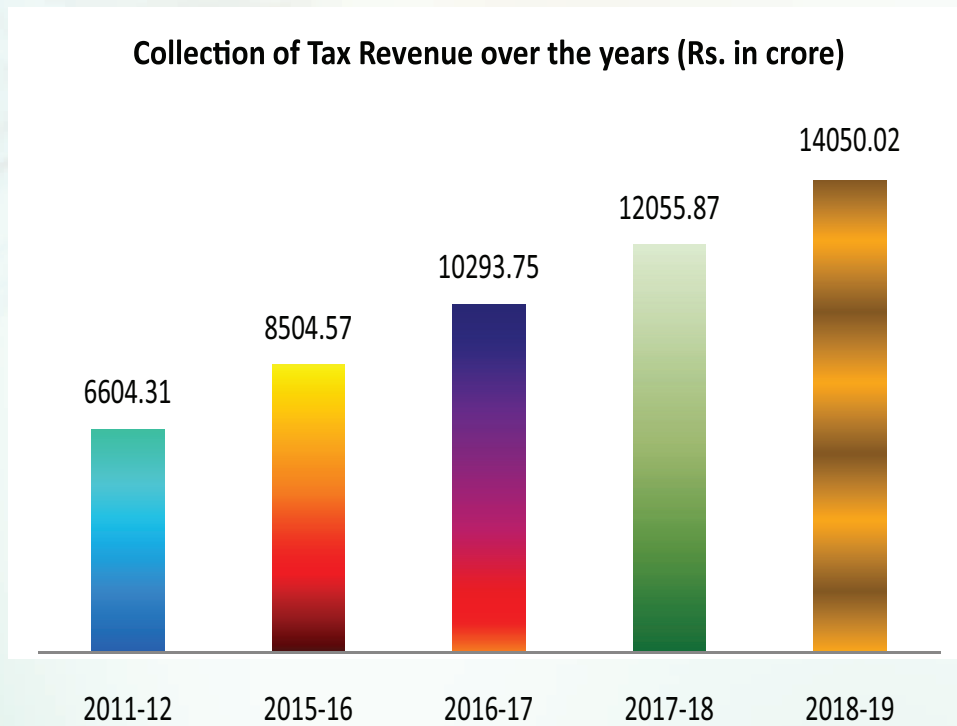
Source: Commissionerate of Taxes, Assam

The various acts relating to taxation that were operational in Assam during FY 2018-19 were:

1. Goods and Services Tax, 2017 (w.e.f 01/07/2017)
2. The Assam Value Added Tax Act, 2003 (w.e.f 01/05/2005) (only for 5 Petroleum product (Petrol, Diesel, ATF, Natural Gas, Petroleum Crude) and Liquor for human consumption.
3. The Central Sales Tax Act, 1956 - except 5 Petroleum product (Petrol, Diesel, ATF, Natural Gas, Petroleum Crude) and Liquor for human consumption.
4. The Assam Professions, Trade, Callings and Employments Taxation Act, 1947.
5. The Assam Electricity Duty Act
6. The Assam Taxation (on Specified Land) Act, 1990
7. The Assam Agricultural Income Tax Act, 1939.

The state government mobilizes tax revenue under these various taxation laws and acts.

## Collection of Tax Revenue over the years (Rs. in crore)

**4.4.1 The Assam Industries (Tax Reimbursement for eligible units) Scheme:**

The scheme had been framed in order to provide refund of State GST under the area based Industrial Reimbursement Scheme. Assam is the first State in the North Eastern Region and in fact, one of the first in the entire country to implement the area based industries scheme in order to attract and induce investment in the State. Under the scheme, an amount of Rs. 253.94 crore of State GST has been reimbursed during 2018-19 to the 3120 no. of eligible industries. The reimbursement will usher the growth of further industrialization in the State.

**4.4.2 Relief to Small Tea Growers**

The Government has exempted the small tea growers from burden of tax on green tea leaf under the Assam Taxation on Specified lands (Amendment) Act, 2018 from 25 paise to Nil with effect from 7<sup>th</sup> December, 2018 in order to promote the cultivation and manufacturing of tea by marginal and small tea growers. This step is expected to ensure the growth of employment in the State. The department has collected Rs.70.00 crore from small tea growers during last three years i.e from F.Y 2015-16 to F.Y 2017-18. Also, considering the crisis faced by the tea estates of Assam, the Government of Assam has exempted the payment of tax on green tea leaves grown or bought by them under the Assam Taxation on Specified Land, 1990 for three years with effect from 1<sup>st</sup> January, 2019. The exemption granted to the entire tea growers/industries shall result in net savings which will help them to further invest in expansion of cultivation of tea and generation of income and employment.

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**CHAPTER-V****AGRICULTURE**

Agriculture in Assam at present contributes about 20 per cent of the state's net domestic product and provides livelihood support to about 70 per cent population of the state. The size of operational holdings on an average is 1.10 hectare, and more than 85 per cent farmers are either small or marginal with average land holding of just about 0.36 hectares. The data thus reveal that preponderance of small and fragmented land holdings along with insecure tenancy are the major reasons - underdevelopment of agriculture sector of the state. Government of Assam recognises the problems associated with agriculture sector of the state and puts efforts to bring in rapid changes to the sector and serve the farmers' causes. Towards this government of Assam declared 2015-16 as the year of agriculture and constituted a Task Force to achieve the objectives.

**TABLE-5.1****CONTRIBUTION OF AGRICULTURE AND ALLIED SECTOR TO GSDP BOTH AT CURRENT AND CONSTANT PRICES FOR 2016-17, 2017-18 AND 2018-19**

Sector	2016-17		2017-18(P.E)		2018-19(Q.E)	
	Current Prices	Constant Prices	Current Prices	Constant Prices	Current Prices	Constant Prices
Crops	13.44	12.96	12.27	12.13	11.33	11.54
Livestock	0.98	0.92	1.14	0.93	1.15	0.92
Forestry % & Logging	1.06	0.83	0.99	0.80	0.95	0.79
Fishing & Aquaculture	2.50	2.57	2.36	2.53	2.36	2.51
Agriculture & Allied	17.98	17.27	16.76	16.39	15.80	15.76

The share of agriculture and its allied activities in GSDP at current prices had marginally come down from 19.89% in 2011-12 to 16.76% in 2017-18(P.E) and 15.80% in 2018-19(Q.E). The trend has been the same similar picture has also been reflected at constant prices. The decline of During the period 2018-19, the contribution of Agriculture and allied sector to total GSDP at constant prices (2011-12 has slightly declined by 0.63% was due to less production of paddy, pulses and some vegetable crops. The reasons for this decline is attributed to various factors such as like soil, river bank erosion of ever widening Brahmaputra River, conversion of agriculture land because of urbanization, industrialization, expansion of roadways and other infrastructural development activities have contributed to the decline or stagnancy of the agriculture sector of the state.

Table 5.2 shows the annual growth rate of GSDP in respect of agriculture and its allied sector at current prices as well as constant prices for the year 2018-19(Q.E.)

**ANNUAL GROWTH RATE OF GSDP IN AGRICULTURE AND ITS ALLIED SECTOR****TABLE-5.2****Annual Growth Rate of GSDP in Agriculture and allied Sector during 2018-19(Q.E)**

Industry sector	Current Prices	Constant Prices
Crop	3.59%	1.70%
Livestock	12.47%	5.82%
Forestry and logging	7.74%	5.46%
Fishing and aquaculture	12.40%	5.87%
Agriculture and allied sector	5.68%	2.76%

Source:- Directorate of Economics and Statistics, Assam

TABLE-5.3

**GROSS VALUE ADDED OF AGRICULTURE AND ALLIED SECTOR AT CONSTANT PRICES NEW  
BASE (2011-12) SERIES**

(Rs. In lakh)

Sl No.	Industry sector	2011-12	2016-17	2017-18 (P.E)	2018-19 (Q.E)
1	2	3	4	5	6
1	Agriculture, Forestry and Fishing	2848113	3500560	3599931	3699324
1.1	Crops	2061487	2625728	2663473	2708705
1.2	Livestock	159289	186202	205035	216963
1.3	Forestry & Logging	231388	167815	175224	184794
1.4	Fishing and aquaculture	395949	520814	556199	588862
GSDP		14317491	20265633	21958040	23477179

TABLE-5.4

**GROSS STATE DOMESTIC PRODUCTS OF ASSAM AT CURRENT PRICES  
NEW BASE (2011-12) SERIES**

(Rs. In Lakhs)

Sl No.	Industry sector	2011-12	2016-17	2017-18(P.E)	2018-19(Q.E)
1	2	3	4	5	6
1	Agriculture, Forestry and Fishing	2848113	4576441	4836062	5110691
1.1	Crops	2061487	3419844	3539231	3666169
1.2	Livestock	159289	250298	330298	371474
1.3	Forestry & Logging	231388	269621	286230	308377
1.4	Fishing and aquaculture	395949	636678	680302	764671
GSDP		14317491	25447825	28849357	32355538

**AGRICULTURE CREDIT:**

Recognizing contributions of the farmers, the state government has issued Identity Cards to the farmers. These Identity Cards are being used to develop a database of the farmers.

Recognising the necessity to ensure credit flow for investment and development of the agriculture sector government of Assam has introduced "zero interest crop loans" by giving 100 percent interest subventions on agricultural loans taken by farmers of Assam to the limit of Rs.1.00 lakh.

It is anticipated that this endeavour will encourage the farmers to avail agriculture loans towards building the rural economy.

**Kisan Credit Cards (KCC)**

The Directorate of Agriculture, Assam during the period 2001-02 to 2018-19 has issues 31 lakhs Kisan Credit Cards (KCC) and sanctioned Rs. 11769.62 crores as credit. The figures of KCC issues and sanctioned amount of credit for the past three years are presented in Table 5.6.

TABLE - 5.6

**AGRICULTURE CREDIT KISSAN CREDIT CARDS (KCC) ISSUED & FINANCING**

Sl No.	Year	No of KCC issued	Credit limit sanctioned (Rs. In crore)
1	2016-17	281773	1259.88
2	2017-18	349362	1492.06
3	2018-19	298629	1415.58

Source : Directorate of Agriculture, Assam

**SUPPORT SCHEMES FOR AGRICULTURE DEVELOPMENT**

In addition to the provisioning of credit, to fulfil the dream of the Honourable Prime Minister for 'Harkhet Me Pani', the state government has prepared District Irrigation Plan, Annual Action Plan and State Irrigation Plan to develop irrigation facilities for the state in a holistic manner. Towards the mission to develop the Agriculture sector, government of Assam had distributed 787 power tillers, 6447 tractors,

and 40 pump sets in the year 2017-18. In the year 2018-19 the government had distributed 3006 pump sets. The state government is also planning to build Majuli Island, the largest riverine island in the world as a hub of organic products with the trade mark in the name of "O Majuli". Productivity of most of the crops in the state is very low compared to the average of the country. The reasons of low productivity are primarily due to erratic rainfalls and various other impediments like floods, soil erosion and sand deposition in agriculture fields, though Assam is endowed with very rich and diverse soil conditions conducive for agriculture. Despite all the constraints, the state Agriculture Department has been successful to give an impetus to increase the production of food grains by implementing various programmes. In recent times the state has seen increase in productivity of food grains and cropping intensity. The Department has taken steps to formulate State and District specific plans considering the agro-climatic conditions, growth potentials and specific requirements of the districts with due emphasis on use of quality seeds of high yielding crop varieties, adoption of multi-cropping, access to assured irrigation, use of improved farm mechanization, use of bio-fertilizers and bio-pesticides, adoption of organic farming practices, establishing market linkage and ultimately creation of employment opportunities and enhancement of income of the people. The agriculture sector in the hill districts of the State, namely East Karbi-Anglong, West Karbi-Anglong and Dima Hasao is constrained because of inadequate transport and communication facilities, infrastructure, extensive practice of traditional Jhum cultivation and non-availability of markets etc. To improve condition of agriculture in the hill districts, the state government now puts emphasis on promotion of cash and horticultural crops, particularly on pineapple and citrus fruits and on ginger and turmeric. Emphasis is also on to support settled agriculture in terrace lands, wherever it seems feasible in the hill areas.

**WEATHER AND RAINFALL:**

The climate of Assam is sub-tropical with warm humid summers and cool dry winters. The state is situated in high rainfall zone with annual average rainfall of 2297.4 mm. The state normally receives 2 percent of the total rainfall in the winter season (January-February), 25 percent in the summer season (March-May), 65 percent in the monsoon season (June-September) and 7 percent in post-monsoon season (October-December). Assam is prone to floods, and drought like situations is also common. The state, though has natural potentialities to drive the agriculture sector, erratic and unpredictable weather conditions and floods have been creating adverse impact making the farmers vulnerable to the situations. Table 5.7 present crop season wise rainfall pattern for the last seven years

**RAINFALL DURING 2018-19:**

**TABLE 5.7  
CROP SEASON WISE AVERAGE RAINFALL IN ASSAM (Figure in mm)**

Year	Kharif season				Rabi season				All Season			
	Actual	Normal	Deviation from normal (%)	Pattern	Actual	Normal	Deviation from normal (%)	Pattern	Actual	Normal	Deviation from normal (%)	Pattern
2013	1529.5	2016.3	(-)24.0	Deficient	177.3	294.8	(-)40.0	Deficient	1706.8	2311.1	(-)26.1	Deficient
2014	1774.6	2001.0	(-)11.0	Normal	79.8	294.8	(-)73.0	Scanty	1854.4	2295.8	(-)19.0	Normal
2015	1936.5	2001.0	(-) 3.2	Normal	196.5	294.8	(-) 33.3	Deficient	2133.0	2295.8	(-)7.1	Normal
2016	1789.7	2001.0	(-)11.0	Normal	289.2	294.8	(-) 2.0	Normal	2078.9	2295.8	(-)9.4	Normal
2017	1983.5	2000.6	(-)1	Normal	306.4	294.8	(+) 4	Normal	2289.9	2295.4	(-) 0.2	Normal
2018	2444.1	3309.8	-26	Deficient	166.2	292.7	-43	Deficient	2610.3	3602.5	-28	Deficient
2019	11457.9	13329.70	-14	Normal	1215.4	1766.7	-31	Deficient	12673.3	15096.4	-16	Normal

Source: Directorate of Agriculture, Assam

Table 5.7 shows that the State had received actual rainfall of 11457.9 mm during 2019 against normal rainfall of 13329.70 mm in the Kharif season. This deviation is (-14%) from the normal. In the Rabi season of 2019 the deviation of rainfall was (-31%), overall deviation of rainfall in the state for the year being (-16%).

**AREA UNDER CROPS:**

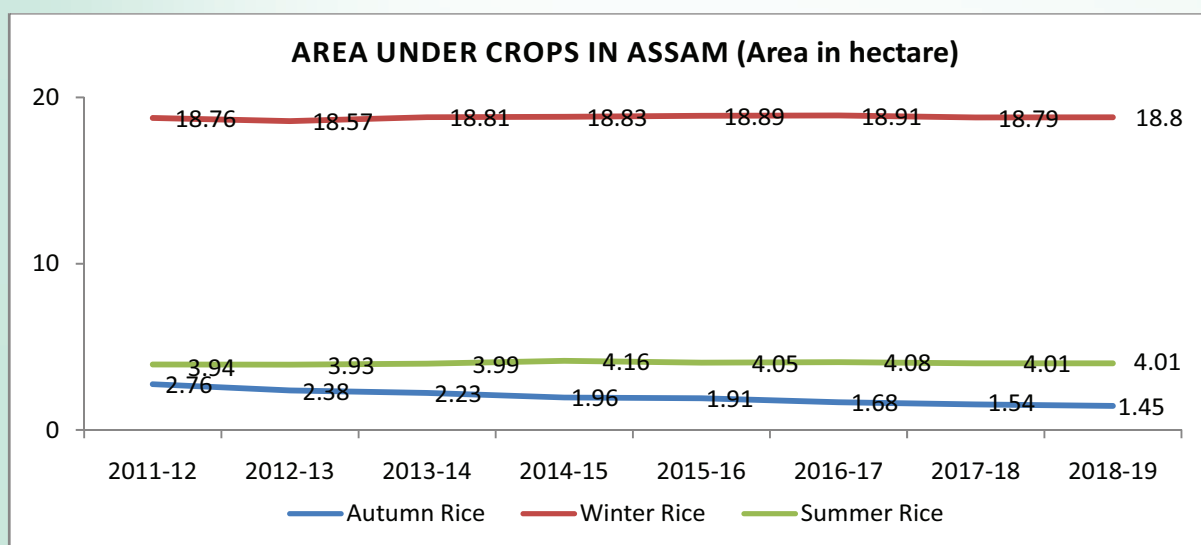
In Assam, the soil, topography, rainfall and climate are very conducive for cultivation of paddy. Rice occupies the highest area under cultivation and this crop receives priority from the farmers as well as from the department of Agriculture. As per the final estimates, the total area under paddy cultivation during the year 2018-19 was 24.25 lakhs hectares. Total area under paddy showed a steady decline due mainly to decline in area under autumn rice (ahu rice). The area under the other two varieties of rice viz., winter rice (sali rice) and summer rice (boro rice) has remained stable with cultivated areas being 18.79 lakh hectares and 4.01 lakh hectare respectively in 2017-18 (Table-5.10). On the other hand, area under wheat recorded a decline over the years; pulses and oilseeds area registered marginal oscillations, but acreages remained stagnant over the years.

**TABLE-5.8**  
**AREA UNDER CROPS IN ASSAM DURING THE PERIOD 2011-12 to 2018-19**  
**(In lakh hectares)**

Year	Autumn Rice	Winter Rice	Summer Rice	Total Rice*	Wheat	Total Pulses	Total Food grains	Total Oilseeds (excl. Coconut)
2011-12	2.76	18.76	3.94	25.46	0.40	1.32	27.43	2.76
2012-13	2.38	18.57	3.93	24.88	0.34	1.42	26.92	3.05
2013-14	2.23	18.81	3.99	25.03	0.31	1.50	27.13	3.05
2014-15	1.96	18.83	4.16	24.95	0.24	1.48	27.00	3.07
2015-16	1.91	18.89	4.05	24.85	0.21	1.42	26.83	3.11
2016-17	1.68	18.91	4.08	24.67	0.17	1.46	26.67	3.18
2017-18	1.54	18.79	4.01	24.34	0.18	1.54	26.42	3.14
2018-19	1.45	18.8	4.01	24.26	0.17	1.50	26.30	3.09

\*Total may not be equal due to rounding off.

Source: Directorate of Economics and Statistics, Assam (Line Graph)



**PRODUCTION:**

Total food grain production in the state is showing a rising trend since 2011-12. The total food grains production was 5525 thousand tonnes in 2017-18, increased to 5683 thousand tonnes in 2018-19.

**YIELD:**

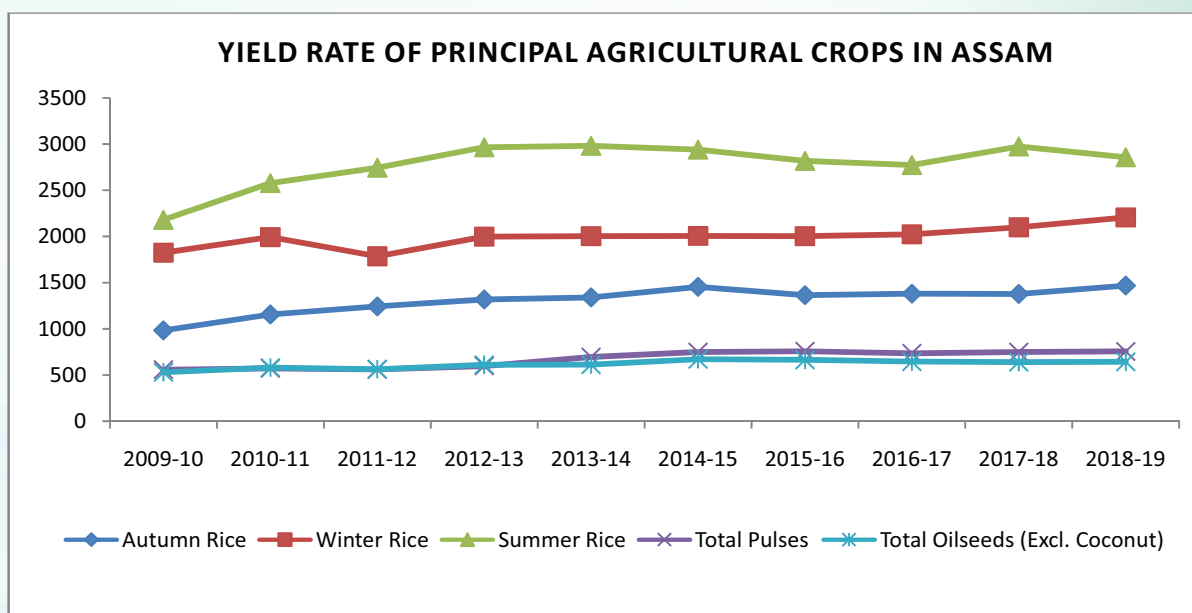
Yield rate of rice shows oscillations during the years 2011-12 to 2018-19 for autumn and summer rice. Winter rice, on the other hand, shows steady increase in yield from 1785 Kg/hectare in 2011-12 to 2205 (Kg/Hec) in 2018-19. The yield of summer rice in 2018-19 was 2858 (Kg/Hec.) compared to 2975 (Kg/Hec.) in 2017-18. Yield of pulses and oilseeds in the state is showing steady growth over the years. In the year 2018-19, yield of autumn rice was increased by 6.6 percent compared to the previous year. During the same period growth in yield of winter rice (3.57 %), pulses (0.93 %) and total oilseeds (0.62%, excluding coconut) were lower than the autumn rice. Yield of Summer Rice on the other hand was declined by 3.9 percent during 2017-18 and 2018-19. Yield rates of autumn paddy, winter paddy, summer paddy, total pulses and oil seeds for ten years are presented in table – 5.9.

**TABLE-5.9**  
**YIELD RATE OF PRINCIPAL AGRICULTURAL CROPS IN ASSAM**

*Kg./Hect.*

Year	Autumn Rice	Winter Rice	Summer Rice	Total Pulses	Total Oilseeds (Excl. Coconut)
2009-10	982	1824	2180	558	529
2010-11	1155	1993	2577	572	580
2011-12	1242	1785	2744	560	563
2012-13	1317	1998	2965	597	610
2013-14	1340	2002	2981	695	611
2014-15	1454	2005	2940	749	670
2015-16	1364	2003	2818	757	664
2016-17	1380	2023	2773	735	644
2017-18	1377	2098	2975	748	638
2018-19	1468	2205	2858	755	642

Source : Directorate of Economics and Statistics, Assam,



**AREA UNDER HIGH YIELDING VARIETIES:**

The state agriculture department focuses to raise productivity of the agriculture sector by adopting and distributing High Yielding Variety of seeds among the farmers free of costs. At present the farmers of the state for rice use Mala, IR-36, Lachit, Masuri, Joya, Ranjit, Ratna, China, Biplob, Krishna varieties of HYV seeds. During the period 2009-10 to 2018-19 area under HYV seeds in case of winter rice has increased



from 10.2 lakh hectare to 14.3 lakh hectare and summer rice has increased from 2.9 lakh hectare to 3.84 lakh hectare; but area under HYV seeds in case of autumn rice has declined (Table 5.10).

**TABLE-5.10**  
**AREA UNDER HIGH YIELDING VARIETY OF RICE**

Area in Lakh hect.

Year	Autumn Rice	Winter Rice	Summer Rice	Total HYV Rice area
2009-10	2.29	10.2	3.41	15.9(62.8)
2010-11	2.13	11.34	3.54	17.01(66.2)
2011-12	2.19	12.8	4.02	19.01(74.6)
2012-13	1.60	11.70	3.61	16.91(68.0)
2013-14	1.43	12.22	2.24	15.89(63.5)
2014-15	1.28	12.42	3.95	17.65(70.7)
2015-16	1.26	13.70	3.37	18.87(75.93)
2016-17	1.07	14.09	3.47	19.18(77.76)
2017-18	1.04	14.36	2.90	18.30(75.18)
2018-19	1.19	14.30	3.84	19.33(NA)

Total figure may be not be equal due to rounding off to nearest 0. Figure in bracket shows the percent of total Rice Area.

Source: Directorate of Agriculture.

#### HYBRID RICE:

The state Agriculture Department since 2009-10 is putting special efforts to promote cultivation of hybrid varieties of rice on experimental basis considering the high yield potential of such varieties over the conventional high yielding varieties. The area under hybrid rice in the state was 254.20 thousand hectares in 2017-18. The area under hybrid rice however declined to 191.825 thousand hectares in 2018-19. Table 5.11 presents the area under hybrid rice in Assam during the period 2009-10 to 2018-19.

**TABLE-5.11**  
**AREA UNDER HYBRID RICE IN ASSAM**

(Area in '000' hectare)

Year	Kharif Rice (Autumn+Winter)	Rabi Rice (Summer Rice)	Total
2009-10	32.9	14.1	47.0(1.9)
2010-11	37.7	25.0	62.7(2.4)
2011-12	2.5	21.7	24.2(1.0)
2012-13	12.4	84.8	97.2(3.9)
2013-14	28.0	206.0	234.0(9.1)
2014-15	NA	NA	167.0(6.69)
2015-16	NA	NA	146.0(5.87)
2016-17	NA	NA	160.5(6.51)
2017-18	104.04	150.16	254.20(10.44)
2018-19	91.149	100.676	191.825(NA)

N.A.: Not Available

Total figure may not be equal due to rounding off to nearest zero.  
Figure in bracket shows the percentage to total rice area.

#### INDEX OF AGRICULTURAL PRODUCTION:

The Index of Agricultural Production for all crops (Base triennium ending 2007-08=100) for the State stands at 150.86 in 2018-19 in all commodities as against 148.15 in 2017-18.

**TABLE-5.12**  
**INDEX OF AGRICULTURAL PRODUCTION IN ASSAM AND INDIA**  
**(Base : Triennium ending 2007-08=100)**

Year	Assam			India		
	Food	Non-Food	All Commodities	Food	Non-Food	All Commodities
2012-13	152.29	115.11	135.70	119.4	129.1	124.2
2013-14	155.81	123.81	141.56	123.3	136.1	129.6
2014-15	157.43	130.24	145.32	116.4	131.5	123.9
2015-16	154.54	127.98	142.72	115.2	122.0	116.0
2016-17 (P)	154.36	131.82	144.33	129.7	122.4	126.1
2017-18	159.37	134.17	148.15	136.8	142.1	139.4
2018-19(P)	163.88	134.64	150.86	136.3	137.7	136.5

N. B.: 1. The Agricultural indices for Assam are constructed on the basis of crops covered by Crop Forecast.

2. Figure rounded to nearest zero.

Source: Directorate of Economics and Statistics, Assam.

#### LAND UTILIZATION STATISTICS:

As per land utilization statistics for the year 2017-18, the total geographical area of the state is 78.44 lakh hectares. The total area sown (under all crops)/gross cropped area is 40.45 lakhs hectares and net area sown is 27.23 lakhs hectares. The data of 2017-18 show decline in GCA and NSA in the state to the data of the year 2016-17. The GCA and NSA for the year 2016-17 was 40.87 lakh hectares and 27.74 hectares respectively.

Cropping intensity of the state during 2016-17 was 147.33(percent); increased marginally to 148.54 percent I 2017-18.

#### AGRICULTURAL HOLDING:

Agricultural Census 2015-16 revealed that there were 27.42 lakhs operational holdings in Assam covering an operated area 29.77 lakhs hectare as against 27.2 lakh operational holdings covering an operated area 29.99 lakhs hectares in 2010-11 census. The trend thus shows that there is a marginal increase of number of holdings (0.80% increases), but marginal decline of operated area which is (0.74%) during 2010-11 to 2015-16. Table 5.13 presents the trend of number of holdings and operated area during Agricultural Census 2000-01, 2005-06, 2010-11 and 2015-16 across the size classes of holding. The data shows increase in number of holdings in marginal size class, but decline in other size classes.

**TABLE-5.13**  
**AGRICULTURAL CENSUSES 2000-01, 2005-06, 2010-11 AND 2015-16**

Size class (in hectare)	Number of holding			
	2000-01	2005-06	2010-11	2015-16
Marginal (Below 1.0)	1699107	1752989	1831115	1869568
Small (1.0-2.0)	561039	591431	496574	493786
Semi-medium (2.0-4.0)	351521	317859	303528	295282
Medium (4.0-10.0)	95500	82933	84869	79264
Large (10.0 & above)	4970	4902	4137	3822
Total	2712137	2750114	2720223	2741722
Size class (in hectare)	Area operated (in hectare)			
	2000-01	2005-06	2010-11	2015-16
Marginal (Below 1.0)	662780	760145	774796	782024
Small (1.0-2.0)	730513	718383	687156	700452
Semi-medium (2.0-4.0)	957959	846006	817982	805819
Medium (4.0-10.0)	498797	425403	437372	409904
Large (10.0 & above)	263529	298606	271763	278566
Total	3113578	3048543	2999070-	2976765

Source: Directorate of Economics and Statistics, Assam.

**TABLE-5.14**  
**AGRICULTURAL HOLDINGS AND OPERATED AREA IN ASSAM**  
**(As per Agricultural Census)**

Agricultural Census Year	Number of holdings (in'000')	Total operated area (in '000' hect.)	Average size of holding (in hect.)
1970-71	1964.38	2882	1.47
1976-77	2254.65	3079	1.37
1980-81	2298.59	3121	1.36
1985-86	2419.16	3161	1.31
1990-91	2523.38	3205	1.27
1995-96	2683.00	3138	1.17
2000-01	2712.14	3114	1.15
2005-06	2750.11	3049	1.11
2010-11	2720.22	2999	1.10
2015-16	2741.722	2976	1.09

#### **HORTICULTURE:**

Assam produces a wide range of horticultural crops including fruits, vegetables, flowers, spices, nuts, tubers, medicinal and aromatic plants. The climatic condition and diverse landscape of the state have helped to develop diverse ecological habitats such as forests, grasslands, wet lands which harbour and sustain wide ranging floral and faunal species in the state. The state has tremendous scope to promote horticulture sector that can help ensuring food and nutritional security, as well as enhance employment opportunities via cultivation and post harvest management and value addition of horticulture produces.

Horticulture crops occupy about 15 percent of gross cultivated area of the State with an annual production of more than 67 lakhs metric tons of various horticultural produces. The state now puts priority for commercialization of the sector.

The emphasis of the state is now on raising productivity of various commercially potential crops through use of better technology, management and provision of planting materials to the farmers. Moreover, emphasis is also placed on pre and post harvest treatment, proper harvest techniques, setting up of collection centers with grading facilities, transport facilities and marketing facilities.

The Directorate of Horticulture and Food Processing of Government of Assam has taken up some positive steps towards creation of self employment opportunities in the horticulture sector by helping 15,000 rural women to get engaged themselves by setting up of 350 small and 4 medium fruits processing units. In the year 2018-19, area under horticulture crops was 8.19 lakh hector, production was 98.37 lakh MT and average yield was 49969 Kg/hector in the state (Table 5.15).

**TABLE-5.15**  
**AREA PRODUCTION AND PRODUCTIVITY OF HORTICULTURAL CROPS FOR THE LAST TEN YEARS 2009-10(FINAL) TO 2018-19(ESTIMATED)**

Year	Fruits crops			Tuber crops			Spices crops		
	Area	Production	Productivity	Area	Production	Production	Area	Production	Productivity
2009-10	1.27	15.65	12370	-	-	-	0.94	2.35	2505
2010-11	1.37	16.56	12485	-	-	-	1.01	2.30	2277
2011-12	1.38	17.75	12885	-	-	-	1.04	2.56	2464
2012-13	1.51	20.74	13760	-	-	-	1.10	3.28	2970
2013-14	1.42	20.25	14219	-	-	-	1.04	2.67	2578
2014-15	1.44	20.12	13869	-	-	-	1.08	2.97	2749
2015-16	1.44	20.56	-	-	-	-	1.09	3.58	-
2016-17	1.41	20.06	14144	-	-	-	1.11	3.77	3380
2017-18	1.46	21.04	14390	1.11	7.79	7000	1.12	3.89	3458
2018-19	1.66	24.97	15041	1.25	12.43	9914	1.27	5.92	4652

Contd..

Year	Vegetable crops			Plantation crops		
	Area	Production	Productivity	Area	Production	Productivity
2009-10	2.51	42.55	16952	-	-	-
2010-11	2.57	4.33	17231	-	-	-
2011-12	3.66	52.51	24325	-	-	-
2012-13	3.86	60.34	27536	-	-	-
2013-14	3.65	53.30	24797	-	-	-
2014-15	3.91	134.78	25455	-	-	-
2015-16	2.80	516.32	-	-	-	-
2016-17	2.80	519.23	18485	-	-	-
2017-18	2.87	54.24	18914	.90	2.23	1569
2018-19	2.90	54.99	18987	1.11	2.60	1650

Area = In Hector  
 Production = Lakh MT  
 Productivity = Kg/Hector

**TABLE-5.16**  
**AREA, PRODUCTION AND AVERAGE YIELD OF SOME MAJOR HORTICULTURAL CROPS OF ASSAM**  
**FOR THE YEAR 2017-18 (FINAL) AND 2018-19 (FINAL)**

Sl. No.	Name of Crops	Year 2017-18 (Final)			Year 2018-19 (Final)		
		Area in hectare	Production in M.T.	Average yield in Kg/Hectare	Area in hectare	Production in M.T.	Average yield in Kg/Hectare
<b>A. FRUIT CROPS</b>							
1	Banana	53082	913272	17205	51113	917792	17956
2	Pine Apple	16304	296524	18187	16905	308769	18265
3	Orange	14952	203716	13625	14971	213809	14281
4	Papaya	7212	147395	20438	7359	149866	20365
5	Assam lemon	13302	112402	8450	13802	119318	8645
6	Guava	4427	96690	21840	4450	97254	21855
7	Litchi	5567	50242	9025	5617	51283	9129
8	Jack fruit	22145	199194	8995	22202	202482	9119
9	Mango	4682	48435	10345	4695	49133	10465
10	Other fruits	4532	36006	7945	4625	36838	9880
<b>TOTAL FRUIT CROPS</b>		<b>146205</b>	<b>2103876</b>	<b>14390</b>	<b>145739</b>	<b>2146544</b>	<b>14729</b>
<b>B. TUBER CROPS</b>							
1	Potato	102868	720968	7009	103205	773481	7495
2	Sweet potato	5303	29199	5506	5020	26342	5247
3	Tapioca	3117	28868	9260	3364	31751	9438
<b>TOTAL TUBER CROPS</b>		<b>111288</b>	<b>779035</b>	<b>7000</b>	<b>111589</b>	<b>831574</b>	<b>7452</b>
<b>C. SPICES CROPS</b>							
1	Chillies	20242	18994	938	19847	18984	956
2	Turmeric	16871	20787	1232	15896	19395	1220
3	Onion	8338	80374	9639	8211	84835	10332
4	Ginger	18105	161604	8926	17865	166272	9307
5	Garlic	10450	62334	5965	10450	62334	5965
6	Coriander	29749	30790	1035	29799	30122	1011

7	Black Pepper	3458	7622	2204	3388	7476	2207
8	Other Spices	5186	6145	1185	5186	6145	1185
TOTAL SPICES CROPS		112399	388650	3458	110642	395563	3575
<b>D. VEGETABLES CROPS</b>							
1	Kharif vegetables	87367	1644424	18822	87740	16000932	18246
2	Rabi vegetables	199387	3779106	18954	200380	3765609	18792
TOTAL VEGETABLES		286754	5423530	18914	288120	5366541	18626
<b>E. PLANTATION CROPS</b>							
1	Coconut	19917	168598	65	20612	183185	66
2	Areca nut	66800	49687	129	67059	52876	128
3	Cashew nut	3658	5029	1375	3658	5029	1375
TOTAL PLANTATION		90375	223314	1569	91329	241090	1569

Production of coconut is in "000" nuts, average yield of Areca nut and coconut is nos. per bearing tree and the data of coconut and areca nut is for the year 2017-18 (Final)

### **INTEGRATED NUTRIENT MANAGEMENT (INM):**

#### **FERTILIZER AND MANURE:**

Fertilizer plays a dominant role in augmenting the productivity of crops. The State Government has put thrust on promoting "Integrated Nutrient Management" (INM) and also organic farming with a view to reduce farmers' dependence on chemical inputs and encourage optimal use of farmers' on-farm resources, economize production cost through adoption of optimum doses of fertilizer and care for the health of soil and the ecology. The uses of bio-fertilizer, compost and green manures and organic farming practices have been gradual increase in the state. In addition to promotion of organic manure, government of Assam however, has accorded due importance to timely availability of fertilizers at the doorstep of farmers during peak season of cultivation. The public institutions such as AIDC, NAFED, GPSS, and other organizations - IFFCO, BVFCL, GreenChemicals Ltd, Testa Agro Industries limited have been playing a pivotal role in distribution of fertilizer throughout the state. At present, there are 416 wholesale points and 6855 fertilizer sale points in Assam.

#### **CONSUMPTION OF FERTILISER:**

The consumption of fertilizer in Assam is low. Farmers are reluctant to invest on fertilizer because of the fear of loss caused by heavy rainfall and flood. Consumption of fertilizer during summer and Rabi seasons is low because of non-availability of water. A Consumption of fertilizer in the state was 60.01 Kg/hectare in 2017-18 and 56.05 Kg/hectare in 2018-19. Table 5.17 present the detail of consumption of fertilizer in Assam.

**TABLE-5.17**  
**CONSUMPTION OF (CHEMICAL) FERTILISERS**

(Fig in '000 MT)

Fertilizer	YEARS					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Nitrogen	151.3	155.9	169.20	153.506	156.78	148.12
Phosphorus	41.7	50.2	33.50	37.61471	50.10	42.17
Potash	80.1	80.3	39.90	39.8450	45.00	38.81
Consumption (kg/Ha)	65.4	68.6	62.60	55.03	60.01	56.05

Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Agriculture.

TABLE-5.18

## SEASON WISE CONSUMPTION OF FERTILIZER IN TERMS OF NUTRIENTS FOR THE LAST THREE YEARS

Nutrient	2016-17			2017-18		
	Kharif	Rabi	Total	Kharif	Rabi	Total
N	67311.11	86195.29	153506.40	68575.03	88200.00	156775.03
P	12545.63	25069.08	37614.71	21601.00	28500.02	50101.02
K	16000.00	23845.00	39845.00	21000.00	24000.00	45000.00
Total	95856.74	135109.37	230966.11	111176.03	140700.02	251876.05
Nutrient	2018-19					
	Kharif	Rabi	Total			
N	87000.00	104000.00	191000.00			
P	24400.00	24000.00	48400.00			
K	31230.00	26000.00	79630.00			
Total	142630.00	154000.00	319030.00			

Source:- Directorate of Agriculture, Assam.

**SOIL HEALTH MANAGEMENT:**

The state Agriculture Department has taken up initiatives to restore depletion of soil nutrients and sustain the crop production system. The state has promoted use of bio-fertilizers, micronutrients, lime, organic manures like green manures and vermi compost and FYM to increase crop productivity and maintain soil health. Of late, use of bio-fertilizer has assumed significance due to motivational demonstration programmes of the agriculture department. Special thrust has been given for the use of Bio-fertilizer by initiating Programme 'Input support to the agriculturist having KCC' under state priority scheme, which has been implemented since 2006-07. Table 5.19 presents the number of soil sample tested and issued for the years 2016-17, 2017-18 and 2018-19.

TABLE-5.19

## SOIL SAMPLE TESTED AND SOIL HEALTH CARD ISSUED (Nos)

Soil Testing Labs	2016-17		2017-18		2018-19	
	Tested	Issued	Tested	Issued	Tested	Issued
State Owned	118044	118044	801496	801496	188400	871338

Source: Directorate of Agriculture, Assam

**INTEGRATED PEST MANAGEMENT (IPM):**

For sustainable agricultural production a key component is Integrated Pest Management (IPM). The humid sub-tropical climate and diverse eco-system of the state favour intensification of insect and pest attacks causing yield loss up to 30 percent. Excessive and injudicious use of chemical pesticides however results in many residual problems and negative externalities. To mitigate the externalities and sustain yield of agriculture fields, the state now has started to facilitate the availability of the Bio-Control Agent (BCA) for Bio-pesticide Intensive BPMI module, the thrust has been given to increase production of already established BCA and the newly introduced BCA in the State Bio-Control Laboratory (SBCL).

The Agriculture Department of the state is trying to popularize the use of bio-pesticides and other methods of IPM by organizing

TABLE-5.20  
CONSUMPTION OF PESTICIDES

(Figure in MT)

Pesticide Consumption	2016-17	2017-18	2018-19
Chemical Pesticide	308.55	259.00	439.95
Bio-Pesticide	188.00	220.50	233.50

Source: Directorate of Agriculture, Assam.

training and demonstrations. The initiatives show result; rising trend of consumption of bio-pesticide in the state over the years.

The trend of consumption of chemical and bio-pesticides during the last three years is presented in Table – 5.20.

#### **DEVELOPMENT OF THE SEED SECTOR:**

The most vital component for increasing production and productivity of crops is the quality of seeds used. Certified seed production is a process through which seeds are produced in conformity with the standard variety by taking specific measures. In Assam, production of certified seed has been taken up in the Field Trial Stations (FTSs), of some of the government seed farms and Assam Seed Corporation's seed farms. In spite of the efforts made there is dearth of quality seeds in the state and seed replacement rate (SRR) is at a low level. The State has to depend on outside sources for quality seeds of some crops every year to meet the demand immediately after occurrence of natural calamities. To meet the growing demand and increase quality seed production, the Agricultural Department has taken the following measures:

- Expansion of Seed Village Programme;
- Production of certified seeds of Paddy, Pulse and Oilseeds in Seed Village in large scale;
- To focus on capacity building of Registered Seed Growers;
- Strengthen Seed Farms to facilitate production, processing & storage of seeds.

#### **SEED REPLACEMENT RATE (SRR):**

The State Agriculture Department has continuously made efforts towards popularisation of improved varieties and use of quality seeds. The SRR of some of the important crops for last six years is presented in Table-5.21

**TABLE-5.21**  
**REPLACEMENT RATE (SRR) IN ASSAM SEED**  
(Figure in %)

Crops	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Paddy	31.1	32.77	45.26	44.37	42.70	38.59
Blackgram	40.5	44.66	32.00	33.00	32.43	-
Greengram	45.2	76.00	34.91	35.54	42.16	-
Lentil	54.1	30.11	57.42	57.01	38.10	-
Pea	46.7	-	-	-	-	-
Rape & Mustard	38.1	45.24	42.00	43.00	43.04	45.03
Sesamum	0.0	-	-	-	-	-
Jute	19.2	63.22	55.83	54.21	65.87	52.43

Source: Directorate of Agriculture, Assam

#### **SEED CERTIFICATION:**

Assam State Seed Certification Agency (ASSCA) is the Nodal Agency, who has been entrusted with the responsibility of seed certification of namely paddy, mustard and seeds of pulses as per feasibility in the state. For planting crops namely coconuts, litchi, guava etc. are under consideration for the purpose of certification. Under ASSCA there are three notified seed testing laboratories located at Guwahati, Jorhat and Silchar. The total annual testing capacity of this three notified laboratories are about 20,000 samples. Seed testing and certification guidelines are to be strictly followed for proper quality control and certification as per the set norms. Table 5.22 shows the status of seed certification in Assam.

**TABLE-5.22**  
**STATUS OF SEED CERTIFICATION**  
**(Figure in Quintal)**

Crop(Seeds)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Paddy	18555	18555	15848	22454	131707	NA	-
Mustard	9210	11324	8456	7630	28791	NA	Yet to be certified
Blackgram	700	1840	2098.5	1621	1623	NA	Yet to be certified
Potato	11300	23350	9000	-	23600	NA	-
Winter Paddy	-	-	-	-	-	-	29843.02
Green gram	-	-	-	-	-	-	Yet to be certified
Lentil	-	-	-	-	-	-	Yet to be certified
Pea	-	-	-	-	-	-	Yet to be certified
Sesamum	-	-	-	-	-	-	Yet to be certified
Jute	-	-	-	-	-	-	Yet to be certified
Summer Paddy	-	-	-	-	-	-	354.9

*Source: Directorate of Agriculture.*

#### **SYSTEM OF RICE INTENSIFICATION (SRI):**

Adoption of the System of Rice Intensification with the use of hybrid seeds has shown significant result in annual growth of production of rice in the State. As compared to normal practices, adoption of SRI system enhances productivity with minimum use of seeds, fertilizers and water, thus reducing the cost of production. The SRI also helps to shorten the crop duration, which may have significance to go for another round of cropping during the year.

#### **CROP DEVELOPMENT:**

To motivate the farmers to adopt the practice of double/multiple cropping the government of Assam is taking up initiatives to facilitate cultivation of summer paddy, rabi pulses and oil seeds. The mission double cropping envisages additional coverage of 1.00 Lakh hectares presently under mono cropping and allocates Rs. 6,200.00 Lakh. The plan is further to add 3.0 lakh hectares to increase the cropping intensity of the state to 160.0 percent.

#### **FARM MECHANIZATION AND IRRIGATION:**

Several factors, particularly, fragmented and small land holdings, farmers' poor economic conditions and non availability of situation specific prototypes of farm implements stand as serious hindrance to mechanization of agriculture of the state. The state, however, has made serious efforts to boost farm mechanization. The State Agriculture Department, has taken up initiatives to procure farm equipment like tractors, power tillers and other farm machineries under externally aided, centrally sponsored and state plan schemes for the benefit of farmers, particularly the small and marginal farmers. Estimates show farm power available per hectare of land in the state is 1.29 HP in the year 2018-19.



**TABLE-5.23**  
**STATUS OF FARM MECHANISATION**  
 (Figure in Nos.)

Year	Tractors	Power Tillers	Power Pumps	Small Implements	Rotovators	Farm power available [HP per hectare]
2016-17	0	6321	0	0	14	1.30
2017-18	0	5207	40	0	160	1.21
2018-19	6582	3125	0	5175	0	1.29

Source: Directorate of Agriculture, Assam.

#### IRRIGATION:

Towards the goals of increasing cropping intensity and raising crop yield provisioning of irrigation in the agriculture field is the prime necessity. Considering the uncertainties faced in the production of Kharif crops due to floods, the state Agriculture Department has put emphasis on Rabi crops by assigning top priority to develop assured irrigation facilities through installation of pump sets (shallow tube well and low lift pumps).

In the year 2016 (as on 31st March) the area covered by irrigation potential was 8.19% of net cropped area. This figure however has declined in the year 2019 (Table 5.25).

**TABLE-5.24**  
**IRRIGATION INFRASTRUCTURE CREATED BY THE**  
**AGRICULTURE DEPARTMENT**

Component of irrigation	Year		
	2016-17	2017-18	2018-19
Shallow Tube Wells (Nos)	2705	40	4831
Low Lift Pumps (Nos)	154	0	0

Source: Directorate of Agriculture, Assam.

**TABLE-5.25**  
**IRRIGATION POTENTIAL CREATED BY AGRICULTURE DEPARTMENT & UTILIZABLE IRRIGATION**

Indicators	As on 31st March 2016	As on 31st March 2017	As on 31st March 2018	As on 31st March 2019
Irrigation potential created (Hectare)	20622	5718	84	9662
Area under Utilizable assured irrigation (Lakh Hectare)	8.19	8.10	7.88	7.40

Source : Directorate of Agriculture

**CROP INSURANCE:**

In Assam about 4.75 lakh hectares of land is chronically flood prone and about 0.94 lakh hectares of land is drought prone. To mitigate the distress of the farmers caused by cross loss/crop damage it is vital to have the measure of crop insurance. In addition to the floods and drought, the farmers of the state also face attacks of pests in the agriculture fields.

The Government of India had launched a Crop Insurance programme under the nomenclature "National Agricultural Insurance Scheme" (NAIS). All farmers who avail loans from financial institutions are covered under the scheme and it is optional for non-loanee farmers. Under this scheme 50 percent of the premium amount is contributed as subsidy to small and marginal farmers which is shared equally by Government of India and State Government. This scheme is expected to be a critical instrument for development in the field of crop production by providing financial support to the farmers in the event of crop failure and help in maintaining flow of agricultural credit. This programme covers 8 (Eight) crops - 3 crops in Kharif Season and 5 crops in Rabi season. The crops are

- Kharif Season : Autumn/Ahu Paddy, winter/Sali Paddy and Jute.
- Rabi Season : Rape & Mustard, Wheat, Potato, Sugarcane and summer/Boro Paddy.

This scheme, under the area approach, not only facilitated insurance coverage to each of the notified crop damage within the defined area for widespread calamities but also on an individual basis for localized calamities such as hailstorm, landslide, cyclone and flood. National Agriculture Insurance Scheme, though is being implemented in the state since 2009-10, has not been able to provide the desired solution to the risk in the agriculture sector in the state. Various reasons such as lack of awareness, low subsidy premiums (10 percent) for small and marginal farmers, delayed claim settlement, slow response of banks in issuance of Kissan Credit Cards have emerged as the main impediments for successful implementation of the scheme. Moreover, some important horticulture crops like ginger etc. are not covered under the scheme.

Calculation procedure of claim under NAIS is:

$$\text{Claim} = \frac{\text{Shortfall in yield}}{\text{Threshold yield}} \times \text{Sum Insured for the farmers in the concerned notified area}$$

- i) Shortfall in yield = Threshold yield – Actual yield for the Defined Area: Threshold yield = 3 years of Average yield for paddy and 5 years of Average yield for other crops.
- ii) As per Scheme, the Agriculture Insurance Co . of India Ltd. (AICL) pays 100% amount of premium collected towards claim if any, and the remaining portion of the claim is equally shared by the government of India and government of Assam.

(The scheme has been withdrawn since 2015-16)

**MODIFIED NATIONAL AGRICULTURAL INSURANCE SCHEME (MNAIS):**

The scheme is being implemented on pilot basis in 50 districts in the country. NAIS is withdrawn from those districts in which MNAIS will be implemented.

- Unit of insurance for major crops is Village/Village Panchayat.
- Scheme is compulsory for loanee farmers and voluntary for non-loanee farmers. Uniform seasonality norms will be applicable for both loanee & non-loanee farmers.

- Suminsured can be opted up to 150% of the value of average yield. Premium subsidy is available up to the value of threshold yield/loan amount only.
- Entire claim will be borne by the implementing agency. The scheme provides account payment up to 25% of the likely claim for immediate relief to the farmers.
- Minimum indemnity level will be 70% against 60% in case of NAIS.
- Calculation of threshold yield: Average yield of last 7 years excluding up to 2 years of declared natural calamity.
- The scheme is implemented in two districts of Assam viz., Kamrup and Dhubri from the Rabi season of 2010-11.

#### **WEATHER BASED CROP INSURANCE SCHEME (WBCIS):**

With the objective to overcome the shortcoming of delayed settlement of claims under NAIS, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was introduced for implementation in 20 States on pilot basis. WBCIS has been implemented in Assam since the Rabi season of 2013-14.

WBCIS is intended to provide insurance protection to the farmers against adverse weather incidence. Such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production

WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers have been restricted to at par with NAIS. The difference between actuarial rates and premium actually paid by farmers are borne by the Government (shared by the Centre and State on 50:50 basis). In addition to this a cap on the premium payable by farmers for annual commercial/horticultural crops has been provided.

The scheme is available to all the farmers- loanee and non-loanee-irrespective of their size of holding. As under NAIS, the loanee farmers' area was covered on compulsory basis in a notified area for notified crops, whereas for non-loanee farmers scheme is voluntary.

To ensure competitive service under the scheme private insurance companies i.e. ICICI-Lombard, IFFCO-TOKIO, M.S Cholamandalam and HDFC-ERGO General Insurance Companies have been involved for implementation besides the Agriculture Insurance Company of India (AIC).

#### **PROCUREMENT OF PADDY AS A MEASURE OF PRICE SUPPORT:**

At present Assam has surplus in Rice production. The improvement in production and productivity is result of better input management practices and adoption of improved technology. Despite the progress made, un-remunerative price received by the farmers for not having institutionalised markets is acting as a disincentive to drive the initiatives of the farmers. To ensure interest of the farmers the state government has engaged Assam State Agricultural Marketing Board (ASAMB) for procurement of paddy at Minimum Support Price, in addition to procurement to be done by the Food Corporation of India. Tables 5.26, 5.27 and 5.28 present procurement of paddy and jute at the minimum support prices (Rs. per quintal) in the state.

**TABLE-5.26**  
**PROCUREMENT OF MINIMUM SUPPORT PRICE OF AGRICULTURAL PRODUCE**  
**(Rs. Per quintal)**

Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Paddy (Common)	1310.00	1360.00	1410.00	1470.00	1550.00	1750.00
Paddy (Grade-A)	1345.00	1400.00	1450.00	1510.00	1590.00	1770.00
Wheat	1400.00	1450.00	1525.00	1625.00	1735.00	-
Maize	1310.00	1310.00	1325.00	1365.00	1425.00	1700.00
Arahar	4300.00	4350.00	4425.00#	5050.00	5450.00#	5675.00
Greengram	4500.00	4600.00	4650.00#	5228.00	5575.00#	6975.00
Blackgram	4300.00	4350.00	4425.00#	5000.00	5400.00#	5600.00
Lentil	2950.00	3075.00	3325.00*	3525.00	4250.00*	-
Gram	3100.00	3175.00	3425.00*	3675.00	4400.00	-
Rape & Mustard	3050.00	3100.00	3350.00	3600.00	4000.00*	-
Sesamum	4500.00	4600.00	4700.00	5000.00	5300.00*	6249.00
Jute (TD-5)	2300.00	2400.00	2700.00	3000.00	3700.00	3700.00
Sugarcane	220.00	230.00	230.00	250.00	-	-

# - Bonus of Rs. 200.00 per quintal is payable over and above the Minimum Support Price.

\*-Bonus of Rs. 75.00 per quintal is payable over and above the Minimum Support Price.

**TABLE-5.27**  
**STATUS OF PROCUREMENT OF PADDY IN ASSAM AT MINIMUM SUPPORT PRICE**

Procurement Agency	Procurement					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
FCI	45.00	6461.00	53087.00	43181.00	39122.00	81862.00
ASAMB	251.06	10553.83	10130.70	16632.806	5261.68	6665.92
NAFED	Nil	Nil	Nil	3377.00	3712.40	18407.46
NACOF	Nil	Nil	Nil	4328.00	419.52	NA
NCCF	Nil	Nil	Nil	2220.244	4194.40	12363.70

**TABLE-5.28**  
**STATUS OF PROCUREMENT OF JUTE IN ASSAM BY JUTE CORPORATION OF INDIA (JCI) AT MINIMUM SUPPORT PRICE**

Region	Districts covered	2013-14		2014-15		2015-16	
		Quantity procured (Qtl.)	Value of produce (In Rs.)	Quantity procured (Qtl.)	Value of produce (In Rs.)	Quantity procured (Qtl.)	Value of produce (In Rs.)
Guwahati	Darrang, Kamrup, Goalpara, Barpeta	40263.92	87438626.00	290.06	649374.00	998.81	4933768
Nagaon	Nagaon, Morigaon	73343.41	158159084.00	5400.56	-	4942.52	-
Dhubri	Dhubri, Bongaigaon	5074.07	10957844.00	Nil	Nil	Nil	Nil
Total	8 (eight) districts	118681.40	256555554.00	5690.62	649374.00	5941.33	4933768

Region	Districts covered	2016-17		2017-18		2018-19	
		Quantity procured (Qtl.)	Value of produce (In Rs.)	Quantity procured (Qtl.)	Value of produce (In Rs.)	Quantity procured (Qtl.)	Value of produce (In Rs.)
Guwahati	Darrang, Kamrup, Goalpara, Barpeta	69088.48	236396465	69504.55	214073908.00	257.81	834781.00
Nagaon	Nagaon, Morigaon	65143.04	221302669	94200.28	288262437.00	4754.88	14923952
Dhubri	Dhubri, Bongaigaon	14404.78	48605057	9235.29	28598800.00	15.00	55500.00
Total	8 (eight) districts	148636.30	506304191	172940.12	530935145.00	5027.69	15814233.00

#### AGRICULTURE MARKETING AND STORAGE:

Marketing of agriculture produces in the state is a serious problem for the farming community. Lack of organized marketing facility, lack of storage infrastructure near the field, poverty and need of money after harvest for repayment of agricultural debt and other contingencies forced the farmers to dispose off their hard earned produces at the earliest and at throwaway prices. Keeping in view of the interest of farmers, the government of Assam in addition to engaging the Assam State Agriculture Marketing Board and FCI for procurement of products have developed storage capacity (Table 5.29).

TABLE -5.29

#### STORAGE CAPACITY CREATED BY DIFFERENT ORGANIZATIONS IN THE STATE

Organisations	Storage Capacity (in MT)		
	2016-17	2017-18	2018-19
Food Corporation of India (FCI)	389976	385913	379969
Central Warehousing Corporation	72150	72983	73717
State Warehousing Corporation	250838	242910	221407
Assam State Agricultural Marketing Board (ASAMB)	46775.00	46775.00	46775.00
Total	759739.00	748581.00	721868.00

Source: Directorate of Agriculture, Assam

At present, the state has 24 Regulated Market Committees, 20 Primary Market Yards, 143 Trader's Shop, 532 Auction Platform/Retailers Shed, 806 Rural Primary Markets, 405 Wholesale Markets, One Organic Market, 18 Packaging Room, 42 Drying Platform and 15 Processing units. The Regulated Markets have been covered under AGMARKNET. As regards to cold storage infrastructure in the state, there are 26 cold storages of which 23 are in private sector and 3 in state sector.

**TABLE-5.30**  
**MARKET INFRASTRUCTURE DEVELOPED (IN NOS.)**

Market infrastructure	2017-18	2018-19
Cold Storage	2 Nos. (Under Construction)	1 No.
Wholesale Market Developed (Out of 405 Nos.)	NIL	NIL
Rural Primary Market (Out of 735 Nos.)	NIL	NIL
Organic Market	NIL	NIL
Sale Counter	NIL	NIL
Seed Storage Godown	3 Nos. (Under Construction)	NIL
Drying Platform	NIL	NIL
Three/Four Wheel Auto Van	NIL	NIL

To assist the farmers carrying vegetables to the distant market, the Assam State Agriculture Marketing Board provides transport subsidy to farmers. Government of Assam now proposes to construct three-storied market at Pamohi (Guwahati), a growers-consumers market complex at Ulubari (Guwahati), and establish 11 sale counters for marketing of farm products. For transportation of agricultural produce from field to market as many as 1102 three/four wheelers were provided during the year 2012-13. During the year 2013-14, the state agriculture department had planned to provide 2372 three/four wheeled auto vans, 35 numbers of refrigerated vans and develop 15 numbers of rural hats. The Department has also taken initiative for establishment of market infrastructure, storage facility and to eradicate the transportation bottlenecks. The rural connectivity scheme implemented under PMGSY is a major step towards benefit of farmers to take out their agricultural products to nearest markets.

**SOME OF THE MAJOR STEPS TAKEN UP TO BOOST UP MARKETING SUPPORT AND FOR POST HARVEST MANAGEMENT:**

- Farming community has been mobilized to form 25 numbers of Farmer Producer Organizations (FPO) for securing better produce price;
- Rural farm women have been empowered by training and providing mini processing units of pulses and oil seeds from which they can earn from their homes;
- Tie up has been made for export of Red Bao Paddy to USA and the process has started in 2012-13 on regular basis;
- Export of Pineapple cubes, orange, ginger, dendrobium orchids to other states and countries have already been started;
- Some Self Help Groups are assisted to take up Agri-Horti activities including postharvest management.

**NATIONAL MISSION ON OILSEEDS & OIL PALM:**

The State is highly deficient in oil seed production. To achieve targeted area the Agriculture Department has been launching Mini-Mission-I-Development of cultivation of vegetable oilseeds crop, Mini-Mission-II-

Development of cultivation of oil palm and Mini-Mission-III-Development of cultivation of tree borne oil seeds.

**ESTABLISHMENT OF MINI OIL MILL WITH PACKAGING UNIT:**

The state Agriculture Department has proposed to establish mini oil mills with packaging units. The scheme has envisaged support of the Assam State Agricultural Marketing Board to market the products. It is also envisaged that value addition of oilseeds will not only drive the oilseed cultivation, it will also help to generate employment in production and processing sectors.

**WOMEN WELFARE SCHEME:**

Considering the role played by rural women in all components of agriculture and farm sector to manufacturing and marketing, the government of Assam through the Chief Minister's Vision on Women and Children, 2016 has given special thrust on woman's self help groups to facilitate their engagement and economic upliftment.

**BRING GREEN REVOLUTION TO EASTERN INDIA INCLUDING ASSAM:**

The Central and the State Governments have chalked out a strategy to achieve the planned growth in agriculture sector of the country. Several interventions such as Bringing Green Revolution to Eastern India (BGREI), double cropping, supply of improved seeds, fertilizer and technology equipment now have been undertaken. Under the initiative on BGREI, the government of India considers the states namely Assam, Bihar, Chhatisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh and West Bengal as potential areas for increasing food grain production and productivity. The states are however mired by low credit availability, poor extension facilities and infrastructure bottlenecks. To remove the impediments on a priority basis steps have been taken emphasising on better seed replacement ratio, adequate and timely availability of critical inputs, improving infrastructure facilities and other required interventions including bank credit. In Assam, the scheme was launched in 2010-11 as a sub-scheme of RKVY to overcome the constraints limiting the productivity of rice based cropping system in the state by adopting short term activities related to transfer of technology through Rice demonstration in farmers' field along with activities pertaining to creation of irrigation facilities to maximize agricultural production in sustainable way.

**PRADHAN MANTRI FASAL BIMA YOJANA: THE HIGHLIGHTS**

The Pradhan Mantri Fasal Bima Yojana was introduced in February 2016 to provide insurance service to the farmers for their yield. It was formulated in line with one nation-one scheme theme by replacing earlier two schemes National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS) by incorporating their best features and removing their inherent drawbacks. The highlights of the scheme are -

- There will be a uniform premium of 2% to be paid by farmers for all Kharif Crops and 1.5 % for all Rabi Crops. In case of annual commercial and horticultural crops, the premium to be paid will be 5%.
- The premium rate to be paid by farmers are very low and balance premium will be paid by the government to ensure full insured amount to the farmers for crops loss in any natural calamities.
- There is no upper limit on government subsidy. Even if balance premium is 90%, it will be borrowed by the Government.
- In the previous schemes, there was a cap on the premium leading to low claims realisation by the farmers. The cap is now removed and farmers will get claim against full sum insured without any reduction.
- Use of technology will be encouraged. Smart phones, remote sensing drone and GPS technologies will be used to capture and upload data of crops to reduce the delays in the claim payment.
- The insurance plan will be handed under a single insurance Company, Agriculture Insurance Company of India (AIC).
- PMFBY is exempted from the service tax.

**STATUS OF PMFBY IN ASSAM:**

The Assam Government rolled out the Pradhan Mantri Fasal Bima Yojana from the Rabi season of 2016-17 with an aim to benefit about 5.5 lakh farmers. In the year 2018, the scheme covered Kharif area of 13263.51 hectares and 19880 farmers. For effective rolling out of the scheme, the state plans to impart training to the officials of agriculture department and organise publicity-cum-awareness programmes among the farmers. Table- 5.31 show the status of implementation of the scheme in Assam.

**TABLE-5.31**  
**PRIME MINISTER FASAL BIMA YOJANA (PMFBY)**

Season	Area covered (Ha)	Farmers covered (No.)	Sum Insured (Rs. In lakh)	Premium collected (Rs. In lakh)	Claims paid (Rs. In lakh)	Farmers benefited (No.)
Kharif 2016	4312.95	51749	-	691.42	501.68	23398
Rabi 2016-17	36692.00	8516	3011.99	173.22	33.60	282
Kharif 2017	38519.50	42723	23308.32	1033.94	50.97	1440
Rabi 2017-18	4328.08	5595	3469.40	163.82	56.97	478
Kharif 2018	13263.51	19880	-	324.33	-	-
Rabi 2018-19	-	76224	-	-	-	-
Kharif 2019	-	-	-	-	-	-

Source : Directorate of Agriculture, Assam

**SCHEME FOR MARKETING OF FRUITS AND VEGETABLES:****TRANSPORT SUBSIDY SCHEME 2018-19:**

Affordable transport facility is one of the prime requisites to enable the farmers to place their produces at remunerative markets. Provisioning of transport facilities also help to reduce number of intermediaries involved in market chain and thus ensure fair return to the farmers and procurement at reasonable price for the consumers. The state has formed Agricultural Production Management Group (APMG) for better crop planning and marketing.

The scheme proposes to provide subsidy @ Rs.2.0/Quintal per km to each selected APMG/growers Group etc. for maximum 2 tons per group per trip for maximum distance of 100 Km.

The scheme had placed supplementary demand of Rs. 250 lakh under the budget head of other agriculture programmes (2435) on subsidy for transportation support for marketing of fruits and vegetables for the year 2017-18. The physical target for transportation was approximately 20,500 MT.

**OBJECTIVE OF THE SCHEME:**

- The objective of the scheme is to facilitate marketing of surplus agricultural products particularly the perishable fruits and vegetables from areas where surplus production takes place. The goal is to ensure remunerative price for the farmers.
- It is also expected that the approach will encourage the growers to take up production on commercial point. .
- To facilitate the urban population to get products at reasonable price.
- To check fall of market price in the surplus growing areas beyond the cost of production. Subsidised transport facilities are thus required to be provided to the growers to safeguard the growers from financial losses in the harvest season.



The entire scheme will be implemented through the District Agriculture Offices as indicated in Table 5.32. Fund for the scheme will be released by the DAO on recommendation from District Level Committee. The amount kept at district headquarters shall be utilized for bringing the produce from the remote areas to the departmental market sheds (Stall) located in the different locations of Guwahati city.

**TABLE-5.32**

Sl. No.	Name of District	Amount (Rs. In Lakh)	Remarks
1	Barpeta	12.00	The amount kept at H.Q. will be utilized for bringing the produce from the remote areas to the departmental market sheds (Stall) located the different location at Guwahati and newly constructed organic Market established by Assam Agricultural Market Board at six mile thus benefitting the producers and also consumer of greater Guwahati. On the other hand H.Q. Fund will be utilized as transport subsidy to the farmers for carrying their produce from remote areas to the departmental stall at Ulubari and Beltola Deptt. Stall. The cost norms will be the same APMG/Growers group from Nagaon, Morigaon, Kamrup, Darrang, Nalbari & Baska will get the benefit of transport subsidy for carrying their produce directly from the farmers field to different markets at greater Guwahati without middle man. In the districts also APMG/Growers group will get the benefit of transport subsidy for carrying their produce from remote areas to the different selected markets at districts.
2	Bongaigaon	12.00	
3	Baksha	10.00	
4	Cachar	08.00	
5	Chirrang	08.00	
6	Darrang	15.00	
7	Dibrugarh	08.00	
8	Dhubri	10.00	
9	Goalpara	12.00	
10	Golaghat	08.00	
11	Hailakandi	06.00	
12	Jorhat	10.00	
13	Karimganj	05.00	
14	Kamrup (R & M)	10.00	
15	Kokrajhar	08.00	
16	Lakhimpur	08.00	
17	Morigaon	10.00	
18	Nagaon	10.00	
19	Nalbari	12.00	
20	Udalguri	08.00	
21	Sonitpur	10.00	
22	H.Q. DDA(M) Assam, Khanapara, Ghy- 22	50.00	
	Total Rs =	250.00	
(Rupees two hundred fifty lakh) only			

**GUIDE LINES FOR IMPLEMENTATION OF THE TRANSPORT SUBSIDY SCHEME:**

1. APMGs of neighbouring district of greater Guwahati will have to register their APMGs at concerning District Agricultural Officer (DAO) and submit the list of APMGs selected by DAO to the Deputy Director of Agriculture (Marketing) Khanapara, Guwahati. This procedure will enable the APMGs to sale their produce directly at the different sale points of greater Guwahati identified by the Deputy Director of Agriculture (Marketing), the implementing officer of the scheme at the Directorate of Agriculture.
2. APMGs of neighbouring, district are to bring their produces directly to the office of the DDA (M) and a inspector at the office shall weight the goods and prepare the signed invoices.
3. The agriculture marketing inspector shall record the items quantity wise to be loaded in the specified in the stock book. The records in the stock book are to be signed by the Inspector and the DDA(M).
4. After the necessary documentation at DDA (M) office the APMGs will carry the goods to the specified sale points of the Guwahati city.
5. Office of DDA (M) will fixed the sale rate of the goods for the particular day.

6. The personnel of the DDA(M) office will monitor day to day activities of the APMGs.
7. For payment of transport subsidy, the APMGs shall submit the necessary bills in their pad in triplicate in every month, which will be certified by the concern ADOs for payment.

**Constitution of District Level Selection Committee for Agricultural Production Management Groups (APMG)**

- (i) District level selection committee to select the APMGs for transport subsidy is to be formed with the following members.
  - (a) Deputy Commissioner/his representative not below  
The rank of ADC - Chairman
  - (b) District Agricultural Officer - Member Secretary
  - (c) Sub Divisional Agricultural Officer - Member
  - (d) Senior Agricultural Dev. Officer - Member
  - (e) Agricultural Dev. Officer - Member
  - (f) Two members from PRI - Member
  - (h) Local MLAs - Special Member

2. The record of all APMGs of the district must be compiled in a register with name of APMG, name of members and detail address for ready reference at the District Agricultural Office. Necessary records of all groups formed in the concerned the district, are to be sent to the DAO. As formation of APMG is a continuous process, it is important to furnish the information on group formation at the DAO. The groups for transport subsidy are selected from the registered list and groups with small and marginal farmers are to be given priority to avail the transport subsidy.

3. The APMGs who have availed Auto vans under the RKVY are not entitled for transport subsidy scheme.
4. The DAO is to identify few spots/sale points within the district where the selected APMGs will sale their products. The DAO needs to discuss with the district administration to select the spots.
5. Space or existing shade or sale points within the premises of Deputy Commissioner's office can be considered for the purpose of this scheme.
6. The sale points should have specified timing or days of operation. The timing and days to be operated should be displayed for convenience of the buyers.

**PROCEDURE FOR SALE:**

1. Sale price is to be fixed by the District Agricultural Officer in consultation with farmers and on the basis of prevailing market rate. The price list is to be displayed everyday at the sale points.
2. In case the farmers of the APMGs are not getting remunerative price the Agricultural Development Officer (ADO) will inform the District Agricultural Officer (DAO). In such case the DAO is to take measure to facilitate sale of the products at identified points.

**SCHEME FOR DEVELOPMENT OF JUTE GRADING AND BALING - AIM AND OBJECTIVE:**

The aim and objective of the Jute grading and baling scheme is to extend facilities and modern know how of the grading jute to the growers of the state. It is expected that grading of jute would help the growers to involve themselves in the marketing of jute to get remuneration prices of graded jute.

During 2018-19 under the scheme it was proposed to impart training to 90 unemployed educated youth selected from the families of jute growers in three batches in the jute grading training centre located at Howly of Barpeta District. The training centre was established in 2000, but the infrastructure of the centre got damaged in 2001 due to natural calamities. Since then the centre is not operational and the staff associated with the centre were attached to the district agriculture office, Barpeta. Now a financial proposal of Rs. 350 lakh is made to revive the training centre. The duration of the training is planned for one month with provision of a stipend of Rs.1000/-for each of the trainees. In addition, there is provision for food and accommodation. The proposal has also made provision for a study tour to the terminal market of jute located at Kolkata. Financial allocation for the scheme made is presented in table 5.33.

**TABLE -5.33**  
**EXPENDITURE FOR LAST THREE YEARS**

Year	Budget	Amount sanctioned	Expenditure
2014-15	Nil	Nil	Nil
2015-16	Nil	Nil	Nil
2016-17	Rs.350.00 lakhs	Nil	Nil

*Supplementary demand for the year 2017-18-: Rs. 350.00 lakhs.*

**MARKET INTELLIGENCE SCHEME (PLAN): OBJECTIVES**

The scheme of market intelligence is in operation in Assam since November 1957. The scheme originally covered seven markets; now it covers 72 important markets and representative markets and 40 commodities to collect requisite information for formulation of economic policies. The scheme has importance for formulating price policy by the state and it provides necessary support to address problems of marketing. The activities under the market intelligence scheme is to collect and dissemination of daily and weekly wholesale and retail prices of market arrival of important agricultural commodities and live stock products from the selected markets and furnish the market information to the Economic and Statistical adviser of government of India, state government, public and private institutions and Army Head Quarter through various reports, bulletin and review. The All India Radio, Guwahati broadcasts the daily price bulletin of wholesale prices of selected agricultural commodities of important markets of Assam in the evening programme of "KRISHI JAGAT" for the best interest of growers, consumers and traders. This scheme has an annual operational budget of 150 lakh.

**SCHEME FOR QUALITY CONTROL AND AGMARK GRADING (PLAN):**

This scheme was introduced in the state during the year 1966-67. Agmark is a symbol of purity guaranteed by the Government. It is voluntary for the packers and millers. Under the scheme Agmark laboratories have been established in Guwahati, Tezpur, Nagaon, Jorhat, Dibrugarh and Silchar. The principal objective of the scheme is to promote grading of commodities like mustard oil, spices, honey ghee, wheat etc. under Agmark grading. To encourage the packers and millers to produce quality product, at present there are six District Agmark Laboratories established in different parts of Assam. The scheme has annual operational budget of Rs. 220 lakh.

**TABLE-5.35**  
**PROPOSED BUDGET PROVISION FOR THE YEAR 2018-19**

Sl. No.	Head of Account	Amount proposed for General area 2018-19	Remarks
1	Repairing & Renovation of Agmark Laboratory	Rs. 150.00 lakh	Including Electricity & running water supply for Agmark Laboratory
2	Purchase of Chemical for Agmark Laboratory	(a) Chemicals Rs. 20.00 lakh (b) Glass wares & others Rs. 10.00 lakh (c) Machineries Rs. 20.00 lakh & Equipments	For 6 nos. of laboratories.
3	Training of Officers	Rs. 12.00 lakh	T. A. & D. A. for 12 nos. of Officers for Agmark grading training at Calcutta.
4	Purchase of Furniture for 6 nos. Laboratories	Rs. 6.00 lakh	For 6 nos. of laboratories
5	Ongoing Expenditure	Rs. 2.00 lakh	For 6 nos. of laboratories

## ANNEXURE-5.01

## AREA, PRODUCTION AND AVERAGE YIELD UNDER FOOD AND NON- FOOD CROPS COVERED BY CROP FORECAST IN ASSAM 2018-19

Sl No	Name of Crop	Area (in Hect)	Production (In Tonnes)	Average Yield (Kg/Hect)
1	Autumn Rice	144766	209122	1468
2	Winter Rice	1879539	4082738	2205
3	Summer Rice	400873	1145512	2858
	TOTAL RICE	2425178	5437372	2271
4	Maize	32264	105003	3254
5	Wheat	16945	23693	1398
6	Other Cereals and Small Millets	5210	3058	587
	TOTAL CEREALS	2479597	5569126	2274
7	Gram	2244	1575	699
8	Tur (Arhar)	5550	4628	833
9	Rabi Pulses	142435	107223	753
	TOTAL PULSES	150229	113426	755
	TOTAL FOOD GRAINS	2629826	5682552	2186
10	Sesamum	11983	8355	697
11	Rape & Mustard	285736	183665	643
12	Linseed	4763	2898	608
13	Castor	724	336	455
14	Nizer	5674	3128	550
15	Coconut (2016-17)	20612	183185	66
	TOTAL OIL SEEDS	308880	198382	642
16	Cotton (b)	843	431	86
17	Jute ( c )	65789	761571	2084
18	Mesta ( c )	3287	19722	1080
	TOTAL FIBRES	69919	781724	2012
19	Banana	51113	917792	17956
20	Pineapple	16905	308769	18265
21	Orange	14971	213809	14281
22	Papaya	7359	149866	20365
23	Potato	103205	773481	7495
24	Sweet Potato	5020	26342	5247
25	Topeoca	3364	31751	9438
26	Onion	5211	84835	10332
	TOTAL FRUITS & VEGETABLES	207148	2506645	-
27	Arecanut (2016-17)	67059	52876	128
28	Chillies	19847	18984	956
29	Turmeric	15896	19395	1220
30	Sugarcane	1199	1093930	35063
31	Tobacco	141	72	480
	TOTAL MISCELLANEOUS CROPS	134142	1185257	-

## CHAPTER-VI

### IRRIGATION

Agriculture plays a vital role in the economy of Assam. Out of the total geographical area of 78.44 lakh hectare, gross cropped area of the state is 40.87 lakh hectares, and net area shown is 27.74 lakh hectares. Irrigation potential of the state is estimated at 27 lakh hectares. The state has planned to irrigate 17 lakh hectares through minor irrigation scheme and 10 lakh hectares through major and medium projects. The minor irrigation schemes of the state plan to rely on surface water as well as ground water sources. It is planned that surface water schemes shall cover 7 lakh hectare and ground water sources shall cover 10 lakh hectares.

Development of irrigation facility has become the necessity in the state to drive and sustain the agriculture sector and meet the rising demand of food. Irregular rainfall and frequent flood waves during the monsoon have compelled the state to go for cultivation in the off-monsoon season developing and using the available surface and ground water sources.

The two major river systems viz. the Brahmaputra and the Barak along with their numerous tributaries constitute the rich surface water resources of the state. Moreover, as per Draft Report, March 2017 of Central Ground Water Board of North Eastern Region the total annual ground water recharge in the state of Assam (excluding urban Guwahati) is 2617060.05 hectometer (ham). The annual extractable ground water resource is 2415438.96 ham in the state after deducting natural discharge of 201621.09 ham from annual ground water recharge. The existing gross ground water extraction for all uses is 269826.00 ham of which 197470.56 ham is the gross ground water extraction for irrigation use and 72355.44 ham( excluding urban Guwahati) is the gross ground water extraction for domestic and industrial use. The net ground water availability for future use is 2135749.11 ham. The state thus has the advantage of rich ground water resources to be used for irrigation purpose and to cope with adverse and unpredictable weather condition including flood, erosion and drought like situation.

The Government of Assam felt the need of a separate irrigation department and the independent department was created in 1974 by bifurcating it from the erstwhile Flood Control and Irrigation Department. The department is playing vital role in the development of irrigation potential of Assam by harnessing the rich surface water and ground water resources of the state. The main service of the department is to supply water to the crop area as per demand of the cultivators and as per requirement of crops.

The irrigation projects of the state are classified into three categories viz. Major Irrigation project-(Culturable Command Area (CCA) is more than 10,000 hectare), Medium Irrigation project-(Culturable Command Area (CCA) is between 2000 and 10,000 hectare) and Minor Irrigation project-(Culturable Command Area (CCA) is up to 2000).

There are three types of Irrigation Schemes executed in Assam. These are:-

1. **Surface Flow Irrigation Scheme:** This type of Irrigation Schemes is done by constructing diversion weir across the river to convey water through canal system by surface gravity flow. This type of Schemes consists of Major, Medium and Minor Irrigation Schemes.
2. **Surface Lift Irrigation Scheme:** This type of Irrigation Schemes is also taken up on surface water sources by lifting of water by pump from river, lake or pond etc. and water is conveyed through canal system.
3. **Ground Water Lift Irrigation Schemes:** This type of Irrigation Schemes is done on lifting ground water by installing Deep Tube wells or Shallow Tube wells and drawing water to the crop field through canal or through over ground flow or underground network of pipe.

The Departments responsible for development of irrigation in the state of Assam are Irrigation Department, Agriculture Department, Panchayat and Rural Development and Soil conservation department. While Irrigation Department executes Major, Medium and Minor Irrigation Projects, the Agriculture Department constructs shallow tube wells and low lift points for handing over to the individual beneficiaries. The minor irrigation activities taken up by Panchayat and Rural Development Department and Soil Conservation Department are of temporary nature and seasonal.

**IRRIGATION INFRASTRUCTURE**

The category wise and status wise number of Government Irrigation Schemes executed by Irrigation Department up to 2018-19 is as follows:

Status of Irrigation Scheme	Category	Number of Government Irrigation Schemes up to 2018-19 (P)		
		Major & Medium	Minor	Total
Completed	Surface flow	13	1501	1514
	Surface Lift	3	462	465
	Ground Water Lift		697	697
Total		16	2660	2676
Ongoing	Surface flow	3	483	486
	Surface Lift	1	169	170
	Ground Water Lift		430	430
Total		4	1082	1086
Grand Total Assam		20	3742	3762

**CREATION OF IRRIGATED AREA AND UTILISATION OF POTENTIAL:**

Irrigation potential created by the state up-to March'2019 is shown in **Table-6.1**. Out of the Gross Cropped Area of 40.87 lakh hectares (2016-17) of the State, 10.07 lakh hectares (24.64%) are covered as irrigation potential by the irrigation department till 2019 under the ongoing irrigation schemes. Out of 10.07 lakh hectares of irrigation potential created, 2.73 lakh hectares (27.15%) are covered through both Major and Medium Irrigation Projects and the rest 7.33lakh hectares (72.85%) through Minor Irrigation Schemes. During the last five years, about 2.49 lakh hectares are covered under irrigation potential.

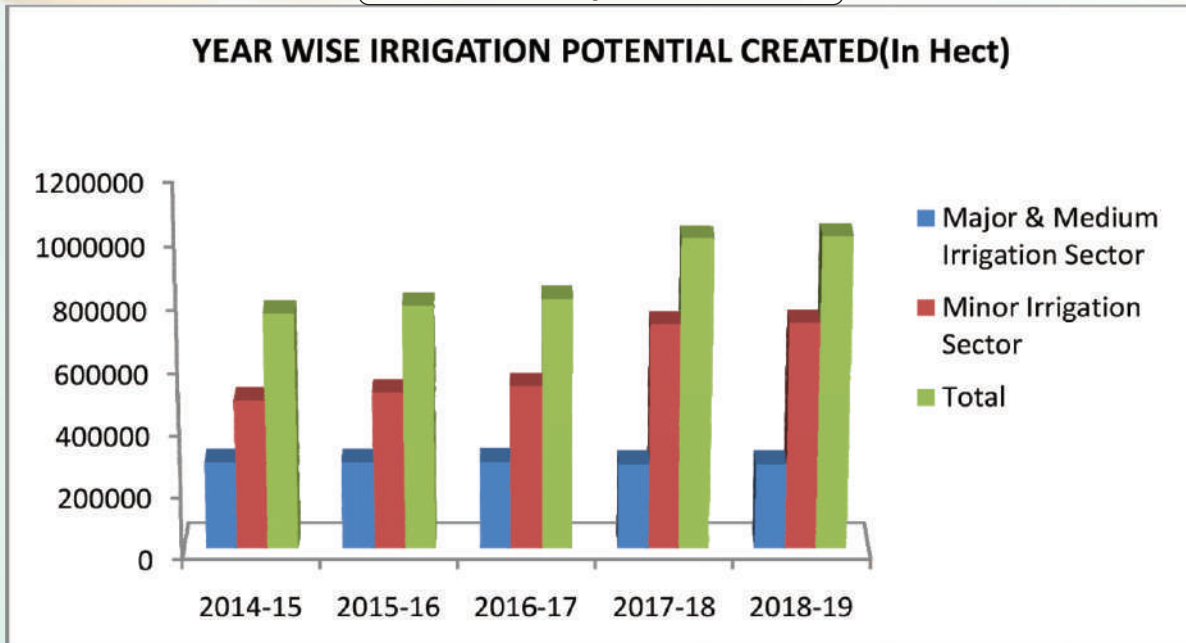
In addition to the Major, Medium and Minor Irrigation Projects, the State Agriculture Department has also created a huge irrigation potential through ASMIDC Ltd and provisioned private Shallow Tube wells (STWs) and Low Lift Points (LLPs). The minor irrigation activities taken up by Panchayat & Rural Development Department and Soil Conservation Department are of temporary nature and seasonal.

**TABLE-6.1**

<b>IRRIGATION POTENTIAL CREATED UPTO MARCH,2018</b>			
<i>(In hectares)</i>			
Year	Major & Medium Irrigation Sector	Minor Irrigation Sector	Total
2014-15	278783	478927	757710
2015-16	278783	503862	782645
2016-17	279423	524912	804335
2017-18	272518	723513	996031
2018-19(P)	273378	733813	1007191

Source: Chief Engineer, Irrigation Department, Assam

The year wise irrigation potential created under major & medium and minor is depicted in the following bar diagram.



**UTILISATION OF IRRIGATION POTENTIAL:**

Irrigation Department collects and maintains data on utilization of irrigation potential implemented by the government irrigation schemes only; and private irrigation provisioning executed by Agriculture Department and other departments/agencies are not covered.

Out of the cumulative irrigation potential created/made available through government irrigation schemes under irrigation department, the provisioning utilised by the farmers during the last three years are as follows:

**TABLE-6.2**

year	Irrigation potential utilized during the year (out of the cumulative created potential through Government Irrigation Schemes)								
	Kharif crops season			Rabi & Pre-Kharif crops season			Total		
	Major & Medium	Minor	Total	Major & Medium	Minor	Total	Major & Medium	Minor	Total
2016-17	60509	116912	177421	17781	35008	52789	80364	147458	227822
2017-18	73108	122294	189744	5658	43569	49227	73108	165863	238971
2018-19(P)	64878	130233	195111	3683	42002	45685	68561	172235	240796

The data shows huge gap of irrigation potential created (IPC) and irrigation potential utilized (IPU).The reason of low utilisation are-

- 1) General wear and tear of the irrigation scheme, and non-availability of fund in proper head of account in the state budget for their repair in due time leading unutilisation of the created potential.
- 2) Natural calamities like flood, storm etc. damaging the created potential.
- 3) Erratic power supply in respect of the electrically operated irrigation schemes(surface lift and ground water lift systems)
- 4) Damage of transformer, H.T. line and mechanical components at peak hours of requirement of water.
- 5) Change of river course in respect of surface flow and surface lift irrigation schemes.
- 6) Damage of canal system.
- 7) Lack of demand from the cultivators for irrigation water.
- 8) Reluctance of the cultivators to adopt multiple cropping in their crop field where assured irrigation is necessary.
- 9) Dependence of the cultivators on rain water as they adopt the traditional system of single cropping.

- 10) Stealing of motors/pumps and other accessories in some areas leading to non-functioning of the irrigation schemes.
- 11) Imposition of irrigation service charges by the government for realization from the beneficiary cultivators. As the cultivators are poor, they are either incapable or reluctant to pay irrigation service charges.

For better and efficient co-ordination among the Departments of Irrigation, Agriculture and other allied sectors, a state level co-ordination committee was constituted under the Chairmanship of the Additional Chief Secretary and Agriculture Production Commissioner, Assam and with the members from the concerned departments. In addition, a District Level Co-ordination Committee under Irrigation Department was constituted with the Additional Chief Engineer/Superintending Engineer as the Chairman and eight other members from various departments and organisations. Moreover, emphasis is placed on participatory irrigation management and as many as 1591 water user's association have been formed within the command areas of irrigation schemes.

It is pertinent to mention that under the Scheme- Pradhan Mantri Krishi Sinchai Yojana (PMKSY), District Irrigation Plans(DIP) for all the 27 districts (including newly created districts) of Assam have already been approved and the State Irrigation Plan(SIP) Assam, has also been finalized. It is expected that during the five year period from 2016-17 to 2020-21, the agriculture sector of the state will mark significant progress. The concern however remains on timely release of the approved fund. Table 6.2 shows district wise activities proposed by Irrigation Department under PMKSY for the five years and as approved by the District Irrigation Plans.

TABLE-6.3

Sl. No.	District	Number of Irrigation Scheme proposed							Area proposed in hectare	Proposed cost (Rs. in crore)
		FIS	DTW	LIS	STW	RRR	LLP	Total		
1.	Chirang	237	40		55			332	21540	2283.50
2.	Dima Hasao	38				57		95	9672	194.65
3.	Bongaigaon	18	230					248	7525	161.36
4.	Dhubri	37	1031	277		15		1360	57662	1386.635
5.	Karbi-Anglong	304	42	99	304	4		753	30442	4606.70
6.	Goalpara	69	273	32				374	19029	316.51
7.	Cachar	61		43				104	30448	300.2743
8	Barpeta	13	143	50				206	45346	437.43
9	Golaghat	16	1884	68	1164			3132	30452	2990.77
10	Kokrajhar	679	32	72				783	37425	1225.02
11	Darrang	95	1195	42				1332	37594	184.4286
12	Dhemaji	15	3694	725				4434	27759	2015.29
13	Lakhimpur	27	2625	1920				4572	45260	2065.73
14	Udalguri	245	509			146		900	24920	2876.93
15	Dibrugarh	1	193	75	7 (260pts)			276	31364	583.49
16	Nagaon	202	1644	976				2822	53807	19.52
17	Sonitpur (Biswanath Block)	88	804	126		85		1103	34590	1668.78
18	Tinsukia	72	1143	243		27		1485	32658	231.02
19	Baksa	1250	63	11				1324	52104	2566.91
20	Kamrup	205	653			102	1524	2484	48249	799.60
21	Morigaon	77	2504	58				2639	31250	550.055
22	Hailakandi	35	277	257		25		594	23250	179.98
23	Kamrup Metro	177	15	253				445	9978	254.78
24	Nalbari	124	497	253				874	27069	643.2437
25	Karimganj	65	98	39		13		215	25403	579.668
26	Sivasagar	9	1229	749		27		2014	39409	683.43
27	Jorhat	42	2483	342	872 (3752pts)			3739	54250	1329.2017
<b>Total</b>		<b>4201</b>	<b>23301</b>	<b>6710</b>	<b>2402</b>	<b>501</b>	<b>1524</b>	<b>38639</b>	<b>888455</b>	<b>31134.906</b>



The state has not initiated the main component of PMKSY, the HKKP till date due to non receipt of CA from the Ministry of Jal Shakti. But under PMKSY-HKKP-Access to ground water, which is a part of the component of PMKSY, has received as CA Rs.22146.00 lakh out of total 24606.96 lakh sanctioned to install 4779 tubewell points (2344 solar and 2435 electrical) during the year 2019-20 to create potential of 19116 hectares of irrigation in 18 districts of the state.

The allocation for irrigation sector of the state is not sufficient to meet up the targeted goals of 2022 (i.e. doubling the farmers income) and 2030 (i.e. to achieve ultimate irrigation potential of 27.00 lakh hectare)

Since 1996-97 central assistance was taken from Accelerated Irrigation Benefit Programme (AIBP) in Major/Medium Irrigation Sector only with the allocation pattern 90:10 (central assistance and state share). Subsequently since the year 2000-01 the central assistance under AIBP received in respect of Minor Irrigation Sector with the same allocation pattern of 90:10. In addition, assistance from Non-Lapsable Central pool of Resources (NLCPR), Assam Rural Infrastructure for Agriculture Services Programme (ARIASP) funded by World Bank and subsequently under RIDF of National Bank for Agriculture and Rural Development (NABARD), Command Area Development and Water Management (CADWM), North Eastern Council (NEC) and support from state plan allocation like TSP, SCSP etc. have been taken to develop irrigation potential in the state.

Table 6.4 presents a statement on scheme wise target and achievement (both financial and physical) under central sector and centrally sponsored schemes for the last three years.

**Table 6.4: Scheme wise Target and achievement (both financial and physical) under Central sector and Centrally sponsored schemes**

Name of Scheme	Physical Achievement (In Hectare)						Financial Achievement (Rs. in Lakh)					
	2016-17		2017-18		2018-19		2016-17		2017-18		2018-19	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
<b>1) AIBP</b>												
i) Major & Medium	30108	0	30108	0	21972	0	10478.80	420.3817	89.00	0	0	0
ii) Minor	57772	6910	74263	7455	0	0	73173.14	7687.67	16457.75	1408	27000.00	4061.6
2) CADWM	26279	900	31124	2000	36729	14990.68	7639.41	478.32	3990.65	273.33	8055.00	1025.54
3) NLCPR	6775	0	3270	360	0	0	1287.32	897.4403	1148.06	11.39	882.04	721.498
4) NEC	0	0	2157	0	0	0	529.47	257.475	473.39	229.15	228.97	0
5) RMIS	-	-	-	-	0	0	314.50	41.92	262.40	56.13	243.00	45.72
6) PMKSY-HKGP	-	-	-	-	31716	0	-	-	-	-	52000	4200

Table 6.5 presents scheme wise target and achievement under state plan during 2016-17 to 2018-19.

Table 6.5 presents number of schemes undertaken with assistance from the World Bank /Asian Development Bank or other foreign investments/assistance during 2016-17 to 2018-19.

**Table 6.5 Scheme wise Target and achievement (both financial and physical) under State plan (NCA & ACA)**

Name of Scheme	Physical Achievement (In Hectare)						Financial Achievement (Rs.in Lakh)					
	2016-17		2017-18		2018-19		2016-17		2017-18		2018-19	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
<b>1) 4701 co. M &amp; M Irrigation</b>												
i) One time ACA recast of Bordikrai I/P)	1050	0	1050	0	0	0	0	0	72.07	0	0	0
<b>2) 4702 co. Minor Irrigation</b>												
<b>State Plan</b>	1590	60	1530	0	1380	0	853	0	2475	617.21	3475.02	633.31

**TABLE-6.6: Schemes undertaken with assistance from the World Bank/Asian Development Bank or Other foreign investments/assistance**

Name of Scheme	Physical Achievement (In Hectare)						Financial Achievement (Rs.in Lakh)					
	2016-17		2017-18		2018-19		2016-17		2017-18		2018-19	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
A)4701 co.M & M Irrigation												
i)Normal Work	5988	0	5668	0	0	0	303	288.748	501.1	128.65	562.10	293.89
ii)LTIF under NABARD Hansiri IP	0	0	0	0	21972	0	0	0	0	0	9000	0
B)4702 co. Minor Irrigation												
i)Normal Work	2003	100	0	0	0	0	853	267.561	0	0	0	0
ii)TSP	2097	660	1626	1316	568	390	503.64	1277.88	430.2	241.93	430.00	421.83
iii)SCSP	3433	1451	1977	1418	1178	754	1400	1277.25	1000	263.95	1000.00	364.57
iv)NABARD-RIDF(xviii & xix) loan	7336	5139	2046	667	4716	2600	12240	5357.26	6000	2707.38	6000	943.67
v)CM's special package for Dhemaji	400	400	400	0	0	0	234.14	234.135	7.1	0	0	0
vi)CM's special package for Barak Valley	132	0	132	132	0	0	174.98	148.238	50	34.91	0	0
vii)Assam Bikash yojana	413	0	413	0	0	0	76.73	27.83	0	0	0	0
viii)AIBP shortfall of AIBP 2007-08, 2008-09,2009-10 and projected share					66808	4892	5043.4	4174.04	10026.21	1970.36	6606.3	622.82
ix) SOPD					4230	80	0	0			3475	633.30
x)CADWM					4230	80	0	0			3475	633.30

The state needs sufficient fund for maintenance of the irrigation schemes and there is paucity fund. In the year 1993, the state introduced on adhoc basis "irrigation service charges" to raise the entire operation and maintenance cost of the irrigation provisioning and at least one percent of the capital cost from the beneficiaries under the premises of the Assam Irrigation Act, 1983.The rates were subsequently revised in 2000.The current rates of irrigation service charge are as follows -

**Table -6.7**

Crops	Rate per bigha(Rs.)	Rate per hect.(Rs.)
1.Kharif	37.50	281.24
2.Wheat and other Rabi crop	75.00	562.50
3.Early Ahu	100.00	751.00
4.Ahu	100.00	751.00
5.Jute	20.00	150.00
6.Sugarcane	29.60	222.00

The charges collected from the beneficiaries are deposited at the public exchequer. The realization of irrigation service charges however is not to the expectation. The following table present the figures of realization of the charges for the years 2016-17 to 2018-19.

Year	Irrigation Service Charges realized (in Rupees)
2016-17	1101305
2017-18	1195244
2018-19	785490

Despite all the constraints the state has set physical and financial targets for development of the irrigation sector. The provisioning as reflected in the budget of the financial year 2019-20 to accomplish the targets, are presented in Table 6.6. Table 6.7 shows crop season-wise area irrigated during the year 2017-18 and 2018-19 (provisional) in the districts of Assam from state provisioned sources of irrigation.

**TABLE-6.8**  
**BUDGETARY PROVISION FOR THE IRRIGATION SECTOR OF ASSAM, 2019-20**

Grant Number	Name of Programme /Scheme	Budget provision for 2019-20			Physical Target (In Ha.)
		SS	CA	Total	
	4701 C.O.Major & Medium				
	<b>Normal Works</b>				
Grant No 49	Jamuna I/P Modernisation	50	0	50	
	Integrated Irrigation Project on Kolong Basin	100	0	100	
	Rupahi Irrigation Project	250	0	250	
	<b>New Scheme</b>				
	Puthimari Irrigation Project	50	0	50	
	Burusuti Irrigation Project	50	0	50	
	Buroi Irrigation Project	50	0	50	
	ERM toKaldia I/P	10	0	10	
	<b>LTIF</b>				
	Loan Assistance from NABARD for Dhansiri I/P(LTFF)	0	3000	3000	21972
	<b>Sub-Total of 4701</b>	560	3000	3560	
	<b>4702 C.O. Minor Irrigation</b>				
	SOPD				
	SOPD-G(By SD)	632.57	0	632.57	
	Dimoria FIS at Tegheria Upper Tepesia Fullong and Khamar(after re-appropriation)	305	0	305	670
	Cost of LA Major works-FIS-Normal				
	Improvement of Pavoi FIS	4.39	0	4.39	60
	Improvement of Behali FIS	13.62	0	13.62	60
	DTW scheme with solar system(Total Nos)	1375	0	1375	550
	GW-Solar DTW Scheme at Biswanath	200	0	200	670
	335 Balipara solar power DTWS	100	0	100	90
	GW -Solar DTW Scheme at Pakhamara,3pts.(By SD)	100	0	100	90
	Irrigation Scheme in Abhayapuri South LAC	50	0	50	1260
	Imp.of LIS from river Buridihing Tripling Fakia/Mouza in Joypur Dev.Block	150	0	150	100
	Remodelling of LIS Singahuti Beel under Kheremia & Sasson mouza	150	0	150	80
	Panbari FIS	200	0	200	
	Reconstruction of Parbatia FIS	300	0	300	
	FIS-repairing ,renovation & extension of canal structure of Gelasuba(By SD)	200	0	200	193
	Renovation,remodelling & extension of Maloibari ELIS	100	0	100	700

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Kathalguri Dong Bund FIS at Udalguri	133	0	133	
Kalajhar Bund FIS at Udalguri, Tangla Div.	200	0	200	
Lissing Bund FIS at Udalguri, Tangla Div.	166	0	166	
Nonoi FIS(Darrang District),Mangaldoi	500	0	500	
Renovation and remodeling of canal system at Borlesakona FIS,Guwahati Div.	133	0	133	
Construction of Dalbari Kaniha FIS,Guwahati Div.	166	0	166	
Improvement of afflux bund,guide bund and canal structure of Singimari FIS,Tangla Div.	233	0	233	
Improvement of canal and canal structure of Gorgella Merbangchuba FIS,Tangla	166	0	166	
Improvement and renovation of Deosila FIS,Dudhnoi Div.	131	0	131	
Reconstruction of Sapoi BaligaonFIS, Tezpur Div.(AfterRe-appropriation)	225	0	225	
Improvement of Sonajuli FIS at Paneri,Mangaldoi Div.	66	0	66	
Remodelling of Hudama FIS at Mangaldoi	133	0	133	
ELIS at Sonapur(5 pts at Dhipuji,Goronga,Tuperpathar,Dumdang,Ghoramar ajan pump ELIS),Guwahati Div.	400	0	400	
Renovation and remodeling of Malunsal Kalibari LIS,Guwahati west	66	0	66	
Improvement of Kuruwa LIS,Mangaldoi Div.	275	0	275	
DTW at Rangia(10 pts),Rangia Div.	200	0	200	
DTW at Jalukbari LAC area(10 pts),Guwahati Div.	200	0	200	
DTW at Dharampur at LAC area(10 pts),Nalbari Div.	200	0	200	
DTW at Tingkhong at LAC area(5 pts),Dibrugarh Div.	100	0	100	
Development of Irrigation colony near Betkuchi,Lokhra,Guwahati Div.	500	0	500	
Construction of Central Laboratory,Auditorium and Guest House at Koinadhara with boundary wall.	333	0	333	
TSP	451	0	451	687
SCSP	1050	0	1050	2742
NABARD	150	2850	3000	3892
AIBP	892.75	15000	15892.75	61916
Shortfall of AIBP fund of 2007-08,2008-09& 2009-10(After re-appropriation)	1168.7773	0	1168.77731	
102-Ground water-1523-Tube Well-IR1-Electrical(By SD)	1040.23	9362.09	10402.32	19116
102-Ground water-1523-Tube Well-IR1-Solar(By SD)	1420.46	12784.18	14204.64	
<b>CSS:RMIS &amp; CENSUS</b>				
Other -CSS	0	700	700	
04-OE	0	2	2	
927-CS-01-Salary-EE-CS	0	6.50	6.50	
Sub-Total of 4702	14579.7973	40704.77	55284.56731	
<b>4705 C.O.CADWM</b>				
<b>Normal works</b>				
CAD for Bordikorai I/S	100	500	600	10755
CAD for Pahumara I/S(After Re-appropriation)	475	50	525	3716
CAD for Maloibari LIS Project	50	100	150	600
CAD for Dhansiri I/P(After Re-appropriation)	1400	603.3306	2003.33061	25100
Sub-Total of 4705	2025	1253.3306	3278.33061	
<b>TOTAL OF GRANT NO-49</b>			<b>62122.8979</b>	

TABLE- 6.9

## Area irrigated seasons wise in the districts of Assam

Name of District	Kharif (in hec.)		Rabi & Pre-kharif (in hec.)		Total (in hec.)	
	2017-18	2018-19(P)	2017-18	2018-19(P)	2017-18	2018-19(P)
Kokrajhar	13890	16021	98	65	13988	16086
Dhubri	100	29	286	183	386	212
Goalpara	1309	1427	365	493	1674	1920
Barpeta	4352	2469	271	218	4623	2687
Morigaon	78	254	571	430	649	684
Nagaon	28423	1096	2296	1131	30719	2227
Sonitpur	7459	5733	123	90	7582	5823
Lakhimpur	81	57	34	31	115	88
Dhemaji	59	56	19	0	78	56
Tinsukia	431	793	12	8	443	801
Dibrugarh	760	515	162	36	922	551
Sivasagar	1362	887	9	65	1371	952
Jorhat	549	545	376	68	925	613
Golaghat	709	1320	967	1349	1676	2669
KarbiAnglong	16863	15954	31337	32598	48200	48552
DimaHasao	4853	4780	-	0	4853	4780
Cachar	2022	1925	1333	1333	3355	3258
Karimganj	22	22	85	85	107	107
Hailakandi	537	537	130	165	667	702
Bongaigaon	263	385	164	431	427	816
Chirang	10058	15705	1133	867	11191	16572
Kamrup	5957	5525	651	720	6608	6245
Kamrup (M)	622	877	1487	1171	2109	2048
Nalbari	320	670	74	60	394	730
Baksa	15122	22751	661	685	15783	23436
Darrang	6872	6883	2240	200	9112	7083
Udalguri	66671	47758	4343	1171	71014	48929
Biswanath	-	12652	-	6125	-	12713
Charaideo	-	390	-	4	-	394
Hojai	-	26989	-	1820	-	28809
Majuli	-	31	-	99	-	130
S.Salmara	-	75	-	48	-	123
Assam	189744	195111	51482	45685	238971	240796

P= Provisional Source : Chief Engineer, Irrigation Department, Assam

**ANNEXURE-6.01**  
**DISTRICT WISE & CATEGORY WISE IRRIGATION POTENTIAL CREATED THROUGH GOVT.**  
**IRRIGATION SCHEMES IN ASSAM**

(Area in Hect.)

Sl. No.	District	Minor(2018-19)(P)				Total
		Surface Flow	Surface Lift	Deep Tube Well	Shallow Tube Well	
1	Kokrajhar	29135	4894	1119	100	35248
2	Dhubri	1038	6996	1316	606	9956
3	Goalpara	8375	5058	4103	188	17724
4	Barpeta	2820	12042	1481	229	16572
5	Morigaon	4348	13079	1130	573	17130
6	Nagaon	4612	11191	2551	488	18842
7	Hojai	3400	6313	1124	0	10837
8	Sonitpur	8087	4683	3857	0	16627
9	Biswanath	12360	5468	2159	1226	21213
10	Lakhimpur	2033	4416	5951	6535	18935
11	Dhemaji	1900	4095	1292	2788	10075
12	Tinsukia	806	2770	3404	447	7427
13	Dibrugarh	0	10412	4546	2700	17658
14	Sivasagar	792	14810	3091	406	19099
15	Charaideo	0	0	60	0	60
16	Jorhat	4026	2449	5372	70	11917
17	Majuli	1104	710	367	5268	7349
18	Golaghat	2765	6233	5521	173	14692
19	Karbi-Anglong	169835	8458	1058	677	180038
20	W.Karbi-Anglong	0	0	0	0	0
21	Dima Hasao	6364	2029	0	0	8393
22	Cachar	14181	6690	304	30	21205
23	Karimganj	7205	1443	304	0	8952
24	Hailakandi	2145	3442	102	0	5689
25	Bongaigaon	3720	2714	1355	572	8361
26	Chirang	28523	518	880	0	29921
27	Kamrup	20931	7981	3332	61	32305
28	Kamrup Metro	2073	3927	0	0	6000
29	Nalbari	0	3555	2702	833	7090
30	Baksa	35125	3280	685	0	39090
31	Darrang	13720	3916	2838	50	20524
32	Udalguri	84907	2800	951	506	89164
33	S. Salmara	90	3984	1404	242	5720
Total Assam		476420	168366	64359	24668	733813

## ANNEXURE-6.02

DISTRICT WISE IRRIGATION UTILISED, FUNCTIONING AND NON-FUNCTIONING IN  
ASSAM (In Nos.)

Sl. No.	District	Functioning Irrigation Scheme during 2017-18	Non-Functioning Irrigation Scheme during 2017-18	Total Irrigation Scheme as on 2018-19(P)
1	Kokrajhar	112	35	165
2	Dhubri	28	31	63
3	Goalpara	47	81	123
4	Barpeta	38	60	100
5	Morigaon	34	37	71
6	Nagaon	57	77	133
7	Hojai	23	26	56
8	Sonitpur	29	25	55
9	Biswanath	39	14	64
10	Lakhimpur	36	72	108
11	Dhemaji	35	35	71
12	Tinsukia	24	31	56
13	Dibrugarh	32	35	68
14	Sivasagar	44	48	88
15	Charaideo	1	1	2
16	Jorhat	59	29	87
17	Majuli	33	19	53
18	Golaghat	45	50	97
19	Karbi-Anglong	536	156	741
20	W.Karbi-Anglong	0	0	0
21	Dima Hasao	67	45	197
22	Cachar	30	128	159
23	Karimganj	16	67	83
24	Hailakandi	13	35	48
25	Bongaigaon	23	37	61
26	Chirang	63	22	93
27	Kamrup	80	73	158
28	Kamrup Metro	16	8	25
29	Nalbari	34	32	75
30	Baksa	106	97	203
31	Darrang	31	33	66
32	Udalguri	282	55	341
33	S.Salmara	15	37	52
Total Assam		2028	2531	3762

## ANNEXURE-6.03

## SECTOR WISE IRRIGATION POTENTIAL CREATED IN ASSAM 2018-19 (CUMULATIVE)

(Area in Hect.)

Sl. No.	District	Irrigation potential created upto 31 <sup>st</sup> March, 2019(P)			Through ASMIDC (STW/LLP)	Grand Total
		Minor Irrigation	Major/Medium Irrigation	Total		
1	Kokrajhar	35248	28194	63442	The Shallow Tubewell and Low Lift points installed through State Irrigation Development Corporation Ltd. are old scheme and the irrigation potential of 149205 hectares created by it has been treated as lost potential	63442
2	Dhubri	9956	0	9956		9956
3	Goalpara	17724	0	17724		17724
4	Barpeta	26572	25650	42222		42222
5	Morigaon	17130	0	17130		17130
6	Nagaon	18842	42063	60905		60905
7	Hojai	10837	41014	51851		51851
8	Sonitpur	16627	32131	48758		48758
9	Biswanath	21213	0	21213		21213
10	Lakhimpur	18935	0	18935		18935
11	Dhemaji	10075	0	10075		10075
12	Tinsukia	7427	0	7427		7427
13	Dibrugarh	17658	3075	20733		20733
14	Sivasagar	19099	0	19099		19099
15	Charaideo	60	0	60		60
16	Jorhat	11917	0	11917		11917
17	Majuli	7349	0	7349		7349
18	Golaghat	14692	0	14692		14692
19	Karbi-Anglong	180038	9637	189675		189675
20	W.Karbi-Anglong	0	0	0		0
21	Dima Hasao	8393	0	8393		8393
22	Cachar	21205	0	21205		21205
23	Karimganj	8952	0	8952		8952
24	Hailakandi	5689	0	5689		5689
25	Bongaigaon	83610	8361	8361		
26	Chirang	29921	0	29921		29921
27	Kamrup	32305	0	32305		32305
28	Kamrup Metro	6000	0	6000		6000
29	Nalbari	7090	0	7090		7090
30	Baksa	39090	33356	72446		72446
31	Darrang	20524	0	20524		20524
32	Udalguri	89164	58258	147422		147422
33	S. Salmara	5720	0	5720		5720
<b>Total Assam</b>		<b>733813</b>	<b>273378</b>	<b>1007191</b>		<b>1007191</b>



**CHAPTER-VII****FLOOD AND FLOOD CONTROL MEASURES****FLOODS AND THE DAMAGES:**

The State of Assam is situated in between 90° to 96° North Latitude and 24° to 28° East Longitude. It is situated in between 90° to 96° North Latitude and 24° to 28° East Longitude. The geographical area of Assam is 78,438.00 sq. km out of which 56,194.00 Sq. Km falls under the Brahmaputra Valley and 22,244.00 Sq. Km falls under Barak Valley including 3 (three) hill districts respectively.

The Brahmaputra Valley has an average width of about 80 Km. Brahmaputra is one of the largest rivers in the world and ranks fifth with respect to its average discharge. The river originates from the Kailash ranges of Himalayas at an elevation of 5300 M. After flowing through Tibet it enters India through Arunachal Pradesh and flows through Assam and Bangladesh before it joins Bay of Bengal.

**BRAHMAPUTRA RIVER BASIN** Brahmaputra river is the 6th largest river in the world in terms of Water Resources (629.05 Km<sup>3</sup>/year), The total drainage area is 5,80,000 Sq km. of which 2,93,000 Sq. Km is in Tibet, 2,40,000 Sq km is in India & Bhutan and 47,000 Sq km is in Bangladesh. The total length of the river is 2906 km, of which 918 km flows through India and 363 km through Bangladesh. The total length of the river in Assam is 640 km. The average width of Brahmaputra is 5.46 Km. The maximum discharge of Brahmaputra at Pandu near Guwahati was recorded as 72,779 cumec on 23.08.1962 and minimum discharge was recorded as 1757 cumec on 22.02.1963. The average annual discharge is about 20,000 cumec and average dry season discharge is 4,420 cumec. Brahmaputra river has 41 numbers of major tributaries of which 26 numbers are in North bank, and 15 numbers are in South Bank.

**BARAK VALLEY:** The Barak valley has a geographical area of 6922.00 Sq. Km excluding 3 (three) hill districts. The local rainfall run off of the valley along with that of adjacent hilly areas flow through river Barak and its various tributaries and is drained out to Bangladesh. The Katakhal, Jiri, Chiri, Modhura, Longai, Sonai, Ruknai and Singla are the main tributaries of the valley. The tributaries are mainly rain fed and cause flood problems when precipitation occurs.

Flood and Erosion are two main recurring natural disasters faced by the state. The flood prone area of the state is 31,500.00 Sq. Km as assessed by the Rastriya Barh Ayog which is about 39.58% of the total land area of Assam. This is about 9.40% of total flood prone area of the whole country. The flood prone area of the country as a whole stands at about 10.2% of the total area of the country, but flood prone area of Assam is 39.58% of the area of the state. It signifies that the flood prone area of Assam is four times the national mark of the flood prone area of the country. Records show that average annual area affected by flood is 9.31 Lakh Hectares. The flood protected area of the state is 16500.00 Sq. Km till date.

The severity of flood problem of the state has been further aggravated by the acuteness of erosion on both banks of river Brahmaputra and its tributaries. Study reveals that an area of 4.27 Lakh Hectare of the state has been eroded by the rivers since 1950, which is 7.40% of area of the state. The average annual rate of erosion is 8000.00 Ha / Year.

**FLOOD AND EROSION PROBLEM OF THE STATE:**

The Brahmaputra and Barak rivers with their 48 numbers of major tributaries and innumerable sub-tributaries have crises-crossed the plains of both valleys. Floods, bank erosion and drainage congestion are major problems faced by the state during the monsoon season. The flood of this region is a recurring phenomenon; every year several waves of flood cause damage to huge areas in the state. The loss to people in terms of houses, crops and cattle is immense. The figures of loss run into hundreds of crores every year apart from huge damages to roads, bridges, schools, communication systems and other such facilities. This diminishes the wealth of the nation and has adverse effects on the development of the state.

No long-term measures have been implemented so far to mitigate the flood and erosion problems of the state. Only Immediate and short-term measures are implemented by the state Water Resources Deptt. as stated above. Implementation flood protection measures have provided reasonable protection to about 16.50 Lakh Hectares of flood affected areas out of the total 31.05 Lakh Hectare of flood prone area as identified by the R.B.A. for the state.

During post-independence period, Assam faced major floods in 1954, 1962, 1972, 1977, 1984, 1988, 1998, 2002, 2004, 2008, 2014. Almost every year three to four waves of flood ravage the flood prone areas of Assam. Average annual loss due to flood in Assam is to the tune of Rs. 200.00 Crores. and particularly in 1998, the loss suffered was about Rs. 500.00 Crores and during the year 2004 it was about Rs. 771.00 Crores.

After the unprecedented floods in the country in 1954, the Govt. of India announced a National Policy on Floods comprising three phases viz. –

- The immediate,
- The short term and
- The long term measures.

The flood control activities in Assam started mainly after the announcement of National Water Policy, Subsequently, "Outlined plan for flood control in Assam" along with various comprehensive plans were prepared and the priority areas, which need immediate and urgent attention were identified.

Till date, the Water Resource Department has taken up works primarily for the general development of the rural sector and for the protection of major townships in both the Brahmaputra and Barak valley. Schemes have also been taken up to relieve the drainage congestion in the cities and other important areas.

- Construction of Embankments and Flood walls.
- River training and bank protection works.
- Anti-erosion and town protection works.
- River channelization with pro siltation device.
- Drainage improvement / Sluices.
- Raised Platform.
- Flood forecasting and warning.
- Flood zoning.

The Water Resource Department, Assam has been implementing various flood management schemes from the beginning of 2<sup>nd</sup> Five Year Plan and is continuing till now.

**Table: 7.1**  
**Physical Achievement of the Water Resources Department, Assam upto March'2019 since 11<sup>th</sup> Plan**

Nature of Work	Total upto 11 <sup>th</sup> Plan	12 <sup>th</sup> Plan (2012-2017)		During 2017-18	During 2018-19	Total
		Achievement during the plan	Total			
1	2	3	4	5	6	7
Construction of Embankments (Km)	4473.82	0.6	4474.42	12.02	-	4486.44
Town Protection & Anti Erosion Works (Nos)	884	74	958	25	36	1019
Construction of Major Sluice (Nos)	94	4	98	2	1	101
Construction of Minor Sluice (Nos)	545	-	545	-	-	545
Drainage Channel (Km)	874.96	7	881.96	-	10.25	892.216
Raising & Strengthening of Embankment (Km)	527.75	280.136	807.89	67.75	21.97	897.614

Source : Office of the Chief Engineer, Water Resource Department, Assam

#### **FLOOD CONTROL SCHEMES:**

The subject of flood management including erosion control falls within the purview of the States. The flood management & anti-erosion schemes are planned, investigated and implemented by the State

Governments with their own resources as per priority within the State. The Union Government renders technical guidance and promotional financial assistance to States.

The Ministry had launched "Flood Management Programme (FMP)" a State sector Scheme in XI Plan which was continued during XII Plan. A total of 522 projects costing Rs. 13238.37 crore were approved and included under FMP. During XI Plan, 420 projects with an estimated cost of Rs. 7857.08 crore were approved while during XII Plan, 102 projects with an estimated cost of Rs. 5381.29 crore were approved. Central Assistance amounting to Rs. 3566.00 crore was released during XI Plan and Rs. 1307.07 crore during XII Plan. Further, a Central Assistance of Rs. 562.67 crore has been released during year 2017-18. Since start of XI Plan, total Central Assistance released to States under FMP is Rs. 5435.74 crore until 31-Mar-18. The State-wise details of works approved, Central Assistance released in the last four Financial Years are given at Table-7.2.

**TABLE-7.2**  
**THE STATE-WISE CENTRAL ASSISTANCE RELEASED UNDER FLOOD MANAGEMENT PROGRAMME**

Sl. No.	State	Works approved during XI Plan	Works approved during XII Plan	Works approved in (XI +XII Plan)	Central Assistance released in FY Rs. in Crore			
		Nos.	Nos.	Nos.	2014-15	2015-16	2016-17	2017-18
1	2	3	4	5	6	7	8	9
1	Arunachal P d h	21	0	21	0.00	47.39	23.69	21.18
2	Assam	100	41	141	15.25	47.14	0.00	245.49
3	Bihar	43	4	47	24.92	16.67	0.00	0.00
4	Chattisgarh	3	0	3	0.00	0.00	0.00	0.00
5	Goa	2	0	2	0.00	0.00	0.00	0.00
6	Gujarat	2	0	2	0.00	0.00	0.00	0.00
7	Haryana	1	0	1	0.00	0.00	0.00	0.00
8	Himachal	3	4	7	115.20	27.00	50.00	87.50
9	J & K	28	15	43	15.16	46.58	40.56	110.40
10	Jharkhand	3	0	3	0.00	0.00	0.00	0.00
11	Karnataka	3	0	3	0.00	0.00	0.00	0.00
12	Kerala	4	0	4	55.22	0.00	0.00	19.05
13	Manipur	22	0	22	6.45	0.00	0.00	0.00
14	Mizoram	2	0	2	1.46	0.47	0.00	0.48
15	Nagaland	11	6	17	13.08	2.51	23.13	0.00
16	Orissa	67	1	68	0.00	0.00	0.00	0.00
17	Puducherry	1	0	1	0.00	0.00	0.00	0.00
18	Punjab	5	0	5	0.00	0.00	0.00	0.00
19	Sikkim	28	17	45	0.00	5.72	0.00	0.00
20	Tamilnadu	5	0	5	0.00	0.00	0.00	0.00
21	Tripura	11	0	11	0.00	0.00	0.00	0.00
22	Uttar Pradesh	26	3	29	21.83	13.50	0.00	13.55
23	Uttrakhand	12	10	22	43.82	57.02	0.00	0.00
24	West Bengal	17	1	18	7.84	0.00	12.61	65.03
25	Total	420	102	522	320.23	264.00	149.99	562.67

During XII Plan, a Central Sector Scheme, "River Management Activities and Works related to Border Areas (RMBA)" was implemented by the Ministry of Water Resources to cover following major components:

- Hydrological observations and flood forecasting on common border rivers with neighbouring countries.
- Investigation of WR projects in Neighbouring Countries.
- Pre-construction activities for WR projects on common border rivers-Pancheshwar Development Authority(PDA)
- Grant- in- Aid to States/UTs for flood management/anti –sea erosion works:-
- Maintenance of flood protection works of Kosi & Gandak projects (in Nepal),
- Flood Protection/anti-erosion works in the border areas with Bangladesh and Pakistan by States.
- Flood Management/anti-erosion works/anti- sea erosion works in UTs.

**ACTIVITIES OF GANGA FLOOD CONTROL COMMISSION (GFCC).**

The State-wise details of Grant- in- Aid to States/UTs released under RMBA in the last four Financial Years are given at Table-7.3.

**TABLE-7.3  
THE STATE-WISE GRANT- IN- AID RELEASED UNDER RIVER MANAGEMENT ACTIVITIES AND WORKS RELATED TO BORDER AREAS (RMBA)**

Sl. No.	State/UT	Central Assistance released in FY Rs. in Crore			
		2014-15	2015-16	2016-17	2017-18
1	2	3	4	5	6
1	Bihar	51.273	47.842	0.00	52.57
2	UP	0.00	26.641	0.00	90.43
3	Tripura	0.00	14.025	0.00	0.00
4	West Bengal	0.00	29.691	0.00	0.00
5	J&K	0.00	0.00	0.00	8.78
6	Punjab	0.00	14.945	0.00	7.47
7	Puducherry	13.256	0.00	0.00	0.00
Total		64.530	133.144	0.00	159.25

Source : Water Resources Department, River Development and Ganga Rejuvenation

**FLOOD MANAGEMENT SCHEMES TAKEN UP BY WATER RESOURCE DEPARTMENT :**

**The Water Resource Department had taken up the following flood management schemes: –**

- 41 Nos of Schemes under Flood Management Programme (FMP) costing Rs. 1387.00 Cr;
  - 48 Nos of Schemes under NABARD (RIDF – XXIII) for Rs. 199.80 Cr;
  - 49 Nos of Schemes under NABARD (RIDF – XXIV) for Rs. 100.00 Cr;
  - 27 Nos of Schemes for the financial year 2016-17 under State Plan costing Rs. 35.37 Cr;
  - 46 Nos of Schemes for the financial year 2017-18 under SOPD costing Rs. 96.12 Cr;
  - 12 Nos of Schemes for the financial year 2017-18 under SOPD for Kollong Rejuvenation costing Rs. 14.92 Cr;
  - 2 Nos of Schemes for the financial year 2018-19 under SOPD costing Rs. 17.18 Cr;
  - 36 Nos of Schemes for the financial year 2019-20 under SOPD-G costing Rs. 100.00 Cr;
  - 4 Nos of Signature Projects under Uttaran for the financial year 2018-19 costing Rs. 40.00 Cr;
  - 2 Nos of Schemes under the funding of DoNER for the financial year 2019-20 costing Rs. 48.75 Cr;
- Ongoing Projects : The Water Resource Department has been implementing various projects to mitigate the problem of flood and erosion in the State. The projects currently under implementation are 23 numbers of schemes under State Plan, 9 numbers of schemes under SOPD for Kollong Rejuvenation, 4 numbers of schemes under Uttaran and 72 schemes under NABARD (RIDF -XXIII & RIDF – XXIV)

**NATIONAL HYDROLOGY PROJECT (NHP):**

The National Hydrology Project (NHP) is being implemented under the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India with a total outlay of Rs.3679.77 Crore for the entire country. This project was approved on 3rd June, 2016. NHP is expected to improve and expand hydrology data and information systems, strengthen water resources operation and planning systems and enhance institutional capacity for water resources management. The project will thus strengthen the information base and institutional capacity for evidence-based decision making in water resources planning and operational management at the basin scale across India using the latest technology and tools. NHP will contribute to the GOI Digital India initiative by integrating water

resources information across state and central agencies. NHP for the state of Assam is being implemented by the Water Resources Department, Assam.

The Union Cabinet has given its approval to implementation of the National Hydrology Project under the funding of the World Bank. The NHP will help in gathering Hydro-meteorological data which will be stored and analysed on a real time basis and can be seamlessly accessed by any user at the State / District / Village level. The total outlay for the state for the entire project period of eight (8) years is Rs. 47.00 Crore. This amount is provisioned across four components of (i) water resources data acquisition system – Rs. 28.2 crores ii) water resource information system –Rs. 2.35 crores, (iii) water resources operation and planning – Rs. 7.05 crores and (iv) institutional capacity building – Rs. 9.40 crores. Presently, construction of two Divisional Data Centres at Jorhat and Barpeta has been completed. Further, construction of State Data Centre at AWRMI, Basistha to establish Real Time Data Acquisition System (RTDAS) for Assam is going on and the rebidding process for Real Time Data Acquisition System (RTDAS) has been initiated.

#### **INTER-MINISTERIAL COMMITTEE ON FLOOD MANAGEMENT PROGRAMME (IMC-FMP) FOR THE XII PLAN:**

The meeting of the Inter Ministerial Committee on Flood Management Programme (IMC-FMP) held on 19<sup>th</sup> December, 2013 had recommended 41 schemes for the XII Plan. Estimated costs of the 41 schemes were Rs. 1387 crore planned to benefits 307,231 ha of land and a population of 40.72 lakh. Out of these schemes seven schemes have been completed and rests were in different stages of implementation.

#### **SCHEMES UNDER RURAL INFRASTRUCTURE DEVELOPMENT FUND (RIDF) OF NABARD:**

The NABARD sanctioned 44 schemes under its RIDF with a budget of Rs.282.50 crores during 2015-16 for flood control measures in the state. Till October, 2018, altogether 37 schemes have been completed, and the remaining schemes were targeted to be completed by March, 2019. During the year 2017-18, NABARD had sanctioned 48 flood control schemes under RIDF-XXIII for the state with financial provision of Rs 199.18 crores and 49 Nos of scheme under RIDF-XXIV for Rs. 100.00 crores. Till October 2018, 8 schemes under RIDF-XXIII were completed.

#### **SCHEMES UNDER NORTH EAST COUNCIL (NEC):**

The NEC had sanctioned 3 Schemes with an amount of Rs. 9.45 crores. In Kokrajhar district two anti-erosion schemes were sanctioned. Under one scheme Raimona Village and its adjoining areas are to be protected from river Janali and under the second scheme, Ranipur and its adjoining areas were to be protected from the erosion by river Pekua with an estimated expenditure of Rs.7.17 crores. These two schemes would benefit 1500 hectares of agriculture land. In addition an anti-erosion scheme at different reaches of both the banks of river Pomra in Baksa District has been completed with a cost of 2.28 crores.

#### **SCHEMES UNDER THE AEGIS OF ASIAN DEVELOPMENT BANK:**

Government of India and Asian Development (ADB) signed a \$ 60 Million Loan Agreement to reduce floods and the riverbank erosion in flood prone area along the Brahmaputra river in Assam. The loan is part of the 120 million dollars multi-tranche financing facility (MFF) for the Assam integrated Flood and Riverbank Erosion Risk Management Investment Program approved by ADB in October 2010. The Program will fund a combination of structural and non-structural measures in three sub project area of Palasbari-Gumi, Kaziranga and Dibrugarh along the Brahmaputra River which include 20 km of riverbank protection works and upgrading of 13 km of flood embankments. The loan will have a 20 years term including a grace period of 5 years, an Annual Interest Rate determined in accordance with ADB's lending facility based on the London Interbank Offered Rate (LIBOR), and a commitment charge of 0.015% per year.

The programme is being implemented in two phases. Two sub-projects under Tranche I has already been completed at Dibrugarh and Palasbari-Gumi area with a total cost of Rs. 319.50 crores. Under Tranche-II, 3 sub-projects at Dibrugarh, Kaziranga and Palasbari-Gumi are initiated with provisioning of Rs.356.09 crores. The Dibrugarh sub-project area would protect 7128 ha of cropland, excluding the tea estates, from regular flood inundation and damages. The Palashbari and Gumi sub projects shall protect 3200 ha and 26980 ha of croplands respectively. The Kaziranga sub project area would protect 10600 ha of area of all types – cropland, forest, wetland etc.

#### **SCHEME UNDER STATE PLAN/STATES OWN PRIORITY DEVELOPMENT PROGRAMME (SOPD):**

During the period, 2015-18, the Water Resource Department undertook 80 schemes covering three financial years (2015-16, 2016-17 & 2017-18) at a cost of Rs.145.49 crores. Out of these schemes 30 schemes have been completed and the rest are targeted to be completed within a short period. These included, one scheme during the FY 2015-16 under the State Plan costing Rs. 8.00 Cr, 27 Schemes

during the FY 2016-17 under the State Plan costing Rs.35.37 Cr, 46 Schemes for the FY 2017-18 under SOPD costing Rs. 96.12 Cr and 6 Schemes for the FY 2015-16 under SOPD in Majuli costing Rs.20.00 Cr.

**SCHEMES UNDER CHIEF MINISTER'S PACKAGE:**

A special scheme under Chief Minister's package on flood and erosion control has been launched in the State. Under this package, 8 Schemes have been taken up in Barak Valley costing Rs. 42 crore. These schemes are to benefit 7900 ha of land and a population of 127,500.

As part of CM's special packages for Barak Valley, 18 schemes at a cost of Rs.65.79 crores were taken up during the year 2013-14 and 2014-15 of which 16 schemes have been completed and the remaining schemes were in progress and nearing completion.

Besides, 6 Schemes under CM Package were taken up in Lakhimpur and Dhemaji districts with a budget of Rs. 30.09 crores which is expected to benefit 12500 ha of land.

Three schemes for protection with RCC porcupine in different reaches of river Subansiri and one scheme for protection at Charikoria River at a total cost of Rs.22.96 Crores were taken up in Lakhimpur District of Assam during the year 2014-15. All the schemes have been completed.

**BRAHMAPUTRA EXPRESS HIGHWAY INCLUDING DREDGING OF RIVER BRAHMAPUTRA:**

The honourable Chief Minister of the state has stressed for an ambitious project of construction of two express highways along the north and south banks of the River Brahmaputra from Sadia to Dhubri. It is expected that the proposed Highways shall contribute to speedier economic development of the state besides protecting the valley from recurring floods. The honourable Union Minister for Water Resources, Government of India has assured full co-operation for this ambitious project. The Water Resources Department, of government of Assam has taken up a preliminary survey on land and morphology of the river. The land survey is to determine the alignment of the proposed highways. The morphological survey consists of reading of 120 of river cross-sections along the course of the River.

**REJUVENATION OF KOLLONG RIVER:**

The Kollong is an off shoot channel of the Brahmaputra, once was a life line of central Assam contributing to the economic and socio-cultural prosperity of the region. Government of Assam now has taken initiative to rejuvenate the dead river channel and a provision of Rs.10 crores was made in the budget of 2017-18. During 2017-18, eight schemes were taken up for this purpose. For the year 2018-19 the state budget has allocated Rs.15 crores for rejuvenation of the river and altogether 11 schemes are adopted with provisioning of Rs.14.50 crores.

**NON-STRUCTURAL MEASURES OF FLOOD DISASTER MITIGATION:**

Non-structural measures to mitigate the damages caused by floods are primarily based on – facilitating timely evacuation of the people and shifting the movable properties to safe places. Timely intervention in such contexts largely depends on an appropriate warning system and anticipation on flood havoc and inundations. The goal of such approach is to organise and enhance the existing capacities and coping mechanism of the local communities (Annual Report of Assam State Disaster Management Authority, 2012). The second approach of non-structural measures is flood plain zoning and appropriate land use plan for settlements, agriculture and other economic activities.

The recommendations for the XII plan made by the working group on flood management and region specific issues indicate several forms (including improvement of the existing) of non-structural measures to supplement the existing measures of flood management programmes. One of the recommendations indicates concrete plan for extension of Central Water Commission's (CWC) flood forecasting network. At present the country has 226 flood forecasting stations consisting of 166 level forecasting stations for villages and towns and 60 inflow forecasting stations for 60 reservoirs/barrages in the country. In Assam at present there are 29 level forecasting stations. The working group recommended extension of inflow forecast services to more dams to cover 80 to 90 percent of the live storage capacity and accordingly identified additional 160 reservoirs. This list of additional reservoir includes Subansiri reservoir (capacity 442 MCM at Full Reservoir Level).The working group of the XII plan felt that there is need based appropriate contour maps and satellite imagery data for assessment and classification of flood prone areas as severe, moderate, low and occasionally affected. The working group emphasized on the need for flood hazard information and zonation as one of the re-requisite for non-structural flood management. The National Remote Sensing Centre has prepared floods hazard maps for Assam based on information derived from the satellite data on floods that occurred during 1998-2007. The data has helped in preparing a hazard index and classify the hazard prone districts of the state.

Government of Assam has also been running a project on flood early warning with support from the North East Space Application Centre of Department of Space, Government of India since 2009. Information on Flood Early Warning System (FLEWS) of the tributaries contributing to flooding

supplement the information of CWC which cover early working only for the major rivers of the state. As the FLEWS projects are location specific, they help to identify or predict which villages or cluster of villages are likely to be inundated. The FLEWS project initially covered Lakhimpur district of Assam and was subsequently extended to 14 districts in the state. As claimed by NESAC the percentage of successful flood alerts has improved from 25 percent in 2009 to 65 percent in 2012. The average lead time of forecast has also improved from 7 hours in 2009 to 14 hours in 2011. The entire system mainly consists of four elements – risks knowledge, monitoring and warning services, disseminations and communications and response capacity. The response capacity can be evaluated on two fronts – the State Administration and the people in affected areas of flood.

The FLEWS adopted in the State is an integrated approach of the stakeholders of Indian Meteorological Department, CWC, North Eastern Electric Power Corporation, NESAC and Brahmaputra Board.

#### WAY AHEAD:

In floodplains across the world, farmers have been welcoming floods as traditional mechanism to upgrade soil quality because they enable silt deposition and Assam was no exception. Siltation drives the desire of farmers to allow floods into their agriculture fields. Floods, however, are now often perceived as a disaster. The Assam Human Development Report (2014) reveals critical evidences on life expectancy, expected years of schooling and per capita annual income in the flood affected areas (captured and presented by development blocks) of the state. The flood affected areas of the state are laggard in these vital indicators of development.

Impact of floods is now considered as a major impediment for development and persistent poverty in Assam. Flood induced poverty is a widely discussed concern at all levels. Concern is how the adverse effects of floods in the state can be minimized at least considering availability of limited resources with the state. Recurrent floods and devastations leave little scope to make rooms for new provisioning and restoration of the damages already done.

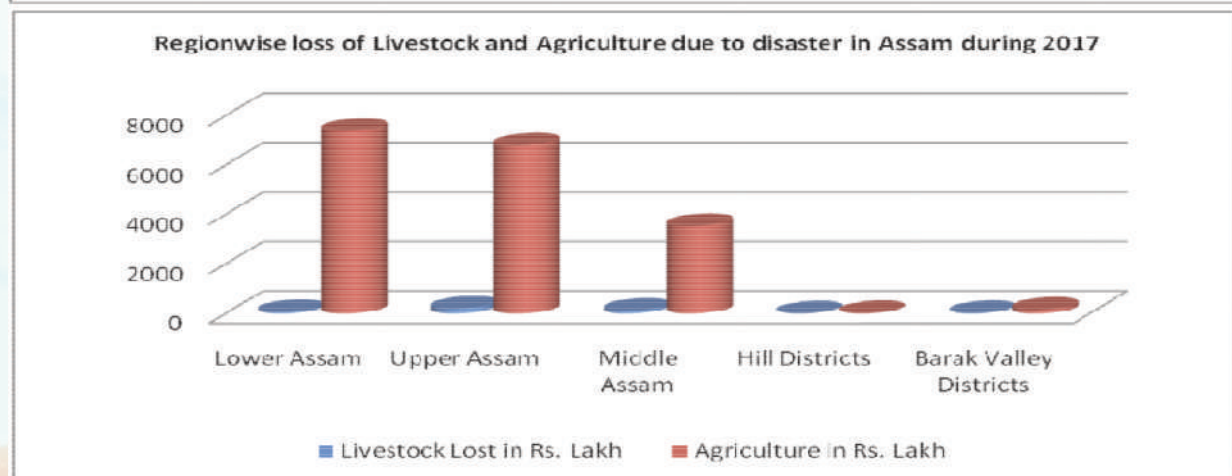
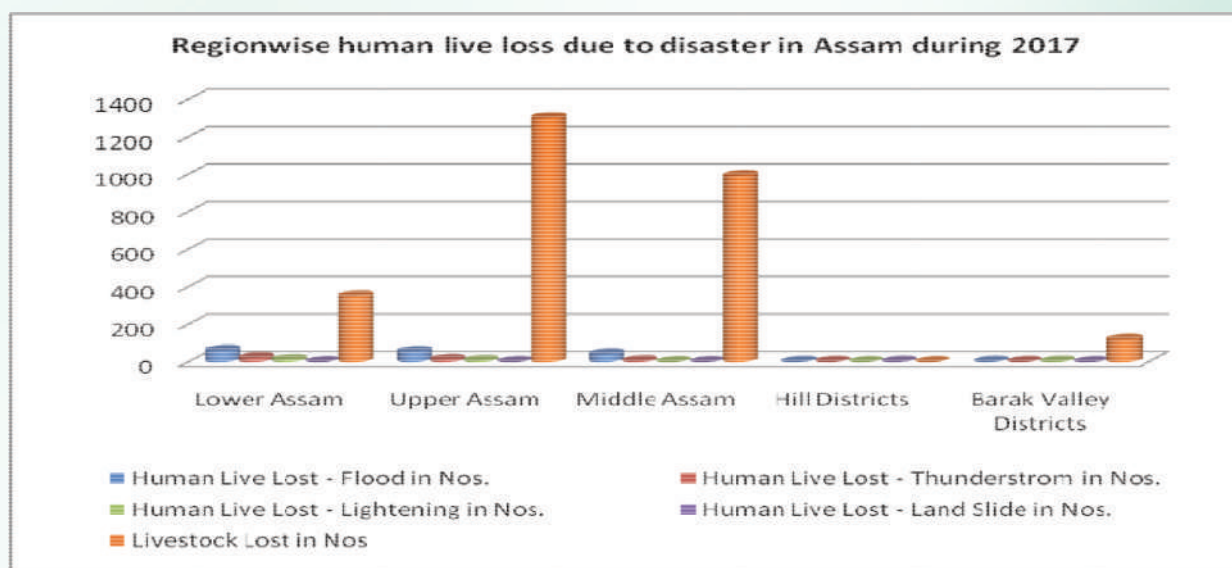
**TABLE-7.4  
DISTRICTWISE DAMAGE OF FLOOD MANAGEMENT STRUCTURES (EMBANKMENTS AND OTHERS) IN ASSAM, DURING THE FLOOD OF 2018**

Name of damage suffering Districts	Type of Embankment (Dyke)	Name of Embankment breached	No. of Embankment breached	No. of breaches in the Embankment	Length of breach (In meter)
1	2	3	4	5	6
Barpeta	Tributary Embankment	Pohumara R/B Embankment	1	1	130
Cachar	Borak dyke	L/B Embankment Borak	1	1	30
	Borak dyke	R/B Embankment Borak	1	1	20
	Tributary Embankment	Madhura R/B	1	1	25
		Sonari R/B	1	1	30
Karimganj	Tributary Embankment		1	9	210
Hailakandi	Tributary Embankment	Katakhal L/B	1	12	570
Nalbari	Tributary Embankment	Nadla L/B Embankment	1	1	30
		Mora Pagaldia L/B	1	1	155
Darrang	Tributary Embankment	L/B Embankment of Noanadi	1	1	20
Assam Total			10	29	1220

Source : Office of the Chief Engineer, Water Resource Department, Assam

**ANNEXURE-7.5  
REGION WISE LOSS OF HUMAN LIVE, LIVESTOCK AND AGRICULTURE DUE TO DISASTER IN ASSAM DURING 2017**

Region wise division of the State	Human Live Lost in Nos.				Livestock Lost in Nos	Livestock Lost in Rs. Lakh	Agriculture in Rs. Lakh
	Flood	Thunder-strom	Lightening	Land Slide			
1	2	3	4	5	6	7	8
Lower Assam (Covering 13 Nos. of districts)	60	22	12	0	350	55.96	7380.18
Upper Assam (covering 11 Nos. of districts)	55	13	7	0	1304	195.3	6794.65
Middle Assam (covering 3 Nos. of districts)	42	5	0	0	991	110.25	3533.09
Hill Districts (Covering 3 Nos. of districts)	1	1	0	2	0	0	13.86
Barak Valley Districts (Covering 3 Nos. of districts)	2	1	3	0	118	14.66	147.53
Total	160	42	22	2	2763	376.17	17869.31

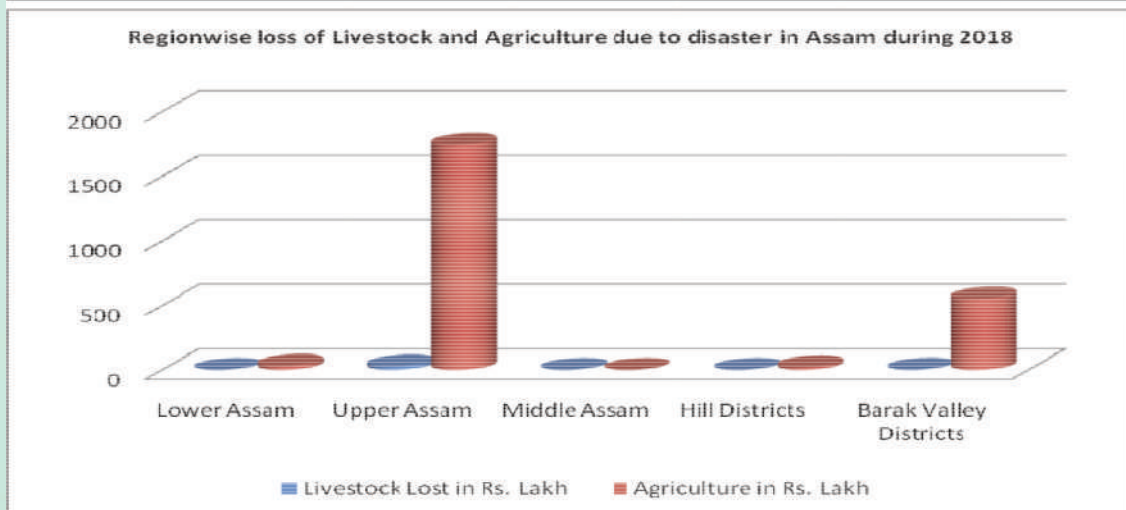
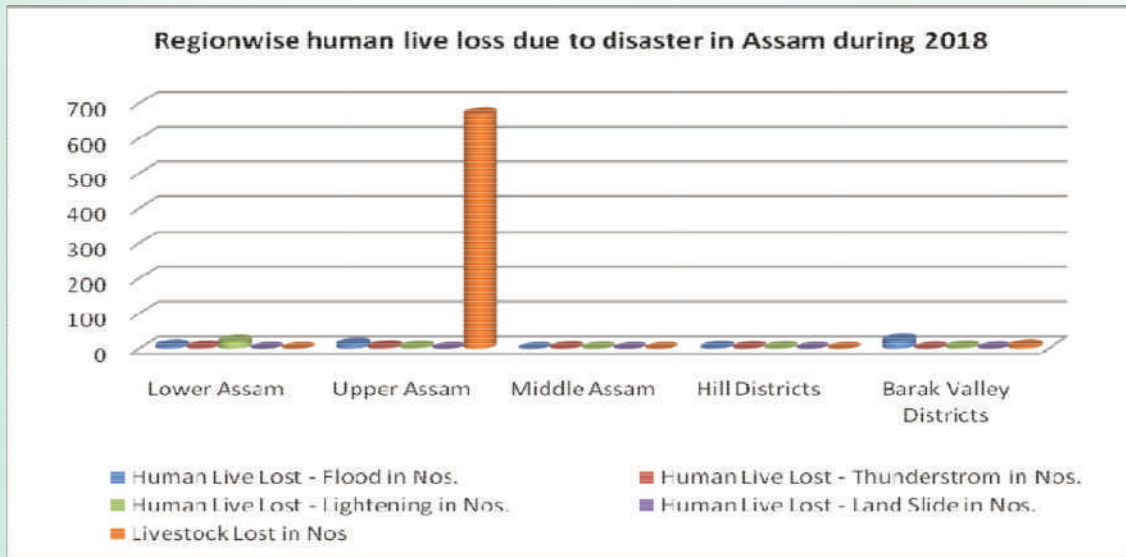




ANNEXURE-7.6

REGIONWISE LOSS OF HUMAN LIVE, LIVESTOCK AND AGRICULTURE DUE TO DISASTER IN ASSAM DURING 2018

Region wise division of the State	Human Live Lost in Nos.				Livestock Lost in Nos	Livestock Lost in Rs. Lakh	Agriculture in Rs. Lakh
	Flood	Thunder-strom	Lightening	Land Slide			
1	2	3	4	5	6 7		8
Lower Assam (Covering 13 Nos. of districts)	7	4	20	0	0 0		29.83
Upper Assam (covering 11 Nos. of districts)	12	5	4	0	671	26.68	1746.86
Middle Assam (covering 3 Nos. of districts)	0	2	1	0	0 0		0
Hill Districts (Covering 3 Nos. of districts)	3	2	2	0	0 0		19.8
Barak Valley Districts (Covering 3 Nos. of districts)	23	1	4	1	7	2.05	552.07
Total	45	14	31	1	678	28.73	2348.56



**BUDGET DOCUMENT FOR THE YEAR 2018-19 OF WATER RESOURCE DEPARTMENT, ASSAM:**

Assam is a riparian state. Brahmaputra and Barak, the two main rivers of Assam flowing through the state have contributed immensely towards progress in various spheres of socio economic and cultural aspects within the state. It is proposed to construct an express highway along both banks of river Brahmaputra, for which the work of initial survey and investigation has already been completed.

The signature project on rejuvenation of river Kollong which was taken up for execution in 2017-18 is making headway and for this purpose an amount of Rs. 15 crore has been provided in the budget 2018-19. Sufficient budget provision has also been made in the budget of 2018-19 for the execution of the externally aided projects – Assam Integrated River Bank Management Project (AIRBMP).

For a permanent solution of the problem of flood and erosion of river island Majuli, the largest populated river island of the world, the construction work of the full-fledged water resources complex including the construction of a material bank for storing flood fighting materials required during emergency situations including other works is presently under way at Majuli.

Government of Assam has decided to take new steps to take up corrective dredging in river Brahmaputra and its tributaries. As the first phase for such an innovative approach, the Government has proposed to purchase one dredger along with other ancillary machineries, for starting corrective dredging in the tributaries of Brahmaputra and Barak. The Government has already accorded approval to the proposal for an amount of Rs. 18.00 crore under SDRF already.

A total budgetary allocation of Rs. 824 crores in 2018-19 is earmarked for Water Resource Department.

**BRAHMAPUTRA & BARAK BASIN: POTENTIAL FOR DEVELOPMENT****BRAHMAPUTRA BASIN:**

As mentioned earlier, Brahmaputra sub-basin extends over an area of 580,000 sq.km lying in Tibet (China), Bhutan, India and Bangladesh. The drainage area lying in India is 194413 sq.km which is nearly 5.9% of the total geographical area of the country. It is bounded on the north by the Himalayas, on the east by the Patkari range of hills running along the Assam-Burma border, on the south by the Assam range of hills and on the west by the Himalayas and the ridge, separating it from Ganga sub-basin. The sub-basin lies in the States of Arunachal Pradesh, Assam, Nagaland, Meghalaya, West Bengal and Sikkim. The State-wise distribution of drainage area is given below:

Sl. No.	State	Drainage Area (Sq. Km.)
1	Arunachal Pradesh	81,424
2	Assam	70,634
3	West Bengal	12,585
4	Meghalaya	11,667
5	Nagaland	10,803
6	Sikkim	7,300
7	Total	194,413

The upper portion of the sub-basin lying in Arunachal Pradesh and Nagaland is mostly mountain ranges and narrow valleys. Most portion of the sub-basin lying in Assam, Meghalaya and West Bengal consists of hills, forests and tea gardens. The Cooch Bihar and West Dinajpur districts of West Bengal have fertile plains.

Red loamy soil and alluvial soil are the predominant soil types found in the sub-basin. Other important soil types found include sandy, loamy, clayey soils, their combinations and laterite soils. The culturable area of the sub-basin is about 12.15 M. ha which, is 6.2% of the culturable area of the country.

The Brahmaputra river originates from Kailash ranges of Himalayas at an elevation of about 5150 m and flows for about 2900 km through Tibet (China), India and Bangladesh and joins the Ganga. The principal tributaries of the river in India are the Dibang, the Lohit, the Subansiri, the Manas, the Tista, the Dharrsiri and the Champamati. The Brahmaputra sub-basin has abundant hydro -power potential. As per the latest assessment, the hydropower potential of the sub-basin is 31012 MW at 60% load factor. This is almost 37% of the country's total hydropower potential. A large proportion of the hydropower potential of the sub-basin still remains untapped due to the physiographic conditions of the basin.

The Central Water Commission maintains hydrologic network. There are 15 gauge-discharge sites in the sub-basin. In addition, gauge data at 80 sites, gauge-discharge data at 15 sites and gauge, discharge and sediment data at 25 sites are maintained by the State Governments and the Brahmaputra Board. The Central Water Commission operates 24 flood forecasting stations in the sub-basin. With the objective of preparing a master plan for controlling the flood and bank erosion and improving the drainage of the Brahmaputra valley, simultaneously tapping the immense water potential

for hydropower generation and possible irrigation, Brahmaputra Board was established by the Govt. of India in 1980. The Board has jurisdiction over the adjacent Barak valley also.

### BARAK SUB-BASIN

The Barak sub-basin drains areas in India, Bangladesh and Burma. The drainage area of the sub-basin lying in India is 41723 sq.km which, is nearly 1.38% of the total geographical area of the country. It is bounded on the north by the Barail range separating it from the Brahmaputra sub-basin, on the east by the Na Lushai hills and on the south and west by Bangladesh. The sub-basin lies in the States of Meghalaya, Manipur, Mizoram, Assam, Tripura and Nagaland. The State-wise distribution of drainage area is given below.

Sl. No.	State	Drainage Area (Sq. Km.)
1	Meghalaya	10650
2	Manipur	9567
3	Mizoram	8866
4	Assam	7224
5	Tripura	4688
6	Nagaland	728
7	Total	41723

There are two major physiographic regions in the sub-basin, namely, the hilly region and the plains. The plains are thickly populated and extensively cultivated. The predominant soil types found in the sub-basin are laterite and red and yellow soils. The culturable area in the sub-basin 0.893 M. ha which is only about 0.5% of the culturable area of the country.

The river Barak rises in the Manipur hills and enters the plains near Lakhimpur. The river enters Bangladesh as Surma and Kushiya. Later, the river is called the Meghna and receives the combined flow of the Ganga and Brahmaputra. The principal tributaries of Barak are Jiri, Dhaleswari, Singla, Longai, Sonai and Katakhal.

The sub-basin has good hydropower potential. As per the latest assessment, the hydropower potential of the basin is 2042 MW at 60% load factor. Bulk potential is yet to be exploited. The Central Water Commission maintains 23 gauge-discharge sites in the sub-basin. The CWC also operates 2 flood forecasting stations in the sub basin.

### 1. Brahmaputra & Barak Basin Organisation, CWC, SHILLONG NORTH EAST INVESTIGATION CIRCLE, CWC, SHILLONG:

Tipaimukh Investigation Circle was opened by CWC in Shillong in the year 1977 for carrying out of Survey & Investigation of Tipaimukh High Dam Project in Manipur/ Mizoram. On completion of the works of Tipaimukh High Dam project, this Circle was renamed as North Eastern Investigation Circle in 1983 and it has been taking up work of Survey & Investigation for various types of water resources development projects in N.E. Region. Of late, S&I works outside of North East have also been taken up for one project of DVC (Balpahari). The field investigations are carried out by three Divisions, namely (1) North Eastern Investigation Division-I, CWC, Silchar, (2) North Eastern Investigation Division-II, CWC, Aizawl and (3) North Eastern Investigation Division-III, CWC, Itangar.

The designs / drawings required for preparation of DPRs are carried out by the specialized Directorate, of Central Water Commission and Central Electricity Authority, New Delhi. Processing of proposal for central assistance pertaining to the states of Meghalaya & Mizoram on SMI Schemes, RRR of water bodies etc. are done under the NEIC, CWC, Shillong.

### 2. HYDROLOGICAL OBSERVATION CIRCLE, CWC, GUWAHATI:

- a) **HYDROLOGICAL OBSERVATIONS** There is a network of 75 Hydrological Observation Stations for collection of Hydro-meteorological data on Brahmaputra Basin and a part of Barak Basin. The Hydro-meteorological data collected by HOC, CWC is being utilized by various organizations for planning of water resources development projects or other projects like bridge across rivers etc. Various user agencies like Govt. Departments/PSU/Students etc collect these data from CWC for numerous development works such as planning, design & construction of hydro-electric project, bridges, expansion of projects, geotechnical studies of rivers etc. Some of the agencies using these data are Brahmaputra Board, North-East Frontier Railway, Hindustan Fertilizer Corporation Ltd., National Institute of Hydrology, NEEPCO Ltd., NHPC, North Easter Space Applications Centre (NESAC), NTPC, ONGC, IIT Guwahati, NIT Silchar, Universities and Engineering Colleges and State Governments departments of NE States.

- b) **FLOOD FORECASTING:** Flood Forecasting has been a recent initiative of the Government to warn people in advance about floods. It is issued by Division offices at 34 stations. Gauge data is collected round the clock on hourly basis during flood season (1st May-31st October). This data is communicated to forecast formulation units i.e. Division/Sub-Division offices mainly through a network of wireless sets and phone/fax etc. The Flood Forecasts are formulated and disseminated to the local administration, concerned state authorities, CWC (HQ), defence and other user agencies including media through email, FAX and other virtual media. During high flood situation, flood alerts are also issued through SMS. Forecast is formulated and Daily Flood Bulletins are issued when Water Level is about to touch/cross warning level at the forecasting site. Forecast is issued to user agencies viz. Civil Authorities, other concerned Government departments, Mass Media like Doordarshan, AIR and News Papers etc. Daily Flood Bulletins are issued once/twice to user agencies through Special Messenger/Phone/Fax/E-mail etc. Besides flood warning, processing of proposal for central assistance pertaining to the state of Arunachal Pradesh on SMI Schemes, RRR of water bodies etc. are also taken up on priority basis.

### 3. MEGHNA CIRCLE, CWC, SILCHAR

The main functions of Meghna Circle and field formations attached with it are observation, validation and compilation of Hydro-meteorological data such as gauge, discharge, silt, water quality, temperature and rainfall in the Indian Catchment of Meghna River System (the Barak and its tributaries and also other north and west flowing rivers of Tripura and west flowing rivers of Meghalaya-either meeting the Barak river in the Indian territory or flowing directly into Bangladesh for ultimately joining Meghna). The Hydro-meteorological data being collected by Meghna Circle may prove useful in assessment of water availability in these rivers for comprehensive planning of water resources projects on domestic water supply, irrigation, hydro-power, flood control and also for navigation and industrial needs. In future, the above data may be an essential input in devising water sharing mechanism between India and Bangladesh on the Barak and other rivers flowing from India into Bangladesh. The Meghna Circle is also responsible for processing of proposal for central assistance pertaining to the state of Manipur & Tripura on MI Schemes, RRR of water bodies etc.

### 4. MONITORING & APPRAISAL DIRECTORATE, CWC, GUWAHATI:

#### 1. Monitoring of ongoing Major/Medium Irrigation Projects in the North-Eastern States of Assam, Meghalaya, Manipur, Tripura, Arunachal Pradesh, Mizoram and Nagaland under AIBP:

The Accelerated Irrigation Benefit Programme (AIBP) was introduced by Govt. of India in consultation with State Govt. in 1996-97 under which Major/Medium Irrigation Projects, in advanced stages of completion, were provided with project specific loans. The State Governments committed their commensurate shares for early completion of the projects. The monitoring work of Major/Medium Irrigation projects of North-Eastern States which are covered under AIBP has been allocated to this Directorate w.e.f. 1996-97. Presently, 10 projects of these states are under purview of AIBP. With the introduction of new scheme i.e. Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), now all the programmes i.e. Accelerated Irrigation Benefit Programme (AIBP) all Major & Medium Project, National Projects and ERM Projects, Minor Irrigation, Repair and Renovation & Restoration (RRR) of Water Bodies, Command Area Development & Water Management (CADWM) Programme and Ground Water Programme will be implemented under PMKSY.

**2. Monitoring of Surface Minor Irrigation Scheme under AIBP/CADWM:** From 1999-2000, Surface Minor Irrigation Schemes of North-Eastern States have been included under AIBP. Monitoring of these Schemes in Assam and Nagaland has also been assigned to this Directorate during 2003-04.

**3. Monitoring of Command Area Development Water Management (CADWM) Projects from year 2000-01 in the North-Eastern States:** Command Area Development Programme was launched in N.E Region along with rest of the country in 1974-75, was and is executed by the respective states under direct control/guidelines of MoWR. In case of CADWM Projects, as per latest guidelines, the DPR at the time of inclusion need not be examined by the CWC field units as well as CWC (Hq). The state government directly submits the DPR after clearance from the state TAC to MoWR, RD&GR. For seeking funding under the CADWM Programme, proposals for new projects would be submitted to the fields unit and the field units would examine the proposals and forward to MoWR, RD&GR.

**4. Vetting of proposals for Central Assistance under AIBP:** The Major and Medium Projects covered under AIBP Scheme get the Central Assistance in two instalments each year. The proposals for release of CA are examined and recommended by this office for further approval by CWC and MoWR.

**5. Appraisal of DPR for Medium Irrigation Projects :** The Detail Project Reports of Medium Irrigation Projects are appraised by this office for their techno-economic clearance by TAC of MoWR. However,

DPRs of Major Projects have to be forwarded to CWC(HQ) from field offices after preliminary examination.

**6. Appraisal of DPR for Flood Management Schemes.**

The DPR of Flood Management Schemes of Assam (Southern Flank), Manipur, Tripura and Brahmaputra Board Projects are appraised by the Guwahati Directorate.

DPR of Flood Management Schemes in Border Areas in all states of North Eastern Region (except Sikkim) are prepared by the Guwahati Directorate.

**7. Appraisal of Revised Cost Estimates of Medium Irrigation Projects:** The revised cost estimates of Medium Irrigation Projects of NE Region submitted by the State Govt. are technically examined as per the guidelines of CWC. TAC Note is prepared and submitted to Project Monitoring Organization, CWC, New Delhi.

8. Proposal of state govt. for funding of water bodies under the scheme of RRR of Water Bodies in the States of Assam and Nagaland are prepared by the Guwahati Directorate.

**ANNEXURE- 7.7  
LOSS DUE TO DISASTER IN ASSAM DURING 2017**

Sl. No.	District	Human Live Lost in Nos.				Livestock Lost in Nos	Livestock Lost in Rs. Lakh	Agriculture in Rs. Lakh
		Flood	Thunder-strom	Lighten-ing	Land Slide			
1	2	3	4	5	6	7	8	9
1	Kokrajhar	10	2	2		1	0.30	108.12
2	Dhubri	14		5		19	4.25	1970.44
3	Goalpara	3	10	1				440.39
4	Barpeta	2	3			122	19.59	1964.59
5	Morigaon	29	3			133	18.72	1809.62
6	Nagaon	9	2			774	80.16	1299.31
7	Sonitpur	4	1	1		166	23.01	1114.27
8	Lakhimpur	12	2			203	33.40	2127.39
9	Dhemaji	10				110	16.79	311.09
10	Tinsukia	0	6	1				466.49
11	Dibrugarh	2	1	2		103	13.65	536.51
12	Sivasagar	4		2		131	23.41	108.46
13	Jorhat	5				39	4.94	43.43
14	Golaghat	8	2			81	12.79	605.21
15	KarbiAnglong	0	1					13.86
16	Dima Hasao	1			2			
17	Cachar	0		2				103.24
18	Karimganj	2	1			72	9.14	31.27
19	Hailakandi	0		1		46	5.52	13.02
20	Bongaigaon	8	1	3				829.00
21	Chirang							910.12
22	Kamrup	2						147.62
23	Kamrup Metro	8	2					46.10
24	Nalbari	2				85	10.31	376.40
25	Baksa	1					0.00	115.04
26	Darrang	4				84	11.37	424.16
27	Udalguri	2	3					
28	Biswanath	5		1		126	18.51	719.14
29	Charaideo	0	1					25.69
30	Hojai	4						1.49
31	Majuli	1	1			345	48.80	761.17
32	South Salmara	8		1		123	21.51	446.67
33	West Karbi Anglong							
	Assam	160	42	22	2	2763	376.17	17869.31

**ANNEXURE-7.8**  
**LOSS DUE TO DISASTER IN ASSAM DURING 2018**

Sl. No.	District	Human Live Lost in Nos.				Livestock Lost in Nos	Livestock Lost in Rs. Lakh	Agriculture in Rs. Lakh
		Flood	Thunder-strom	Lightening	Land Slide			
1	2	3	4	5	6	7	8	9
1	Kokrajhar	2	2	6			0	0
2	Dhubri		2				0	0
3	Goalpara							0
4	Barpeta			4			0	0
5	Morigaon			1			0	0
6	Nagaon						0	0
7	Sonitpur		1				0	0
8	Lakhimpur	1		2		1	0.03	9.07
9	Dhemaji	2	1				0	290.93
10	Tinsukia		1					0
11	Dibrugarh			1			0	0
12	Sivasagar	2	1				0	0
13	Jorhat						0	0
14	Golaghat	4	1	1		670	26.65	1319.59
15	KarbiAnglong		2	1				5.94
16	Dima Hasao	3						13.86
17	Cachar	13	1	2				69.09
18	Karimganj	8	1	1	7		2.05	169.27
19	Hailakandi	2		1			0	313.71
20	Bongaigaon			2				0
21	Chirang			2				0
22	Kamrup			3				0
23	Kamrup	1						0
24	M. Nalbari						0	0
25	Baksa			2			0	0
26	Darrang		2				0	0
27	Udalguri	2						0
28	Biswanath	1					0	77.15
29	Charaideo	2						29.83
30	Hojai	2						50.12
31	Majuli						0	0
32	South			1			0	0
33	West			1				0
	K. h. A. Assam	45	14	31	1	678	28.73	2348.56

Source : Assam State Disaster Management Authority (ASDMA), Dispur, Guwahati-6

## CHAPTER-VIII

### LIVESTOCK, ANIMAL HUSBANDRY AND DAIRY DEVELOPMENT

#### ANIMAL HUSBANDRY:

In rural Assam more than 50 percent population is engaged in Agriculture and allied activities. Animal Husbandry plays a supportive role to raise income and wellbeing of the rural households. The Animal Husbandry department of the state now focuses to improve health of the existing livestock towards enhancing production meat and eggs. Various steps have already been undertaken by the state to achieve the objective of enhancing productivity of the sector and create gainful employment opportunities. The initiatives in this sector are expected to contribute towards improvement of state domestic product.

#### LIVESTOCK POPULATION AS PER 19<sup>TH</sup> LIVESTOCK CENSUS:

The 19th Livestock Census 2012 reveals that Cattle population constitutes the largest group of livestock in the state with 103 lakh cattle. The share of indigenous/non-descript cattle to the total cattle population is 96.2 percent, whereas crossbred cattle population constitutes 3.8 percent (Table 8.1). To the census of 2012 the state had 5.3 lakh Buffalo, 5.2 lakh Sheep, 61.7 lakh Goats, 16.4 lakh Pigs. Table 8.1 presents the data in detail as revealed by 2012 Livestock census.

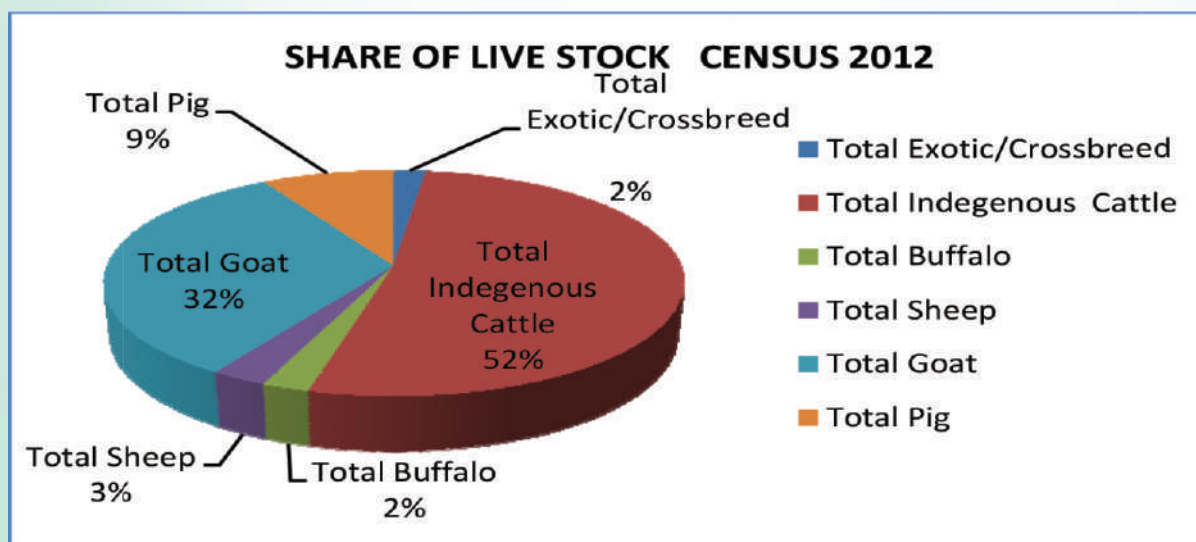
TABLE - 8.1

#### LIVESTOCK AND POULTRY POPULATION IN ASSAM AS PER 2012 LIVE STOCK CENSUS (in no)

Sl. No.	Livestock species	2012
1	<b>Total cattle</b>	<b>10307604</b>
	a. Crossbred cattle	395902
	b. Indigenous Cattle	9911702
2	Buffaloes	435265
3	Sheep	518067
4	Goat	6169193
5	Horses & Ponies	14153
6	Pigs	1636022
7	Dogs	527521
8	Elephant	445
9	Rabbit	6170
10	Fowls	18718209
11	Ducks	7300402

Source: Directorate of Animal Husbandry & Veterinary, Assam.

Fig.-1.



The FIG:1. above shows that among the total livestock, Cattle (both crossbreed & indigenous) constitutes highest share with 54.02% followed by Goat 32.33%, Pigs 8.57%, Sheep 2.71% and Buffalo 2.28% besides marginal share of other livestock species such as Mules, Donkeys, Horses and Ponies. A comparison of 2012 Livestock Census data over the 2007 Census data reveal insignificant variations of livestock numbers in the state.

**TABLE – 8.2**  
**GROWTH TREND OF LIVE STOCK PRODUCTS IN ASSAM**

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
<b>Milk</b> (million litres)	832	838	845	857	873	888	904	925	945
<b>Egg</b> (million nos)	470	471	471	472	473	474	477	495	501
<b>Meat</b> (^000 tonnes)	34.0	34.19	36.63	38.34	42.0	45	47	48.43	50.42

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

**SOME IMPORTANT ACTIVITIES:**

**A. BREED UP-GRADATION THROUGH ARTIFICIAL INSEMINATION PROGRAMME:**

The state despite having sizeable number of cattle population, milk production in the state is not up to the level of expectation. The reason being a significant proportion of cattle population in the state are of non-descript type. Implementation of World Bank funded scheme as well as the Scheme under National Project on Cattle-Buffalo Breeding [NPCBB] although have assisted to increase milk production in the State, achievements in case of production of cross breed animal is not satisfactory. At present, breed up-gradation programme is carried out under AACP, RKVY and NPCBB Schemes.

The State Animal Husbandry & Veterinary Department has proposed to incorporate the following activities to enhance milk production:

- A modern frozen semen production centre has been set up in Barpeta to enhance semen production of quality breed;
- Out sourcing of A.I. Services to boost artificial insemination activities;
- Improvement of Animal Health Services through holding of training and awareness campaign, organizing Health Camps;
- Induction of High Yielding indigenous breed of cattle like Sahiwal, Red Sindhi, etc in addition to routine A.I. activities;
- Stall feeding practices and quality animal rearing to be promoted on cluster basis to ease milk collection as well as to improve the network of A.I. activities.

**B. PIG DEVELOPMENT SCHEMES UNDERTAKEN BY THE A. H. & VETERINARY DEPARTMENT ASSAM:**

Assam has a significant proportion of tribal people for whom pig rearing is an integral part of their life. The present population scenario of pig in Assam comprises of largely non-descript local variety, and a small proportion is of exotic hybrids and genetically graded pigs. The schemes in operation under pig development are :

- National Livestock Mission (NLM)
- Rashtriya Krishi Vikash Yojana (RKVY)
- Assam Agri-Business and Rural Transformation Project (APART)
- Different pig development schemes under SOPD-G, TSP, SCCP etc.

**C. GOVT PIG FARMS:**

At present, the A. H. & Veterinary Department of the state has the following Pig Farms:

1. Base Pig Breeding Farm, Khanapara, Guwahati-22, Kamrup (Nucleus Pig Breeding Centre) (Rani Wing)
2. Base Pig Breeding Farm, Khanapara, Guwahati-22, Kamrup (Khanapara Wing)
3. Govt. Pig Breeding Farm cum Demonstration Farm, Sonapur, Kamrup



4. Nucleus Pig Breeding Centre, Morigaon
5. Base Pig Breeding Farm, Bajalbari, Titabor, Jorhat
6. Govt. Pig Breeding Farm, Khanikar, Dibrugarh
7. Govt. Pig Breeding Farm, Kokrajhar
8. Govt. Pig Breeding Farm, Diphu, Karbi Anglong
9. Govt. Pig Breeding Farm, Dongkamokam, Karbi Anglong
10. Govt. Pig Breeding Farm, Sontila, Dima Hasao
11. Govt. Pig Breeding Farm, Umrangsu, Dima Hasao
12. Govt. Pig Breeding Farm, Sonaigaon, Udalguri
13. Nucleus Pig Breeding Centre, Kathiatoli, Nagaon
14. Govt. Pig Breeding Farm, Kopahtoli, Halowating, Sivasagar
15. Govt. Pig Breeding Farm, Gargaon, Sivasagar
16. Govt. Pig Breeding Farm, Khelowa, Sivasagar
17. Govt. Pig Breeding Farm, Dirpai, Gogamukh, Dhemaji
18. Govt. Pig Breeding Farm, Kuchdhowa, Goalpara
19. Govt. Pig Farm, Deyangmukh, Dima Hasao

At present 16 of the above mentioned farms are operational. The farm at Gargaon, Sivasagar is damaged; the farm at Kopahtoli, Halowating, Sivasagar is occupied by CRPF personnel and the area of the farm, Dirpai, Gogamukh, Dhemaji is requisitioned by the ICAR as informed by the respective District A. H. & Veterinary Officer. The department is taking every possible step to make all the farms functional to its full strength. Towards this the state is receiving funds under the schemes of NLM, RKVY, APART, SOPD-G, IPDPNE, NEC, RIDF etc.

#### **D. PIG DEVELOPMENT SCHEME FOR FARMERS:**

Pig rearing helps to bring additional income to rural families (primarily the tribal communities) and supplement household expenses. This initiative requires little capital. The A. H. & Veterinary Department, Assam has been emphasizing on scientific pig rearing among the traditional rearers through introduction of exotic Boar, improved housing and management and health care which will require transfer of farmer-centric technologies and anthropo-centric approach to the farmers. During past few years, the A. H. & Veterinary Department, Assam has taken some farmer-centric approach for economic upliftment and social safeguard of rural poor particularly the woman folk. In coming years too, more farmer-centric approach has been proposed under NLM, RKVY, APART, SOPD-G, IPDPNE, NEC, Assam Milk, Meat and Egg Mission (AMMEMS) under CMSGUY, RIDF etc. where besides giving emphasis on production and productivity, emphasis would be placed on marketing of produce by organizing the pig rearers into organized and registered entity.

#### **SCHEMES PROPOSED UNDER DIFFERENT SCHEMES:**

##### **THE FOLLOWING FARMS ARE PROPOSED UNDER NATIONAL LIVESTOCK MISSION (NLM):**

1. Nucleus Pig Breeding Farm for Indigenous Stock (Doom) at Agomoni, Dhubri for 100 pigs (20:80)
2. Multiplier Pig Breeding Farm, Bongaigaon
3. Multiplier Pig Breeding Farm, Golaghat
4. Multiplier Pig Breeding Farm, Lakhimpur
5. Base Pig Breeding Farm, Khanapara, Guwahati, Kamrup under IPDPNE
6. Pig Breeding Farm, Khanikar, Dibrugarh under IPDPNE
7. Pig Breeding Farm, Kuchdhowa, Goalpara under IPDPNE

##### **The following farms are proposed under NEC:**

1. Nucleus Pig Breeding Farm, Sonitpur for Exotic Breed
2. Multiplier Pig Breeding Farm, Darrang
3. Multiplier Pig Breeding Farm, Biswanath
4. Multiplier Pig Breeding Farm, Lakhimpur

##### **RKVY: (RASHTRIYA KRISHI VIKASH YOJANA)**

##### **The following works have been proposed under RKVY during 2019-20:**

1. Rearing of Pig through Pig Rearers Group (PRG) in different districts of the state. A total of 2000 units of 10 members each will be supported and all the members will be covered in 20 Nos. of Farmer Producer Organization (FPO)/ Farmer Producer Company (FPC). The districts proposed for the activity will be Golaghat, Goalpara, Jorhat, Sonitpur, Dibrugarh, Tinsukia, Cachar, Morigaon, Bongaigaon, Dhemaji, Lakhimpur and Sivasagar.

##### **AMMEMS under CMSGUY:(CHIEF MINISTERS SAMAGRA GRAMYA UNNAYAN YOJANA):**

1. Intensive Pig Development Project in different districts of the state has been proposed covering the rural poor.
2. Farmer Producer Organization (FPO)/Farmer Producer Company (FPC) for Piggery Development in Assam under which 30 FPOs has been proposed covering 23 districts of the state.

**APART: (ASSAM AGRIBUSINESS & RURAL TRANSFORMATION PROJECT)**

- Cluster approach will be adopted for pig development in the state under APART. A total of 59390 families will be covered under the project. All the families will be covered in 56 clusters. The clusters will be covered by 30 FPOs.

**SOPD-G: The following works have been proposed under RKVY during 2019-20:**

- (FPO)/ Farmer Producer Company (FPC). The districts proposed for the activity will be Nagaon, Dibrugarh, Morigaon and Dhemaji. Rearing of Pig will be through Pig Rearers Group (PRG) in different districts of the state. A total of 2000 units of 10 members each will be supported and all the members will be covered in 20 Nos. of Farmer Producer Organization.

**E. FODDER DEVELOPMENT**

Feed and fodder are prime contributing factors for the growth of livestock sector. It is estimated that feed and fodder account for 60-70 percent of the total cost of livestock production. As high rainfall ensures availability of grass and vegetation in the state, the farmers are not habituated with fodder cultivation. However, with massive land use conversion in the state, the farmers have started to face the crisis of not having ample grazing land. To meet the demand, the Department has planned to initiate fodder cultivation using institutional waste land and strengthen and revamp the Regional Feed Testing Laboratory, located at Khanapara. The plan is also to establish Silage making unit in each state owned livestock farm for demonstration purpose.

The Animal Husbandry and Veterinary department, Assam has also proposed establishment of 6(six) feed mill and fodder block making units in PPP mode.

**TABLE – 8.3  
ACTIVITIES ON FODDER PRODUCTION IN ASSAM**

Sl No.	Financial Year	Name of the schemes	Financial involvement Rs. in lakh	No. of units	Remarks
			Nil		
2.	2017-18		Nil		
3.	2018-19	Fodder Seed Distribution during summer season under the RKVY 2018-19	206.00	1500	Ongoing project, progress report is not available

**F. COORDINATED CATTLE BREEDING PROJECT (S.E)**

Productivity is though low, the non- descriptive Indigenous cattle & Buffaloes are the main source of milk production in the state. The priority of the hour is genetic improvement to enhance milk production.

C.C.B.P (S.E) phase-I was launched under NPCBB with the objective to produce milch cattle economically in large numbers for enhancement of milk production to be achieved through infusion of exotic inheritance. The project is also to combine productivity and adaptability to disease resistance including reasonable draught ability and adjust to the local environment.

**TABLE – 8.4  
CATTLE BREEDING ACTIVITIES UNDER CO-ORDINATED PROJECT 2018-19**

Physical Target	Physical Achievement	Financial Achievement (Phase-1)			
		Year	Fund released (In lakh)	Expenditure (In lakh)	Balance (In Lakh)
Collection of Semen	Started	2007-08, 2008-09	10.00		
Distribution of Semen in FPR Area	Started	2009-10, 2010-11	Nil	7,82,350.00 From 2007 to 2012	2,17,650.00
No. of A.I. done	1,750 Nos. 750 Nos.	2011-12, 2012-13			
No. of Calf born	65 Nos. 42 Nos.	2013-14 to 2019-20			

The Operation of current bank account has been closed as per Govt. instruction. Hence the expenditure cannot be incurred during the financial year 2019-20.

## G. PHYSICAL AND FINANCIAL ACHIEVEMENTS OF NERDDL & ANIMAL HEALTH CENTRE FOR 2019-2020:

### PHYSICAL PROGRESS:

The NERDDL provides referral and consultancy services to the state diagnostic laboratories of the region for economically important livestock and poultry diseases, as and when needed. The NERDDL official visit the state laboratories in Meghalaya, Manipur, Arunachal Pradesh and Mizoram and provides necessary guidance. Besides these NERDDL tests the following specimen as part of its routine works.

**TABLE – 8.5**  
**LABORATORY TESTS PERFORMED BY NERDDL DURING 2018-19**  
**Sectional Officers of NERDDL**

Name of the section	No. of samples processed	Diseases diagnosed
Parasitological	352	Theileriosis-12 (+ve), Anaplasmosis 1(+ve), Trichomoniasis (-Ve) Babesiosis (-Ve) Amphistomiasis-115(+ve), Nematodiasis-39 (+ve) Fascioliasis 7(+ve)
Bacteriological	285	Salmonellosis, Coli bacillosis, Staphylococcosis, Diplococcosis, Pasteurella Spp.
Serological	1681	Test done against H5N1, PRRS, PPR, CSF
Virological	1875	Avian Influenza
Toxicological	87	Negative for poisoning -63, positive for carbamateinsecticide- 13, positive for Organo Phosphorus insecticide-5, Aflatoxin- 2, Species identification of meat - 4 (All decomposed)
Pathological	155	BSE negative status, Pnumonia, hepatitis, Enteritis, cardio respiratory failure, nephrosis, aflatoxicosis, NCD, duck plaque, pastuerellosis, E. coli, necrotic ulcer etc

### PRESENT STATUS REPORT

#### INSTITUTE OF VETERINARY BIOLOGICALS – AT A GLANCE

##### A) Preface:

Veterinary Biological means a medicinal preparation made from living organisms and their products widely used in the field of immunization and disease diagnosis of animals and birds. These immunizing agents may be classified as vaccine, immunoglobulin, antiserum, antitoxin or antigen, which play a vital role in immune-prophylaxis and diagnosis of diseases. Vaccine is an immuno-biological substance designed to produce specific protection against a given disease. It stimulates the production of protective antibody and other immune mechanisms. Vaccine may be prepared from live modified organisms, inactivated or killed organisms, extracted cellular fractions, toxoids or combination of these. More recent preparations are sub-unit or recombinant vaccine. Immunoglobulin is internationally accepted for proteins of animal origin and the term antisera are applied to materials prepared in animals like horses. The specific immunoglobulin or more specifically antisera or antitoxin has also tremendous healing power against a particular disease.

Although many of the vaccines currently licensed for use in animals are produced by conventional methods, the advent of biotechnology has provided an opportunity for developing new generation vaccines with improved efficacy and greater safety. The inactivated vaccines often contain many irrelevant substances, some with undesirable activity. The main disadvantage of inactivated vaccine is slow and short lived immune response. The live attenuated vaccines can produce adverse reactions including immuno-suppression and also have a very short cell life. Despite these limitations, conventional vaccines will continue to be used until superseded by safer and more effective sub-unit or genetically engineered live vaccines with DNA technology.

Vaccination is one of the most cost-effective measures for controlling of infectious diseases. Some infectious diseases with wildlife reservoirs as in the case of rabies can only be prevented and controlled with vaccination strategy. Therefore, the benefits of vaccine are not only confined to reduce morbidity and decrease mortality among the animals and birds but also to prevent the transmission of zoonotic diseases in the human population. So, a reliable supply of pure, safe, potent and effective vaccine is

essential for maintenance of animal health and the successful operation of national disease control or eradication programme.

Government of India established the Institute of Veterinary Biologicals (IVB) at Chenikuthi, Guwahati in the year 1950-51 with a license to produce goat tissue vaccine (wet type) against a contagious viral disease of cattle and buffaloes called Rinderpest (RP) or Cattle plague under the Rinderpest Eradication Programme. In the year 1957-58 the liquid goat tissue RP vaccine was replaced by Freeze Dried (FD) RP vaccine as per recommendation of National Project on Rinderpest Eradication (NPRE) and accordingly Assam started to procure the F.D.R.P. vaccines from Bengal Veterinary College, Calcutta and Indian Veterinary Research Institute (IVRI), Izatnagar, Uttar Pradesh. Realizing various problems and difficulties of procuring vaccines from other states and institutions, in 1966-67 the IVB was shifted to Khanapara under a scheme titled as "Expansion of Biological Production Section" for large scale vaccine production. The scheme started working in the year 1970 with the production of F.D.R.P. and other viral and bacterial vaccines. Later on it was raised to the regional status through financial assistance from North Eastern Council (NEC) during the 5<sup>th</sup> and 6<sup>th</sup> five year plan and till date this is the only vaccine producing centre in the entire NE region. Today, the Institute supplies the vaccines not only to the NE states but also to the other states like Uttar Pradesh, West Bengal, Jammu & Kashmir, Andaman Nicobar island and several defense organizations. The neighbouring country of Bhutan has also received support from this institute.

**B) Aim and Objective:**

1. To produce quality vaccines against the livestock and poultry diseases commonly prevalent in the North Eastern Region.
2. To ensure maximum possible protection to the livestock and birds having crossbred exotic germ plasm.
3. To provide sufficient confidence to the breeder of the region to adapt Animal husbandry as an industry for their economic upliftment with appropriate health coverage.
4. To provide necessary protection of health of the livestock and birds during natural calamities.
5. To provide necessary health coverage to the human population against zoonotic diseases by vaccinating the livestock and birds.
6. To keep co-ordination with various research laboratories and organization for recent development in vaccine production technology.
7. To introduce new vaccines in the Veterinary field from laboratory.

**C) Facilities available:**

1. Bacterial vaccine section.
2. Viral vaccine section.
3. Antirabic section.
4. Quality and Standardization section.
5. Small animal laboratory farm.
6. Storage and issue section.

**D) PRESENT STATUS:**

**a) PRODUCTION :**

The IVB has been producing vaccine since its inception in 1950. The quantity of production, procurement & distribution during the period. 2007-08 to 2017-18 are as follows:-

- i) Total production of Vaccine : 56,73,696 doses
- ii) Total procurement of vaccine : 2,46,75,270 doses
- iii) Total distribution of vaccine : 3,37,88,146 doses

**b)** The IVB has well developed infrastructure for production of various bacterial and viral Vaccines. The need however, is to cope with the modern vaccine production technology of contemporary times. At present the institute is producing the following type of vaccines.

- a) Bacterial Vaccine - H.S., B.Q., Anthrax
- b) Viral Vaccine - F<sub>1</sub>, R<sub>2</sub> B, Duck Plague, Swine Fever.

**c) MANPOWER :**

At present, the institute has altogether 103 post (technical 49 & non-technical 54) in various disciplines. Altogether 10 technical personnel of the institute received training in specific discipline at IVRI, Izatnagar, UP. The technical personnel are responsible for producing vaccines as per norms. Details of staff position are enclosed as **Annexure-I**.

The need of the hour however is to expand the number of trained personnel with training to get accustomed with the developments of contemporary times and produce vaccines as per norms laid down by the OIE and WHO. . A proposal on this front has already been made and placed before the state government for immediate consideration.

**D) EQUIPMENT AND UTILIZATION:**

Most of the instruments and appliances which are presently used in the institute have been providing services for long now require replacements. The institute now has obtained some vital equipments from the Central Government through NPRE and also some machineries with the aid of ASCAD. The

provisioning are however not adequate and hence the Institute seeks help from the State Government and other agencies for machineries and working capital to get equipped with modern facilities for production of new generation vaccines.

**E) CONCLUSION:**

There is huge demand for biological products at present. The existence of IVB plays a key role in the growth, development and sustainability of livestock and wildlife population of the state. In addition, the products and various immunizing programme of the IVB are directly or indirectly related with activities of some other department of the state. The IVB is a need base institute, and there are convergences of many activities of other departments to the animal husbandry and veterinary department of the state.

**TABLE – 8.6  
VACCINE PRODUCTION (Target and Achievement)**

PHYSICAL	Target 2016-17	Achievement 2016-17	Target 2017-18	Achievement 2017-18	Target 2018-19	Achievement 2018-19
i) No. of vaccination (disease-wise in lakhs)						
i) PPR	02.00	0.00	02.00	0.14	65.00	31.02
ii) FMD	50.00	0.01	50.00	0.38	90.00	70.43
iii) HS	15.00	01.58	15.00	0.83	12.00	0.54
iv) BQ	03.00	01.29	03.00	0.90	03.00	0.38
v) Anthrax	03.00	0.71	03.00	0.38	03.00	0.15
vi) SF	03.00	0.00	03.00	0.93	03.00	0.26
vii) DP	05.00	0.58	05.00	0.68	05.00	1.73
viii) R <sub>2</sub> B	05.00	0.71	05.00	0.76	05.00	0.69
ix) F <sub>1</sub>	05.00	0.20	05.00	0.28	05.00	0.64
x) H.S.-B.Q combine	03.00	0.35	03.00	0.32	03.00	1.80
xi) ETV	02.00	0.00	02.00	0.20	02.00	0.16
xii) GP	02.00	2.00	02.00	0.10	02.00	1.18
xiii) Brucella	02.00	0.00	02.00	0.00	02.00	0.25
<b>TOTAL</b>	<b>100.00</b>	<b>5.43</b>	<b>100.00</b>	<b>5.90</b>	<b>200.00</b>	<b>109.23</b>
ii) No. of Biological - production units upgraded / Strengthened (a) Addition / Alternation – Position / Progress made so far, Purchase of freeze dryer stage of purchase, Fermenter technology – stage of purchase / installation.	1	Machineries & Equipments etc not completed	1	Machineries & Equipments etc not completed	1	Machineries & Equipments etc not completed
iii) No. of Disease Diagnostic Labs upgraded / strengthened	3	-	3	-		
iv) No. of training organized for veterinarians Exposure visit	200	-	200	-	100	40
v) Nos of training for Para- Veterinarians	200	-	200	-	100	62
vi) No. of Workshops / Seminars organized	2	-	2	-		
vii) No. of awareness camps organized at Block / Village level	438	-	438	-		
viii) No. of awareness camps organized at District / state level	26	-	26	-		

Source – Directorate of Animal Husbandry and veterinary.

**TABLE - 8.7**  
**FMD-CP STATUS REPORT (PH-I) FOR THE YEAR 2019-20**

District	Block	Total village	Vaccine issued in PH-1	Vaccine utilized	Vacc. (%)	Village covered on	Village coverage (%)	Pre Serum sample	Post Serum sample	Balance vaccine dose
Baska	5	692	218350	191694	87.79	673	97.25	200	200	161275
Barpeta	12	844	246350	47052	19.10	462	54.74	200	0	205269
Bongaigaon	6	568	126400	107262	84.86	391	68.84	200	200	19138
Cachar	15	1061	232100	111050	47.85	619	58.34	200	0	121050
Chirang	1	510	141350	80682	57.08	494	96.86	200	200	60668
Darrang	5	564	213350	112418	52.69	333	59.04	200	200	102922
Dhemaji	5	1323	280750	115524	41.15	641	48.45	191	0	165226
Dhubri	14	1100	312850	88974	28.44	336	30.55	155	200	223876
Dibrugarh	7	1359	276250	73252	26.52	377	27.74	200	200	202998
Dima Hasao	5	699	30750	30274	98.45	378	54.08	200	0	476
Goalpara	8	840	177450	175018	98.63	718	85.48	120	0	2432
Golaghat	8	1132	256800	121939	47.48	964	85.16	200	0	134861
Hailakandi	5	334	113700	67574	59.43	180	53.89	200	0	46126
Jorhat	8	871	310750	210986	67.90	527	60.51	200	30	99764
Kamrup	17	1313	454200	113814	25.06	608	46.31	194	0	340386
Karbi-Anglong	11	2928	226950	195101	85.97	1690	57.72	200	0	31849
Karimganj	7	943	182850	34916	19.10	233	24.71	200	0	147934
Kokrajhar	5	1072	203350	140870	69.27	774	72.20	200	200	62480
Lakhimpur	9	1188	372900	225244	60.40	773	65.07	200	0	148080
Morigaon	5	638	193200	181675	94.03	589	92.32	200	146	11525
Nagaon	18	1431	462200	259716	56.19	858	59.96	200	0	202484
Nalbari	7	467	158800	158800	100.00	447	95.72	200	0	0
Sonitpur	14	1889	587050	302898	51.60	899	47.59	200	0	284152
Sivsagar	9	882	261300	168269	64.40	673	76.30	200	20	93031
Tinsukia	7	1186	255450	116431	45.58	553	46.63	200	0	139019
Udalguri	6	803	204550	53922	26.36	199	24.78	200	200	150628
<b>Total</b>	<b>219</b>	<b>26637</b>	<b>6500000</b>	<b>3485355</b>	<b>53.62</b>	<b>15389</b>	<b>57.77</b>	<b>5060</b>	<b>1796</b>	315764 9

#### ESTIMATION OF MILK, MEAT AND EGG PRODUCTION

The total milk production of the state for the year 2018-19 was estimated at 945.92 Million Litres against 925.78 Million litres of the previous year 2017-18. It reveals that the growth of milk production has increased by 2.2% over the previous year. During 2018-19 milk from indigenous/ non descript cattle accounted 53% of the total milk production of the state, while the contribution of crossbreed cattle was 31.54%; thus cattle milk from indigenous and cross breed varieties together accounted for 84% to the total milk production in the state. On the other hand Buffalo and Goat milk contributed 13% and 2% respectively of the total milk production.

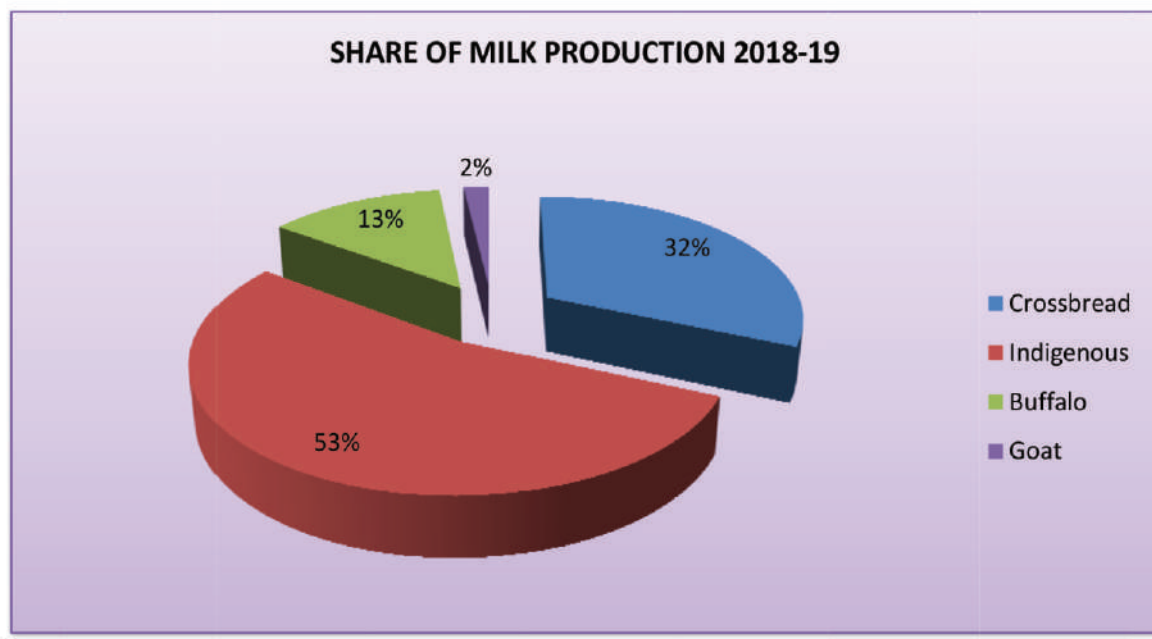
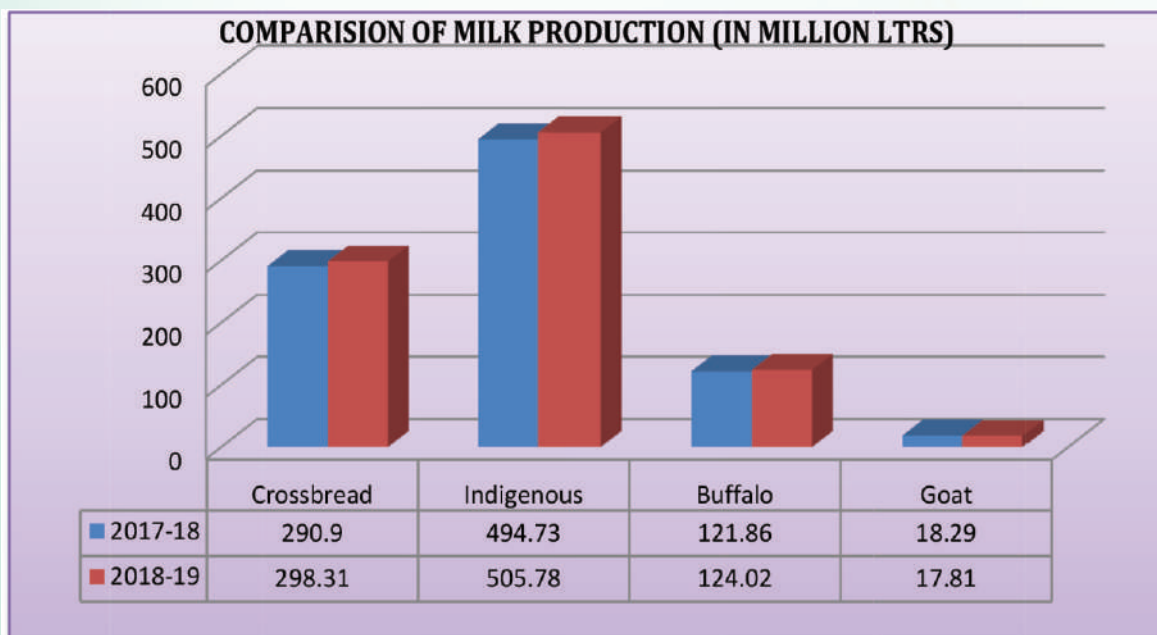
Total meat production in the state during the year 2017-18 was 48.43 thousand tonnes. Meat production during 2018-19 was 50.42 thousand tonnes; an increase in production by 4.11% over the previous year 2017-18.

The state had produced 5014.61 lakh eggs (both from fowl and duck) during 2018-19; and increase by 1.29% from the year 2017-18. During 2017-18 the state had produced 4950.77 lakhs eggs.

**INTEGRATED SAMPLE SURVEY SCHEME:**

**TABLE - 8.8**  
**ESTIMATED MILK PRODUCTION OF ASSAM** *(in million ltrs)*

Period	Cattle		Overall	Buffalo	Goat	Grand Total
	Crossbreed Cattle	Indigenous Cattle				
Annual 2018-19 (P)	298.31	505.78	804.09	124.02	17.81	945.92
Annual 2017-18	290.90	494.73	785.62	121.86	18.29	925.77(P)
% Change over 2017-18	3%	2.2%	2.35%	1.8%	(-)3%	2.2%

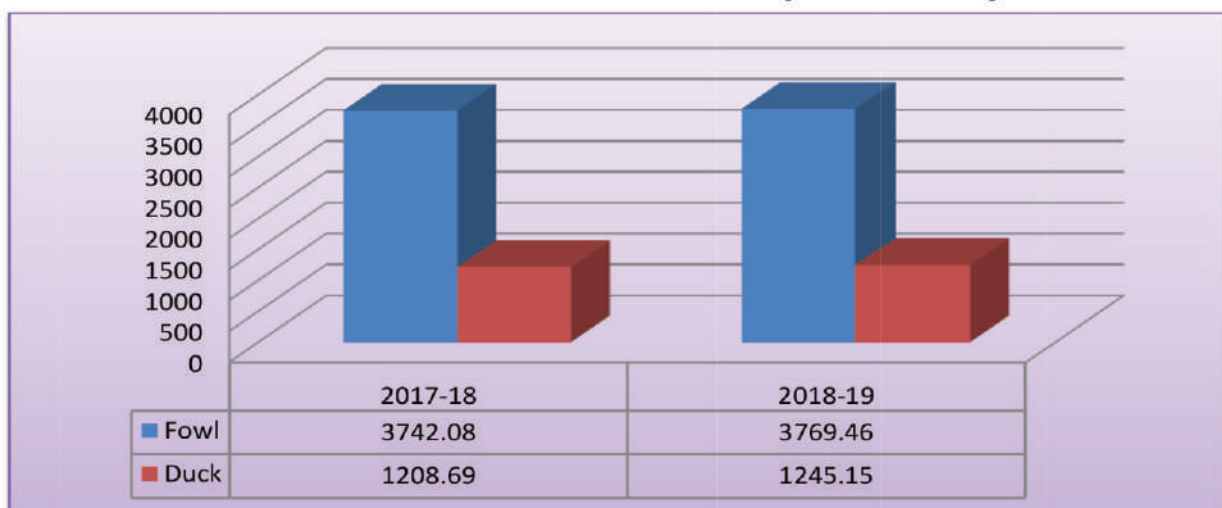


**TABLE – 8.9**  
**ESTIMATED EGG PRODUCTION OF ASSAM**

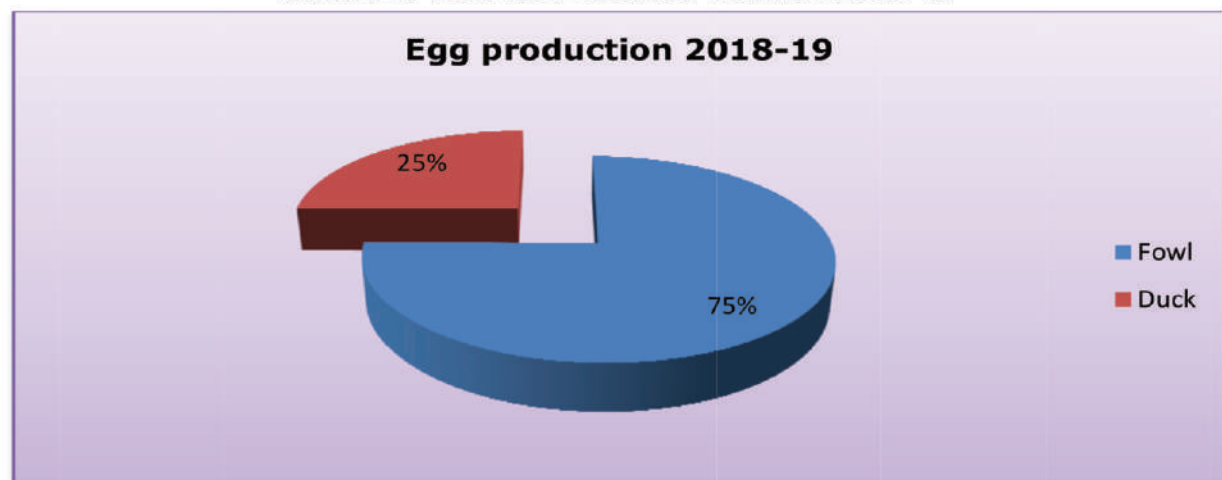
Period	Fowl (in lakh nos.)	Duck (in lakh nos.)	Total Egg (in lakh nos.)
Annual 2018-19(P)	3769.46	1245.15	5014.61
Annual 2017-18	3742.08	1208.69	4950.77
Annual 11-12 % Change over 2011-12			
% Change over 2017-18	1%	3%	1.3%

**COMPARISION OF EGG PRODUCTION (IN LAKH NOS)**

**COMPARISION OF EGG PRODUCTION (IN LAKH NOS)**



**SHARE OF EGG PRODUCTION DURING 2018-19**

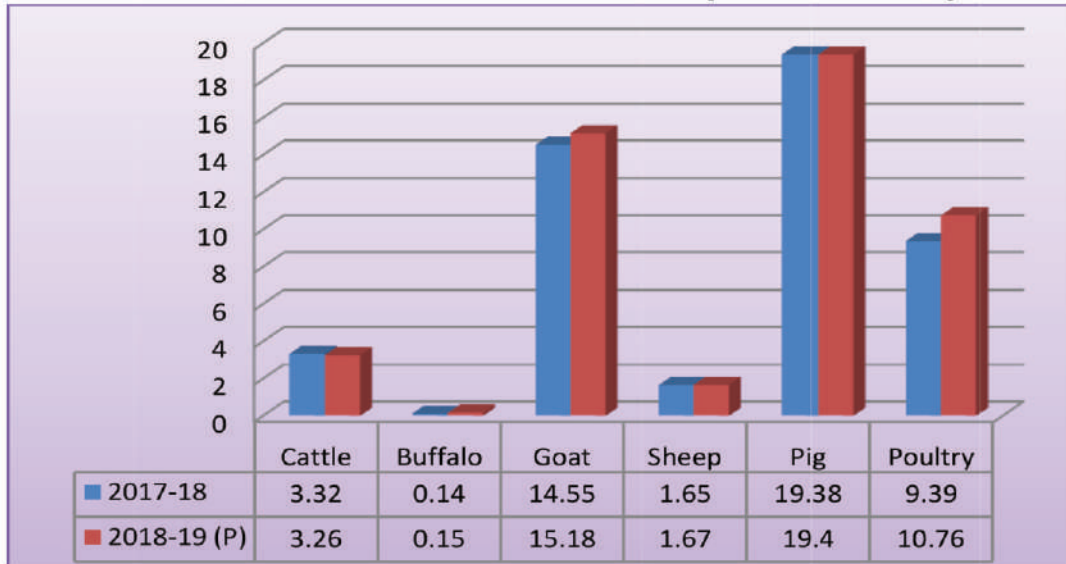


**TABLE – 8.10**  
**MEAT PRODUCTION ('000 TONNES)**

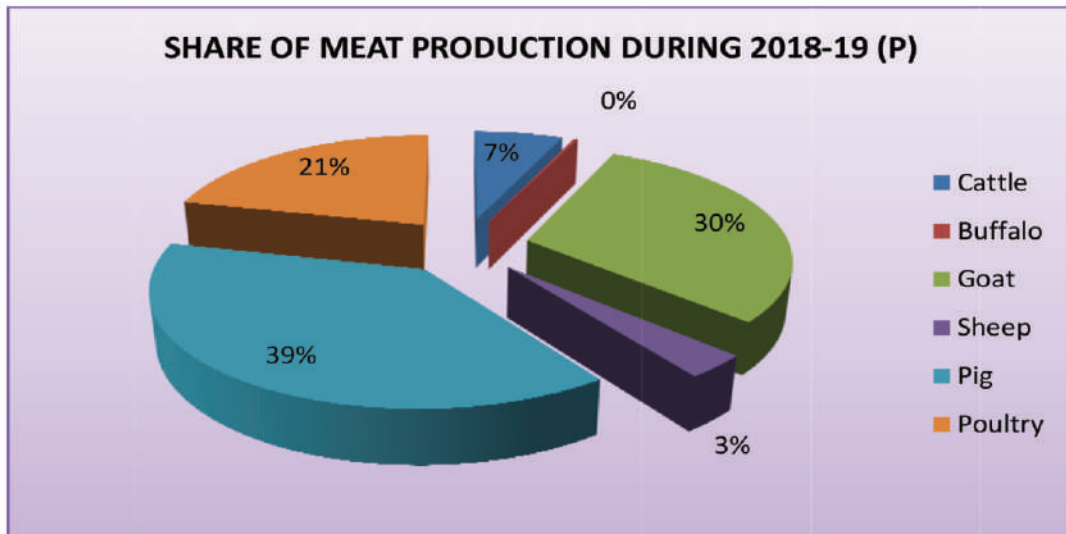
ITEM	2017-18	2018-19 (P)
Cattle	3.32	3.26
Buffalo	0.14	0.15
Goat	14.55	15.18
Sheep	1.65	1.67
Pig	19.38	19.40
Poultry	9.39	10.76
<b>Total Meat</b>	<b>48.43</b>	<b>50.42</b>



**COMPARISON OF MEAT PRODUCTION (IN '000 Tonnes)**



**SHARE OF MEAT PRODUCTION DURING 2018-19 (P)**



**ASSAM PROJECT ON AGRI-BUSINESS AND RURAL TRANSFORMATION (APART)  
(A WORLD BANK FUNDED PROJECT)**

**ANIMAL HUSBANDRY AND VETERINARY COMPONENT**

The Government of Assam through Government of India has applied for a credit of US\$200 million from the International Development Association (IDA) (a wing of the World Bank group), for implementation of the Assam Project on Agribusiness and Rural Transformation (APART), which is currently under preparatory stage.

**Project Development Objective (PDO):** "To add value and improve resilience of selected agriculture value chains, focusing on smallholder farmers and agro-entrepreneurs in targeted districts of Assam".

**The project would achieve the PDO by:**

- Promoting investments in agri-enterprises, reducing the business and transaction costs, facilitating access to finance for agribusiness entrepreneurs, and, where appropriate, push for process, regulatory and/or policy change;
- Supporting the development of a modern supply chain; improved information communication technologies (ICT) based farm information and intelligence services, and alternative marketing channels; and Improving producer's access to knowledge, technologies and infrastructure so that they are able to respond to market opportunities and climate variability.
- **Project Beneficiaries:** Farmers, farmer producer organizations, and entrepreneurs especially in the MSME segment in the targeted districts.
- Key Performance Indicators (KPIs):

- Number of beneficiaries with improved resilience
- Number of new agri-enterprises established
- Number of jobs created by targeted agri-enterprises, including for women (percent)
- Increase in value of marketed output at the farmer level
- Direct project beneficiaries (number), of which female (percentage).

**APART Districts:** 1.Kokrajhar, 2.Goalpara, 3.Dhubri, 4.Barpeta, 5.Nalbari, 6.Kamrup, 7.Nagaon, 8.Morigaon, 9.Karbi Anglong, 10. Cachar, 11. Darrang, 12.Sonitpur, 13.Lakhimpur, 14.Golaghat, 15.Jorhat, 16.Sivsagar.

**The project broadly focuses on two components:**

1. **PORK VALUE CHAIN (PVC)** To be implemented by Animal Husbandry & Veterinary.
2. **MILK VALUE CHAIN (MVC)** Interventions by AHVD in the Cross Cutting areas under Formal Dairy Sector (by West Assam Milk Union Limited (WAMUL) and Informal Dairy Sector by Dairy Development Department (DDD)

**APART STRETEGY- Pig Insemination Centre( PIC) SECTOR INTERVENTION**

- **Increased production through genetic improvement** of indigenous pigs through selective and crossbreeding – Induction of heterogeneous germplasm on cluster approach.
- **Address the issues related to feed shortage** and improvement of nutrient utilization for enhancing pig production-Ration balancing of locally available feed materials and production area specific low cost concentrate feed and production quality improvement to meet the market requirement.
- **Development of integrated pig health management Programme-** Pulse immunization of the pig herd against CSF & other diseases & regular deworming practices.
- **Post harvest management and value addition** of pork-Introduction of low cost slaughterhouses, linkages of production clusters with modern processing houses, modern pork vending outlets, transformation of the vendors.
- **Promote environment friendly and climate resilient pig farming-** Demonstration and adoption of climate resilient pig housing technology with improve manure management practices.
- **Promoting entrepreneurial development** in forward and backward front of pig production-Incentivizing the entrepreneurs to take up sectoral enterprises like feed production, meat processing & marketing, commercial pig breeding & fattening.
- Address the much needed issue of **Food safety** as per FSSAI norms from production, processing and value addition, cold chain maintenance upto retailing. Assessment of contaminants and residues in pork and formulate a standard SOP for reduction in pork for human consumption.
- **Knowledge, attitude & practice gap analysis** of the all the value chain actors, customized designing of training content for capacity building and massive awareness programme on good production practices & food safety along the value chain.
- Formation of **Farmer Producer Organization (FPO)** in production clusters to undertake the various activities in group basis and organized way which is difficult to perform by an individual farmer

**1. PORK VALUE CHAIN (PVC): Activities proposed :**

1. Food safety: Consumer awareness
2. Traceability: To bring about transparency along the entire chain of pork production
3. Training need assessment & Capacity Building of market actors
4. Transformation of vendors: Handholding in obtaining of license to Pork handlers, butchers, retailers/vendors and Structured meat shop
5. Waste Disposal
6. Market Development: Identification of Livestock market
7. Hassle free transportation
8. Identification of Cluster of minimum 100 families with 2- 3 pigs within 3 KM radius
9. Market led Extension services
10. Judicial use of Feed staff: Estimation of nutritive value of the local and conventional feed resource & ration balancing
11. Rationalization of Breeding: Breeding activities at cluster level by community boar management and introduction of AI with heterogeneous germplasm
12. Operationalization of the newly constructed Pig breeding Farms of the AHVD as Nucleus farm for seed development with exotic germplasm
13. Strengthening of existing infrastructure of the AHVD centrally for large scale feed production
14. Formulation of policy for bulk procurement of Maize and other available raw materials at production site

15. Feed testing facilities: Activation of the existing laboratory under AHVD at Khanapara
16. Vaccine production & distribution
17. Contract for bulk procurement of CSF vaccine in place
18. Credit & Insurance
19. Financial services - Awareness of community on opening of bank accounts, book keeping, Credit linkage, KCC etc., Convergence of various schemes i.e. NLM

#### **FINANCIAL OUTLAY OF THE PROJECT:**

Pork Value Chain: Project Cost=Rs.6893.72 lakh, No. of Districts: 13 Investments under this sub-component will cover: Production, aggregation, processing, Value Addition & Marketing, Food Safety & Public Health Issues in piggery sector covering 56 Blocks/Clusters under 13 Districts of the State.

#### **2. MILK VALUE CHAIN (MVC) APART Strategy- Dairy Sector Intervention : FORMAL SECTOR:**

The focus is productivity enhancement by organizing farmers into Milk Producers' Institutions (MPIs) that eventually will get registered as Dairy Cooperative Societies (DCS) and genetic upgradation of non-descript cows using AI, improved feeding through fodder production demonstrations, bulk supplements provision through DCS and by developing linkages with crop producers (e.g. maize, mustard, legumes for crop residue).

##### **Activities proposed under APART- FORMAL MILK SECTOR**

- 1) **Doorstep AI Delivery Services:** To provide quality AI services, at farmers' door step using semen doses from high genetic merit bulls available in the country aimed at producing superior calves with higher productivity.
- 2) **Animal Health:** The project proposes to cover animal health care services through animal health/ fertility camps, vaccinations and disease control activities.
- 3) **Animal Nutrition-Feed & Fodder:** To focus on balanced intake of locally available animal feed and fodder as well as intake of processed feed and other feed supplements for the crossbred milch animals to enable them to achieve their full genetic potential of milk yield.
- 4) **Village Based Milk Procurement Systems:** Collection of milk through MPIs (Milk Producers Institutions).
- 5) **Processing and Marketing of liquid milk and milk products:** Value addition of milk through processing.
- 6) **Capacity Building:** By imparting training programmes for milk producers, village level functionaries, BMC and plant operators, marketing supervisors and executives / managers engaged in various project activities.

##### **INFORMAL SECTOR:**

Transformation of the informal dairy sector into the formal one through improvement in resilience in production, quality, safety and standards of milk adding value to the produce with particular focus on informal market actors and dairy-entrepreneurs in targeted districts.

##### **Activities proposed under APART- Informal Milk Sector**

To provide training to the farmers under informal sector with the help of competent departmental experts in order to enhance the farmer's capability to adopt new practices of animal health care and management, feeding etc.

1. To provide information to the farmers about the better feeding practices in time for better production and productivity and thereby reducing the cost of milk production.
2. Creation of gainful employment in the organized dairy sector

##### **Cross cutting areas of Formal and Informal Milk Sectors:**

Project Cost=Rs.4049.48 lakh, No. of Districts:16 Investments under this sub-component will cover:- about 1,25,500 dairy animals covering 56 Blocks/Clusters under 13 Districts of the State under Health Coverage, Skill Development & Mineral Mixture support (the later two only in Informal Milk sector)

#### **"RASTRIYA KRISHI VIKAS YOJANA" (RKVY) AT A GLANCE:**

##### **ANIMAL HUSBANDRY & VETERINARY DEPARTMENT, ASSAM:**

In Assam most of the farmers are small and marginal farmers, practicing subsistence agriculture. The farmers are often constrained by lack of fund coupled with very low availability of credit facilities. The level of farm mechanization, fertilizer usage and irrigation provisioning in the state is also very low; affecting the pursuit of the farmers to enhance agricultural productivity as well as raising cropping intensity. Although, the State has managed to become self-sufficient in rice production, there is still a significant shortfall in the production of other cash crops like sugarcane, wheat, pulses, oilseeds etc. Keeping in mind the above constraints of development of agriculture and allied sectors in Assam as well as in other states of India, the National Development Council has launched the flagship agricultural development plan "Rashtriya Krishi Vikas Yojana in the year 2007-08 affirming its commitment to

achieve 4% annual growth in the agriculture and allied sectors. The plan was introduced in Assam during the year 2008-09. The target of achieving annual growth rate of agriculture for Assam was fixed at minimum of 2% during 11<sup>th</sup> Five year Plan. Since inception of the RKVY programme, various development projects have been implemented in each district of the state to raise the level of productivity in agriculture and allied sectors.

The primary target area for Agricultural sector development through RKVY was identified as Agriculture, Horticulture, Animal Husbandry, Research, Fishery and Dairy. Apart from these, other related sectors were also considered from time to time under the RKVY on the basis of C-DAP (Comprehensive District Agriculture Plan) and SAP (State Agriculture Plan). To achieve the target growth projection, the state has given complete flexibility and choice in selecting interventions. The main aim of the scheme is a holistic development of Agriculture and allied sectors with a funding pattern of 90:10 between Centre and States of North East India.

The RKVY contributed significantly for the development of animal husbandry sector of the state. The growth of this sector has increased steadily in spite of various constraints faced by the farmers during the implementation period.

**TABLE-8.11**  
**YEAR-WISE PHYSICAL AND FINANCIAL PROGRESS OF RKVY 2017-18**

*Rs. In lakh*

Sl. No.	Components	Physical		Financial	
		Target	Achievement	Target	Achievement
1	Furniture and other Logistics for newly constructed Sub-Centres (On-going project)	100 Unit	Completed	120.00	120.00
2	Strengthening of Pig breeding farm Kheluwa, Sivasagar. (On-going project)	1 Unit	-do-	102.05	102.05
3	Goats and other Logistics for newly established Goat Breeding Farm at Howly, Barpeta (On-going project)	1 Unit	-do-	30.00	30.00
4	Strengthening of RILEM-Assam for functioning (On-going project)	1 Unit	-do-	110.00	110.00
5	Establishment of a Rabbit Farm at IVB, Khanapara	1 Unit	-do-	54.20	54.20
6	Assam Veterinary Council at Chenikuthi, Guwahati: Infrastructure Development	1 Unit	-do-	97.12	97.12
7	Bovine Brucellosis Surveillance Programme etc. under AHC	1 Unit	-do-	22.94	22.94
8	Establishment of School of Veterinary Science & Animal Husbandry, Bokakhat	1 Unit	-do-	551.00	551.00
9	Construction of Hospital/Dispensary complex, Sub Centre etc.	7 Unit	-do-	420.00	420.00
10	Establishment of Rural Goat Slaughter House	2 Unit	-do-	520.76	520.76
11	Skill Development programme for farmers.	1112 Farmers	-do-	18.75	18.75
12	Skill Up-gradation cum Refresher Training for Paravets	45 No.	-do-	3.32	3.32
13	Publicity Campaign	1 Unit	-do-	23.30	23.30
14	Establishment of Pig Farm for Rehabilitation of cadre of designated camps	1 No.	-do-	200.00	200.00
15	Establishment of Goat Farm for Rehabilitation of cadre of designated camps	1 No.	-do-	89.00	89.00
16	Administrative Cost	L/S	-do-	28.94	28.94
<b>Total</b>				<b>2393.44</b>	<b>2393.44</b>

**TABLE-8.12**  
**YEAR WISE PHYSICAL AND FINANCIAL PROGRESS OF RKVY 2018-19**

*Rs. In lakh*

Sl. No.	Components	Physical		Financial	
		Target	Achievement	Target	Achievement
1	Furniture and other Logistics for Hospitals/Dispensaries	100 Unit	Completed	150.00	0.00
2	Strengthening of Regional Feed Testing Laboratory (RFTL), Khanapara	1 Unit	-do-	250.00	0.00
3	Animal Ambulance	5 Unit	-do-	123.00	0.00
4	Establishment of Cold Storage (Walk-in-chiller) for preservation of vaccine	17 Unit	-do-	173.00	0.00
5	Infrastructure Development for Govt. Fodder Farms	2 Unit	-do-	200.00	0.00
6	Infrastructure Development under AHC/NERDDL	1 Unit	-do-	12.00	0.00
7	Ambulatory Animal Husbandry & Veterinary Clinic on Boat	3 Unit	-do-	120.00	0.00
8	Fodder cultivation (Maize seed distribution)	9000 Unit	-do-	206.00	0.00
9	Production of 'Kamrupa' variety Poultry for Rural Farmers	1 Unit	-do-	282.00	0.00
10	Construction of Hospital/Dispensary	4	-do-	70.80	0.00
11	Administrative Cost	L/S	-do-	33.60	0.00
<b>Grand Total</b>				<b>1620.40</b>	<b>0.00</b>

**TABLE-8.13**  
**YEAR-WISE PHYSICAL AND FINANCIAL PROGRESS OF RKVY 2019-20**

*Rs. In lakh*

Sl. No.	Components	Physical		Financial	
		Target	Achievement	Target	Achievement
1	Animal Ambulatory Clinic/Mobile Veterinary Clinic	32	Under process	800.00	0.00
2	Establishment of Pig Breeding Farm at Bokakhat, Golaghat	1	-do-	386.00	0.00
3	Strengthening of Goat Breeding Farm, Howly, BARPETA: (ongoing project)	1	-do-	40.40	0.00
4	Strengthening of Rabbit Farm at Institute of Veterinary Biologicals (IVB), Khanapara (ongoing project)	1	-do-	20.00	0.00
5	Strengthening/Construction of Hospitals/Dispensaries/Vety. Institutions with Furniture and other Logistic support :				
	(A) construction dispensary building with furniture	1	-do-	18.00	0.00
	(B) furniture and other logistic support dispensaries/hospitals/institutions	43	-do-	64.50	
	(C) establishment of 1 Market Hub of Livestock & Poultry product	1	-do-	95.50	
6	Pig Development through Farmers Producer Organisation	20 FPO	-do-	815.00	0.00
7	Fodder Development/Cultivation	Varies	-do-	225.00	0.00
8	Skill Development Programme	Varies	-do-	186.60	0.00
9	Administrative Cost	L/S		54.00	0.00
<b>Total</b>				<b>2705.00</b>	<b>0.00</b>

**POULTRY DEVELOPMENT:**

The Animal Husbandry & Veterinary Department, Assam is encouraging backyard poultry rearing in the state for enhancing meat and egg production. As this sector generates employment and enhance rural income, a large number of, people are directly engaged in poultry sector in the state.

**TABLE- 8.14  
DETAILED REPORT ON THE PHYSICAL AND FINANCIAL ACHIEVEMENTS FOR THE PERIOD  
FROM 2016-17 TO 2018-19.**

Sl. No.	Name of the Scheme	Financial						Physical		
		2016-17		2017-18		2018-19		2016-17	2017-18	2018-19
		Target	Achievement	Target	Achievement	Target	Achievement	Achievement	Achievement	Achievement
1.	100% Assistance to State poultry farm under CSS	Nil	Nil	Nil	Nil	Nil	Nil	Egg Production: 1,49,666 Nos.	Egg Production: 4,52,38,741 Nos.	Egg Production: 2,20,403 Nos.
								DOC: 28,514 Nos.	DOC: 73,696 Nos.	DOC: 55453 Nos.
								Farmers Benefited: 1,448 Nos.	Farmers Benefited: 8,221 Nos.	Farmers Benefited: 1323 Nos.
2.	Broiler Raising Programme	Nil	Nil	50.00 (L)	50.00 (L)	Nil	Nil	12,26,827 Kg	12,44,514 Kg	11,94,915 Kg
3.	Broiler Chick Distribution Programme	Nil	Nil	Nil	Nil	50.00 (L)	50.00 (L)	Nil	Nil	Meat Production: 1.80 L Kgs
										Farmers Benefited: 1000 Nos.

**NATIONAL PROJECT ON RINDERPEST ERADICATION (NPRE):**

The NPRP scheme activities like Village Search, stock route search, Institutional search etc. For Rinderpest like disease are going on throughout the State. The officers of head quarter (Rinderpest) Guwahati are Visiting to the field in all District in time to time Team of doctors from Rinderpest headquarter have visited the various dispensaries/ hospitals/ sub centres and enquired about the occurrence of Rinderpest or Rinderpest like diseases. The Veterinary Doctors and Veterinary Field Assistant placed in different districts under Rinderpest Eradication Scheme are also engaged in various NPRE Scheme activities to search and enquire about occurrence of Rinderpest or Rinderpest like disease in the districts at the village level. It is to be stated the occurrence of Rinderpest or Rinderpest like disease were not reported/ found during the search operation from the entire state.

The collection and screening of the serum sample at State Elisa Laboratory under the Sero-Surveillance work has been completed.

**DAIRY DEVELOPMENT:**

The Government of Assam has created a separate Directorate for Dairy Development in Assam bifurcating it from the Animal Husbandry and Veterinary Department with the basic objective to develop dairy industry in Assam.

The primary objectives of Dairy Development in Assam are:

- Procurement, processing and distribution of milk aiming at economic upliftment of rural milk producers and help urban consumers to get quality milk at a reasonable price.
- Developing adequate infrastructure to ensure procurement and processing of milk produced in the State.
- Organizing milk producers for efficient procurement, processing and marketing.
- Awareness among milk producers, traders and consumers regarding clean milk production and consumption.
- To modernize the supply of inputs like A.I., Feed, Fodder, Animal Health coverage and Training etc. to the Dairy farmers in the milk shed areas linked with Milk Supply Schemes and Milk Plants.

- To help the villagers in marketing their produce by setting up of suitable transport and marketing organization.
- To implement the Central Sector and other Dairy Scheme linking the Town Milk Supply Scheme causing inflow of financial benefit to the milk producers in the remote areas by providing a steady market throughout the year.
- To coordinate between the allied departments and Nationalized Bank and to provide financial resources to rural farmers for enhancement of milk production and economic status of the villagers specially marginal farmers, small farmers and landless farmers.
- To achieve the goals of dairy development and to improve overall performance in the state the Directorate of Dairy Development has worked out the following strategies-
- To organize the presently dispersed dairy farmers in to integrated network of viable commercial unit.
- To create critical infrastructure to enhance the milk procurement, processing and marketing through organized sector, especially of those areas where the process of enhancement of milk yield has been taken up through genetic improvement of cattle through Artificial Insemination under ARIASP Phase-I. (WB Project for agricultural infrastructure creation).
- To upgrade the skill producers for clean milk production in order to maintain the norms of national standard.
- To encourage and facilitate private participation and investment from both inside and outside the state in the dairy sector.
- Dairy farming will be developed on cluster basis in the potential districts of Assam.
- The small dairy farmers will be organized into Dairy Co-operative Society (DCS). The primary Dairy Co-operative Society will form the district level milk union. All the Co-operative Institutions will run democratically with technical support from the Dairy Development in Assam.

TABLE - 8.15

**SCHEMewise TARGETS AND ACHIEVEMENTS (BOTH FINANCIAL AND PHYSICAL) UNDER STATE SECTOR DURING 2018-19**

SI No.	Name of the scheme	Physical		Financial	
		Target	Achievements	Target	Achievements
1	Establishment of Milk Processing Plant at Dhemaji under C. M.s special package	1 Unit	NIL	0.01	0.00
2	Establishment of 13 units of Commercial Dairy Farm at Dhemnaji under C.M.'s Special Package (Continuous scheme)	13 Units	13 Units	9.20	9.20
3	Organization of DCSs in 4 District - 2016-17. (Continuous)	40 DCSs	40 DCSs	25.05	19.54
4	Construction of Grade-III residential staff Qtr 4 storied 16 units at Dairy Campus Khanapara. (Continuous scheme)	16 Units	16 Units	176.22	176.22
5	Balance payment for work station to Directorate office staff.	1 No	1 No	7.78	7.78
6	Operationalise the Dudhnoi Chilling Plant -(Electrical Transformer and power line) (continuous scheme)	1 Job	NIL	7.67	0.00
7	Establishment of District Dairy Development Office with farmers training center at Golaghat and Majuli. (New Scheme)	2 Nos	NIL	50.00	0.00
8	Organization of 200 DCSs in 21 districts of the state. (Finance Minister's Budget Speech.	200 DCSs	200 DCSs	127.59	24.56
9	Preparation of Road Map cum Vision documents of Dairy Development, Assam	1 Job	1 Job	20.47	20.47
10	Establishment of Fodder Block Manufacturing Unit at Bokakhat. (New Scheme)	1 Job	1 Job	42.00	0.00
11	SOPD-SCSP-Implementation of Milk Village Scheme under SCSP. (Ongoing scheme)	10 Units	0.00	100.00	0.00
12	SOPD-TSP-Implementation of Milk Village Scheme under TSP (Ongoing scheme)	3 Units	0.00	30.00	0.00
<b>Grand Total:</b>				<b>595.99</b>	<b>257.77</b>

**TABLE- 8.16**  
**SCHEMES PROPOSED DURING 2019-20**

Sl. NO.	Name of the Scheme/Project	Physical Target	Financial Targets and estimates
	<b>Under SOPD</b>		
1	Establishment of Milk Processing Plant at Dhemaji (ongoing)	1 Unit	59.54
2	Construction of Grade-III residential staff qtr (16 units) at Dairy Campus, Khanapara (ongoing)	1 Unit	35.00
3	Establishment of District Dairy Development office at Golaghat and Majuli (Ongoing)	2 Units	20.01
4	Organization of 200 DCSs in 21 district (Ongoing)	200 DCSs	209.57
5	Integrated Support Services for creation of milk surplus district – Sadiya Sub-division (Ongoing).	30 DCSs	9.99
6	Establishment of Fodder Block Manufacturing Unit at Bokakhat	1 Unit	40.00
7	Creation of soft ware for monitoring the activities of DCSs linking with TMSS (New)	1 Job	10.00
8	Strengthening of TMSS (New)	1 No	10.00
9	Implementation of Milk Village Scheme under SOPD-SSCSP	10 Units	105.00
10	Implementation of Milk Village Scheme under SOPD-TSP	3 Units	30.00
	<b>Total Under SOPD</b>		529.11
B	Under APART (World bank aided Project)		
1	Market/Marketing		397.85
2	Processing		1.65
3	Aggregation		57.75
4	Production		303.68
5	Capacity Building		299.96
6	Project Implementation C		214.64
	Total		1275.53
C	<b>Under RKVY</b>		
1	Establishment of Milk Processing Plant at Pathsala in Barpeta district		
	(a) Civil works for Establishment of Milk Processing Plant	10 Nos	226.00
2	Cottage Dairy Unit for value addition	60 Nos	80.00
3	Administrative Charges		6.12
	<b>Total:</b>	<b>312.12</b>	



**TABLE- 8.17**  
**PRIORITY LISE OF SCHEME (PROPOSED) UNDER SOPD 2019-20**

<b>Sl. No.</b>	<b>Name of the Work/Scheme</b>	<b>Amount (Rs. In Lakh)</b>
1	Establishment of Milk Processing Plant at Dhemaji (ongoing)	59.54
2	Construction of Grade-III residential staff qtr at Dairy Campus, Khanapara (ongoing)	35.00
3	Establishment of District Dairy Development office at Golaghat and Majuli (Ongoing)	20.01
4	Organization of 200 DCSs in 21 district (Ongoing)	90.45
5	Establishment of 13 Commercial dairy farms at Dhemaji	0.01
6	Integrated Support Services for creation of milk surplus district – Sadiya Sub-division (Ongoing).	9.99
7	Establishment of Fodder Block Manufacturing Unit at Bokakhat	40.00
8	Creation of soft ware for monitoring the activities of DCSs linking with TMSS (New)	10.00
9	Strengthening of TMSS (New)	10.00
10	Balance work for completion of Chilling Plant building Karimganj	4.73
11	Site Development and approach road to Chilling Plant Karimganj	6.35
12	Construction of Milk Parlour Building at Bokakhat	60.00
13	Release of payment against Machinery supplied by M/S Chadha Sales Pvt. Ltd.	3.30
14	Renovation of Chilling Plant building Hailakandi	20.00
15	Implementation of Milk Village Scheme under SOPD-SCSP	105.00
16	Implementation of Milk Village Scheme under SOPD-TSP	30.00
<b>Grand Total:</b>		<b>474.39</b>

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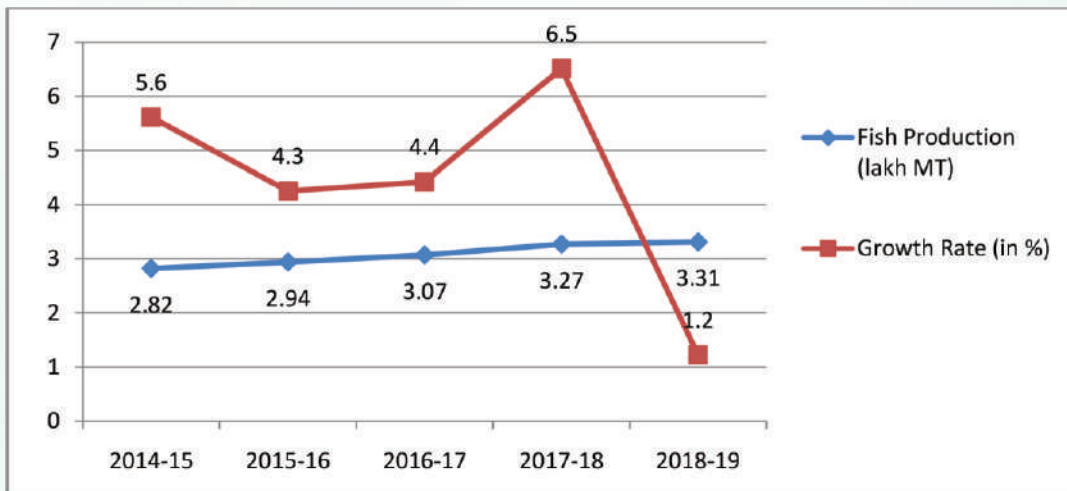
## CHAPTER-IX

### FISHERIES

Assam is endowed with water bodies in the form of rivers, ponds, derelict water bodies and beels/wetlands covering total water spread area of over 2.38 lakh hectare excluding the 4820 KM length of rivers; thus have a congenial environment for pisciculture. The state is also rich in diverse fish-fauna with 216 fresh water species available and more than 150 fish species having ornamental importance and 50 species with overseas ornamental value.

Fishery and aquaculture play important roles in ensuring food and nutritional security; and livelihood security of a significant section of people in the state. Considering importance of the sector, fishery sector has been identified as one of the *Ratnas* among the selected *Navaratnas* under the 'Chief Minister's Samagra Gramya Unnayan Yojana (CMSGUY)'. Fish Production in the state has reached a level of 3.31 lakh MT during 2018-19 against the requirement of 3.54 lakh MT.

The following chart shows growth rate of Fish production in Assam.



#### RELEVANCE OF THE SECTOR IN THE STATE ECONOMY:

Fish occupies an important place in the lives of the people of the state and fish farming has been one of the commonest activities in the rural areas. More than 90% of the people of the state prefer fish in their meal leading to ever increasing demand for fish. Thus, the Fishery Sector is considered as an important economic activity in the socio-economic context of Assam, raising opportunities for sustainable employment on production and marketing fronts.

The contribution of Fishery Sector to the State's GDP (at constant price 2011-12 prices) was Rs. 5,56,199.00 lakh as per provisional estimates 2017-18 with a growth rate of 6.79 percent over previous year and Rs. 5,88,862.00 lakh as per quick estimates 2018-19 with a growth rate of 5.87 percent per annum as per provisional estimates 2017-18.

#### IMPORTANCE OF THE FISHERY DEPARTMENT:

Most of the people engaged in the Fishery Sector, either in the culture or in the capture fisheries are economically not very sound. Initial investment in setting up of a fish pond or a farm attracts relatively large investments. Moreover, due to lack of awareness, knowledge and skill on scientific rearing and management, fish production in the state is lower to its potential. Due to constant effort of the State as well as of Government of India, there is growing interest of people on pisciculture in past few years. In recent times the sector has attracted the rural youths and one sees many entrepreneurial ventures.

For overall development of the sector, the steps taken by the fishery department of the state are:

- ✓ to increase fish and quality fish seed production in the state with optimum utilization of resources
- ✓ implementation of fishery related schemes of the Government of Assam and Government of India,
- ✓ to identify and promote research and studies on fisheries and fishery related areas so that benefit can be disseminated to the grass root level users,
- ✓ to collect, compile, analyze and make available adequate/ relevant statistical and other information for proper planning to promote of fish farming and related industries /activities,
- ✓ to prepare / support in preparation/ project reports and proposals related to fisheries and fishery related industries,

✓ to provide extension services to fish farmers/ fishermen and fishery entrepreneurs.

**PRESENT STATUS OF DEVELOPMENT AND MANAGEMENT OF RESOURCES:**

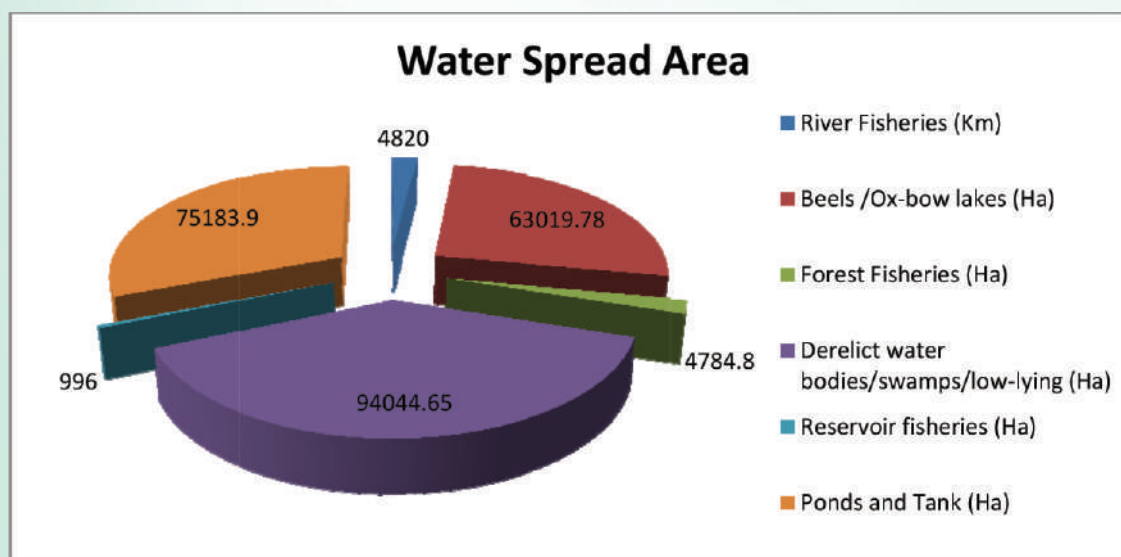
Although the potential for fish production in Assam is high, scientific fish farming and management is still at nascent stage. Culture based capture fisheries' enhancement programme has been undertaken in some of the beels and low-lying areas which has resulted in increasing the productivity to a considerable extent.

Riverine fisheries are being exploited with little conservation effort and no specific intervention. The state also has revenue fisheries, i.e. rivers and beels under the administrative control of Assam Fisheries Development Corporation Ltd; Fisheries Administrative Departments, Government of Assam; Deputy Commissioners and Sub-Divisional Officers (Civil) and Panchayats and leased out to individual and co-operative societies.

**TABLE: 9.1  
FISHERY RESOURCES, 2019-20**

Sl. No.	RESOURCES	NUMBER	WATER SPREAD AREA
1	RIVER FISHERIES	MAIN RIVER 2, TRIBUTARIES-53	4820 (KM.)
2	BEELS /OX-BOW LAKES	1907	63019.78 (HA.)
3	FOREST FISHERIES	441	4784.80 (HA.)
4	DERELICT WATER BODIES/SWAMPS/LOW-LYING	3973	94044.65(HA.)
5	RESERVOIR FISHERIES	1	996 (HA.)
6	PONDS AND TANK	455122	75183.90(HA.)

Source: Department of Fisheries, Assam.



**MAJOR INFRASTRUCTURE OF FISHERY SECTOR:**

**Eco-Hatcheries & other Infrastructures:**

- (a) Departmental : 21 nos.
- (b) Private : 517 nos.
- (c) Mini bandh : 9 nos. (Departmental)

**Departmental Farm:**

- (a) Handed over to FFDA : 68 nos.
- (b) Retained with the Department: 32 nos.

**Total Farm:** : 100 nos.  
 Fish Feed Mill (Pvt.) : 13 nos.  
 Fisheries Training Centre : 9 nos.

**ACTS AND RULES OF THE DEPARTMENT**

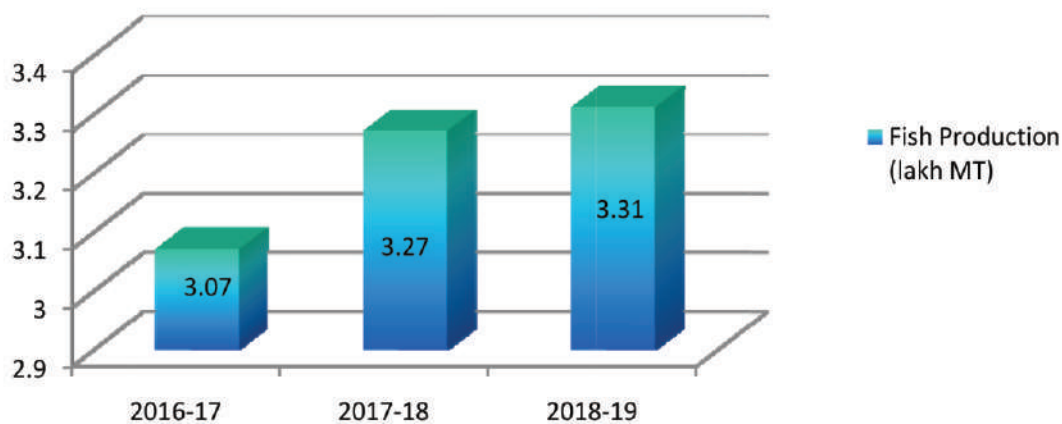
- The Assam Fishery Rules, 1953 (Amended in 2005)
- The Assam Fish Seed Act, 2005
- The Assam Fish Seed Rules 2010. This is the first such kind of Act in the country.

**TABLE- 9.2**  
**FISH & FISH SEED PRODUCTION FOR LAST THREE YEARS, 2016-17 TO 2018-19**

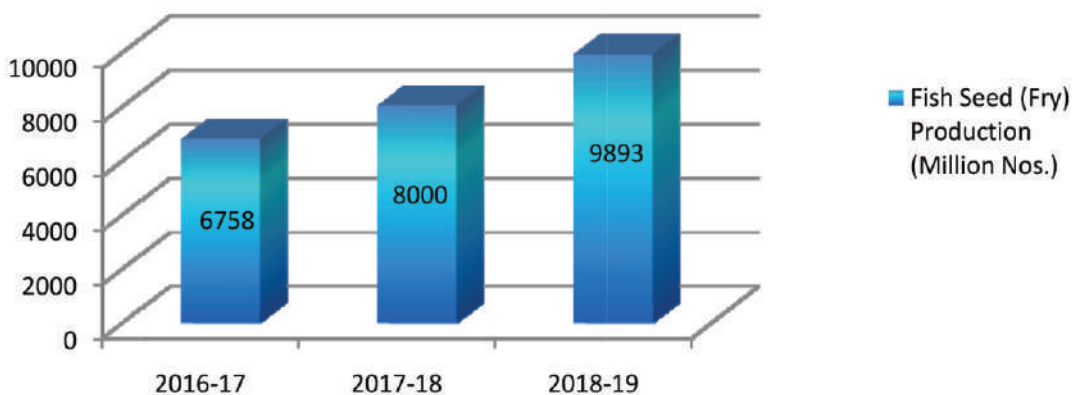
Year	Fish Production (lakh MT)	Fish Seed (Fry) Production (Million Nos.)	Fingerling Production (Million Nos.)
2016-17	3.07	6758	-
2017-18	3.27	8000	3921
2018-19	3.31	9893	4695

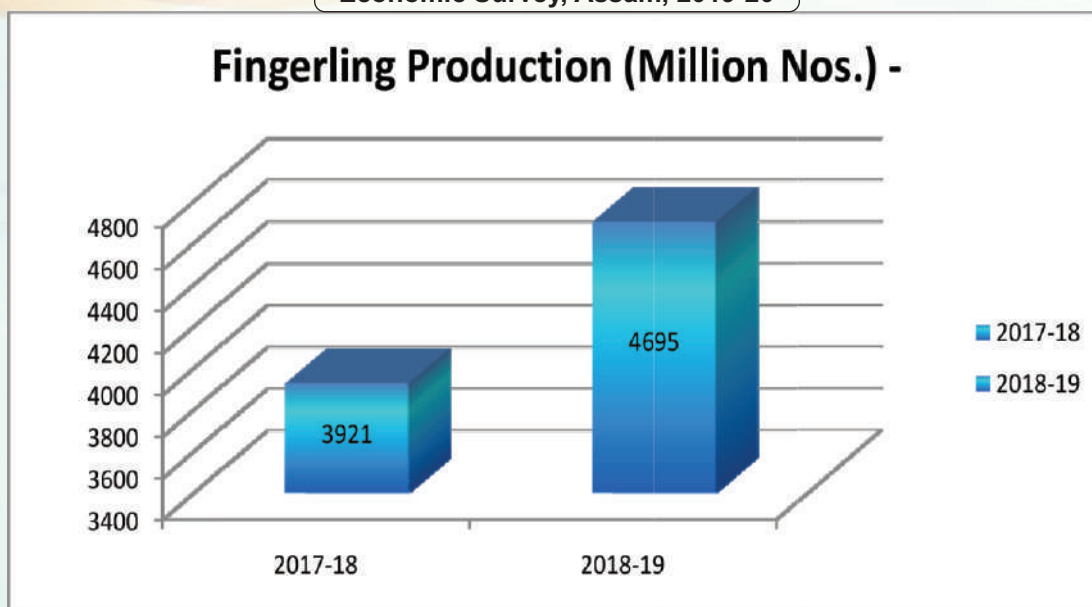
Source: Department of Fisheries, Assam.

**Fish Production (lakh MT)**



**Fish Seed (Fry) Production (Million Nos.)**





**TABLE- 9.3**  
**FINANCIAL ALLOCATION AND EXPENDITURE DURING THE LAST THREE YEARS (2016-17 TO 2018-19)**

During last three years year wise component wise allocation and expenditure statement placed below:

(Rs in Lakh)

Sl. No	Category	Allocation			Expenditure		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
1	General Areas (including State Share of CSS & RIDF)	1860.44	1260.69	1629.16	741.606	766.4804	999.45699
2	SCSP	200.00	100	100	146.40	88.00224	-
3	TSP	0.00	-	-	0.00	-	-
4	Central Share for CS & CSS	1702.61	9341.74	9100.00	1702.61	1182.8458	6092.85204
	<b>Total</b>	<b>3763.05</b>	<b>10702.43</b>	<b>10829.16</b>	<b>2590.616</b>	<b>2037.32844</b>	<b>7092.30903</b>

*Source: Department of Fisheries, Assam.*

**Brief description of the development schemes / programmes implemented by the fishery department in the last three years :**

**A. State Owned Priority Development (SOPD) schemes.**

**1. Fish & Fish Seed Farming:**

This is one of the major schemes implemented by the Department for enhancement of fish and fish seed production along with other related activities and infrastructure development. Various programmes have been taken up under this scheme for fish and fish seed production. The following beneficiary oriented programme has been implemented under the scheme 'Fish and Fish Seed Farming'

**a) Construction of Individual and Community New Pond – General and SCSP**

**b) Input and Material Supply for the Pond**

**2. Construction of Hygienic Fish Markets:**

Proper marketing of fish is one of the important aspects for consumer's safety as well as to encourage more and more people to take up fisheries as livelihood. The state is in need of new hygienic fish markets and hence it is proposed to construct as well as to remodel existing one with all required modern amenities for maintaining the minimum hygiene. With this back ground, Department of Fisheries, Assam has been taken up construction of Hygienic Fish Market in different parts of the state.

### 3. Rural Infrastructure Development Fund (RIDF):

Department of Fisheries, Assam has been implementing different fishery related infrastructure development programmes under NABARD instituted Rural Infrastructure Development Fund (RIDF), contributing towards agricultural growth, rural connectivity and other social sector development. Under this programme beel fisheries development and up-gradation of Departmental Fish Farm has been initiated along with construction of marketing infrastructure and fish landing centers. Under RIDF-XXIII the Department has been implementing "Ghare Ghare Pukhuri Ghare Ghare Maach" under which more than 1300 Ha individual ponds and about 500 Ha village community tanks under process of excavation covering more than 9500 beneficiaries.

#### B. CENTRALLY SPONSORED SCHEMES

##### I. Blue Revolution:

Project preparation, monitoring and evaluation etc for the followings:

- Construction of new pond (Government and private)
- Renovation of existing pond
- Establishment of fish seed hatchery, fish feed mill
- Supply of inputs
- Fishery related infrastructure development.

##### II . NATIONAL WELFARE FUND FOR FISHERMEN

Fishermen Insurance

Under this component, fisher folk licensed, identified or registered with the State Government could be insured for Rs. 2.00 lakh against death or permanent disability, Rs.1.00 lakh for partial disability. The insurance cover will be for a period of 12 months and a policy would be taken out by FISHCOPFED for all the States of the country.

#### C. FISHERY MISSION SOCIETY UNDER CMSGUY

The Fishery Mission Society for Chief Ministers Samagra Grammya Unnayan Yojana (FMS-CMSGUY), is an autonomous Society under the administrative control of Mega Mission Society for Chief Minister Samagra Grammya Unnayan Yojana (MMS-CMSGUY) and Fisheries Department, Government of Assam. It is formed with an objective to contribute to achieve the goal of double the income of the fish farmers in Assam by 2021-22 in terms of fish and fish seed production by developing existing water resources through effective resource utilization and creation of additional water bodies for large scale fish production in scientific way. The Fishery Mission Society also aims at quality fish seed production and distribution at farmer's door step and making the state self-sufficient in advanced fingerling production by 2022 and conservation of native, endangered and indigenous fish species by diffusing useful knowledge and extends doorstep technical support.

##### Ongoing Projects under FMS-CMSGUY:

- Supply of inputs to RIDF-XXIII Project Beneficiaries for two years (Convergence Programme)
- Capacity building of farmers under "Ghare Ghare Pukhuri Ghare Ghare Maach".
- Cage Culture in Selected Beels of Assam

##### 1. SUPPLY OF INPUTS:

Total area Targeted-1811.33 ha.

Total beneficiaries (under RIDF-XXIII) to be covered (Individual & Community tank)-10,000 Nos.(approx.)

Total Project cost- Rs. 5434.00 lakh

CMSGUY Share-(50%)-Rs. 2717.00 lakh

Beneficiaries Share(50%)-Rs.2717.00 lakh

Sanction received from MMS-CMSGUY till date- Rs.2717.00 lakh.

Fund received-Nil.

Construction of pond (Individual & Community tank) under RIDF-XXIII is going on under the supervision of Directorate of Fisheries.

After completion of the pond construction, the amount (CMSGUY Share) for inputs will be released to beneficiaries by Fishery Mission Society through DBT.

##### 2. Capacity Building (5days residential training to farmers):

v Total no of beneficiaries to be covered	-	10,000
v Total project cost (in Rs.)	-	500.00 lakh
v CMSGUY Share	-	100%
v Sanction received (in Rs.)	-	500.00 lakh
v Fund received (in Rs.)	-	100.00 lakh.

5 days residential training will be provided to RIDF-XXIII Project beneficiaries.

Fishery Mission Society has already released an amount of Rs.20.00 lakh to Assam Agricultural University for conducting training of 40 batches of farmers initially (2000 farmers). College of Fisheries, AAU, Raha (The nodal institute for conducting the training) has already started the training programme and completed the training of 6 batches of farmers covering Nagaon, Barpeta Nalbari and Sonitpur districts upto the end of January, 2020.

### 3. Cage Culture in Selected Beels of Assam

#### A. Project at a glance:

- Total no. of beels covered-15 Nos
- Total estimated project cost (Rs. in lakh) for 150 Cages in 15 beels including training - Rs. 333.18 lakh
- CMSGUY share (70% on civil works & inputs and 100 % on Training to farmers - Rs. 234.39 lakh.
- Beneficiary share (30%) - Rs. 98.78 lakh.
- Sanction received till date-Rs.235.00 lakh
- Fund received-Rs.50.00 lakh

Installation of cages is going on.

#### D. ASSAM AGRIBUSINESS AND RURAL TRANSFORMATION PROJECT (APART)

##### Sub-Component: Fisheries Value Chain

Fisheries Value Chain: Over view: The fish value chain is to be implemented by the Department of Fisheries and the district Agricultural Technology Management Agency (ATMA), in collaboration with World Fish Centre (WFC) and private sector partners. This sub-component will focus on: (i) improving the quality of the inputs such as fish seed and feed for aquaculture, (ii) increasing the fish productivity and production from the pond/tank aquaculture systems, (iii) increasing fish production through culture-cum-capture fisheries activities in the beels, (iv) promoting diversification of fish species – particularly genetically improved strains - in combination with Indian major carps in the culture systems, (v) improved post-harvest management, value addition and marketing of produce by setting up fish farmer common service centres (CSCs.).

##### E. RASTRIYA KRISHI VIKASH YOJANA (RKVY):

RKVY, a flagship programme of Government of India introduced in the State during 2008-09 was also implemented during last three years of the 12<sup>th</sup> five year plan period, It is supported by 50% subsidy to the fish farmers against the schematic cost. Zila Parishads recommend the list of beneficiaries under RKVY. The major schemes implementing under RKVY are development of existing pond, low-lying areas converted to community tank, construction of new ponds and creation of nursery & rearing tanks.

##### Achievements under the schemes /programmes implemented during 2018-19.

In addition to continuing with the schemes of earlier years of the 12<sup>th</sup> five year plan i.e. Aquaculture Development of FFDA, Fishery Extension Service, schemes under RIDF under the state plan, several new schemes were introduced in the last year of the 12<sup>th</sup> five year plan under centrally sponsored programme. The National Welfare Fund for Fishermen, activities of "Matsya Jagaran" under "Fish and Fish Seed Farming" scheme and "Blue Revolution-Integrated Development and Management of Fishes" are some of the schemes to name. Under Matsya Jagaran there was provision of engagement of fishery extension worker as "Matsya Mitra" at the Village level.

Important developmental activities during 2018-19 include construction of 1395 ha of new pond and 433 ha of community pond covering 7850 individual beneficiaries and 391 community/groups respectively under SOPD and RIDF schemes. Under SOPD scheme "Fish and Fish Seed Farming" necessary inputs and materials have been supplied to about 800 farmers engaged in 125 ha of water bodies/pond area to enhance fish production. The scheme also provided input supports to 10 departmental farms. In Majuli, input have been provided for fingerling rearing in 5 ha along with input supports in 13 ha to enhance productivity of integrated pig cum fish culture project.

##### Schemes /Activities proposed during 2019-20:

Major activities proposed under various schemes are as follows:

Under State owned priority Development (SOPD)

##### Fish and Fish Seed Farming:

Input and material will be supplied in 52 ha along with 10 departmental farms for enhanced fish productivity, construction of 11.50 ha of new pond under Seed Bank Programme and development of 16.97 ha of water area of those water bodies belongs to the co-operative societies/communities /groups.

##### Fishery Extension Service:

Honorarium to 75 Matsya Mitra is provisioned as support measure besides organising workshop and seminar on fishery related activities and award to fishermen and/ fish farmers.

Marketing & Transport: Towards this 6 fish retail outlets are to be established.

Rural Infrastructure Development Fund (RIDF): The plan is to construct new individual pond and community pond and the target is yet to be fixed.

##### Centrally sponsored "Blue Revolution & Integrated Development & management of Fishes:

Project proposal amounting to Rs. 3064.39 Lakh has been submitted for construction of new pond for promotion of commercial fish farming, establishment of fish seed hatcheries, Re-circulatory aquaculture system for intensive fish farming, housing for fishermen etc.

**Rastriya Krishi Vikash Yojan (RKVY):**

Under RKVY-RAFTAAR proposal submitted for the activities of renovation and up gradation of departmental farms, setting up of mobile fish outlet (Kiosk), construction of new pond, supply of cast net to members of societies of FISHFED, Assam, supply of ice box, bicycle to the member societies of FISHFED, Assam etc.

**ANNEXURE-9.1**

**DISTRICTWISE NUMBER AND AREA UNDER FISHERIES IN ASSAM, 2018-19**

(Area in Hactare)

District	Beel Fisheries		Ponds and Tanks		Derelict Water Bodies/ Swamps	
	Nos.	Area (Ha)	Nos.	Area (Ha)	Nos.	Area (Ha)
1	2	3	4	5	6	7
Kokrajhar	76	2066.50	8377	1871.81	96	572.00
Dhubri	162	5302.78	15983	3216.72	-	11713.46
Goalpara	50	2178	9208	2021.14	70	463.00
Barpeta	77	1889.4	22955	4431.08	87	1393.00
Morigaon	112	2824	15986	3029.65	132	203.53
Nagaon	134	9919	53075	6369.00	143	23578.00
Sonitpur	70	1380	16050	1637.00	305	679.00
Lakhimpur	41	1559.5	16577	4392.48	68	4273.00
Dhemaji	46	425	5100	1054.00	145	706.00
Tinsukia	18	2295	12098	3815.50	-	2449.00
Dibrugarh	84	1024	14059	1028.25	80	206.38
Sivasagar	172	3955.94	11675	1121.79	112	7194.95
Jorhat	123	3633.96	14349	2450.16	478	11920.50
Golaghat	120	1565.8	7555	1133.25	-	529.50
Karbi- Anglong	15	49	10215	2736.00	106	332.00
Dima-Hasao	-	-	1298	110.00	648	37.41
Cachar	198	7945	36459	8563.00	284	5738.00
Karimganj	39	3459	26797	3746.30	-	11480.00
Hailakandi	42	1922	35307	6703.00	150	2000.00
Bongaigaon	41	2608	6906	978.49	193	3332.40
Chirang	16	122	3155	465.00	77	150.16
Kamrup	209	3817.9	22936	4576.20	222	643.36
Nalbari	31	792	26788	3362.00	515	3645.00
Baksa	12	142	24545	2312.00	-	441.00
Darrang	19	2144	28545	2735.00	62	364.00
Udalguri	-	-	9120	1325.08	-	-
<b>Assam</b>	<b>1907</b>	<b>63019.8</b>	<b>455118</b>	<b>75183.90</b>	<b>3973</b>	<b>94044.65</b>



## ANNEXURE-9.2

## DISTRICT WISE NUMBER AND AREA UNDER FISHERIES IN ASSAM, 2018-19

District	Reservoir Fisheries		Forest Fisheries		River Fisheries		Others (Paddy field/Canals etc.)	
	Number	Area (Ha)	Number	Area (Ha)	Number	Area (Ha)	Number	Area(Ha)
1	8	9	10	11	12	13	14	15
Kokrajhar	-	-	17	208.0	10	495.0	-	37048.5
Dhubri	-	-	-	-	-	23400.0	-	33610.0
Goalpara	-	-	-	20.0	8	8356.0	-	5414.0
Barpeta	-	-	-	-	9	2210.0	-	17843.0
Morigaon	-	-	3	955.0	10	327.0	8027	30870.0
Nagaon	-	-	8	800.0	-	2825.0	-	104910.0
Sonitpur	-	-	-	-	8	20640.0	-	1851.8
Lakhimpur	-	-	2	16.7	16	2474.0	51	15000.0
Dhemaji	-	-	-	-	21	874.0	-	6536.0
Tinsukia	-	-	-	-	6	26100.0	-	15762.4
Dibrugarh	-	-	-	-	4	254.0	-	98879.8
Sivasagar	-	-	14	120.0	35	7677.0	-	20040.0
Jorhat	-	-	-	-	4	392204	-	63747.0
Golaghat	-	-	-	1720.0	25	12778.0	-	-
Karbi Anglong	-	-	4	30.0	-	-	-	-
Dima Hasao	1	996	5	0.9	4	450.0	1550	2380.0
Cachar	-	-	313	418.0	45	5867.0	550	4005.0
Karimganj	-	-	-	-	5	5500.0	-	380.0
Hailakandi	-	-	-	-	4	1589.0	-	2105.0
Bongaigaon	-	-	-	-	8	562.0	666	825.0
Chirang	-	-	10	70.0	2	480.0	1	2766.2
Kamrup	-	-	42	27.5	74	453.0	558	5040.0
Nalbari	-	-	-	-	7	2100.0	-	18680.0
Baksa	-	-	19	121.0	14	5700.0	-	290.0
Darrang	-	-	-	-	17	6380.0	69	-
Udalguri	-	-	-	-	-	-	-	-
Assam	1	996.0	441	4784.8	341	176905.0	11472	489034.0

Source : Directorate of Fisheries, Assam Guwahati.

## ANNEXURE-9.3

## DISTRICT WISE NUMBER OF HATCHERIES AND FISH SEED PRODUCTION IN ASSAM, 2018-19

District	No. of Hatcheries			Production of Fish Seed (Fry in Million nos.)		
	Government	Private	Cooperative	Government	Private	Cooperative
1	2	3	4	5	6	7
Kokrajhar	1	6	-	0.00	5.08	-
Dhubri	1	13	-	0.00	0.00	-
Goalpara	0	11	-	0.00	26.91	-
Barpeta	0	80	-	0.00	-	-
Morigaon	1	42	-	0.00	1073.75	-
Nagaon	1	177	-	0.12	690.20	-
Sonitpur	1	16	-	0.00	167.00	-
Lakhimpur	2	12	-	0.00	26.00	-
Dhemaji	0	8	-	0.00	10.91	-
Tinsukia	0	7	-	0.00	23.00	-
Dibrugarh	1	4	-	0.09	3.13	-
Sivasagar	2	6	-	0.31	11.81	-
Jorhat	1	9	-	0.45	5.00	-
Golaghat	0	14	-	-	32.70	-
Karbi Anglong	2	2	-	-	-	-
Dima Hasao	0	-	-	0.77	-	-
Cachar	1	6	-	0.10	82.50	-
Karimganj	0	32	-	-	1967.22	-
Hailakandi	0	4	-	-	20.00	-
Bongaigaon	1	4	-	0.00	0.00	-
Chirang	0	2	-	0.00	5.90	-
Kamrup	3	24	-	-	33.66	-
Nalbari	0	7	-	-	940.00	-
Baksa	1	14	-	0.00	68.00	-
Darrang	2	14	-	0.17	20.00	-
Udalguri	1	3	-	0.00	19.50	-
Assam	21	517	-	2.00	9891.37	-

Source : Directorate of Fisheries, Assam Guwahati.

## ANNEXURE-9.4

## SCHEME WISE PHYSICAL TARGETS AND ACHIEVEMENTS UNDER CENTRAL SECTOR AND CENTRALLY SPONSORED SCHEMES FOR THE LAST YEARS

(2016-17 TO 2018-19)

Sl. No.	Item	Unit	2016-17		2017-18		2018-19	
			Target	Achv.	Target	Achv.	Target	Achv.
1	2	3	4	5	6	7	8	9
	Centrally Sponsored Schemes (CSS)							
1	Blue Revolution – Integrated Development & Management of Fishes							
	Construction of new pond	Ha	162	162				
	Beneficiaries	Nos.	1487	1487				
	Reclamation of Existing pond	Ha	29.00	29.00				
	Beneficiaries	Nos.	186	186				
	Creation of fingerling rearing area (General)	Ha	-	-	53.9	-	53.9	64.22
	Beneficiaries	Nos.	-	-	-	-	-	402
	Creation of fingerling rearing area (SC/ST area)	Ha	-	-	21.1	-	21.1	15.06
	Beneficiaries	Nos.	-	-	-	-	-	125
	Construction of fish seed hatcheries	Nos.	12	12	20	-	20	16
	Beneficiaries	Nos.	-	-	-	-	-	16
	Infrastructure Solar power system (General)	-	-	-	-	-	-	13
	Beneficiaries	-	-	-	-	-	-	13
	Infrastructure Solar power system (SC/ST)	-	-	-	-	-	-	1
	Beneficiaries	-	-	-	-	-	-	1
	Housing for SC fishermen	Nos.	75	75	50	-	50	30
	Recirculatory Aquaculture system (RAS)-General	Unit	-	-	-	-	4	2
	Beneficiaries	-	-	-	-	-	-	2
	National welfare fund for Fishermen (NWFF)							
	Fishermen Insurance	No. of Fishermen	157325	157325	157325	157325	157325	157325
2	Aquaculture Development under FFDA							
	a) Water Area Developed (New Pond construction)	Ha	48.35	48.35	-	-	-	-
	Beneficiaries	Nos.	130	130	-	-	-	-
	b) Reclamation of Existing Pond	Ha	113.28	113.28	-	-	-	-
	Beneficiaries	Nos.	407	407	-	-	-	-
3	Central Sector Scheme							
	Strengthening of data base & Information Networking (Catch Assessment Survey as per methodology designed by CIFRI in selected Districts)	No. of Districts	8	8	-	-	-	-

Source : Directorate of Fisheries, Assam Guwahati.

ANNEXURE-9.5

**SCHEME WISE PHYSICAL TARGETS AND ACHIEVEMENTS UNDER STATE SECTOR(SOPD) FOR THE LAST YEARS (2016-17 TO 2018-19)**

Sl. No.	Item	Unit	2016-17		2017-18		2018-19	
			Target	Achv.	Target	Achv.	Target	Achv.
1	2	3	4	5	6	7	8	9
	General							
1	Fish Production	Lakh ton	3.05	3.07	3.19	3.27	3.47	3.31
2	Seed Production	Million nos.	5700	6758	6800	8000	9000	98933.72
3	Fish & Fish Seed Farming							
	Construction of New pond Matsya Jagaran (including SCSP)	Ha	65.00	65.00	63	63.475	-	-
	Beneficiaries (including SCSP)	Nos.	502	502 (individual)	453	568	-	-
	Fish Rearing Pond-Seed Bank Programme	Ha	-	-	43.00	42.04	-	-
	Beneficiaries		-	-	392	392	-	-
	Fish Seed Rearing Pond Majuli Dev. Programme (new pond)		-	-	4.00	4.10	-	-
	Beneficiaries	Nos.	-	-	50	50	-	-
	MDP Production of Fish fingerling in rearing tank	Ha	-	-	-	-	5	5
	Beneficiaries	Nos.	-	-	-	-	-	53
	Integrated Fish Farming, Majuli Dev. Programme renovation of existing pond	Ha	-	-	13.00	12.70	-	-
	Beneficiaries	Nos.	-	-	72	72	-	-
	MDP Productivity increase through input & material support for pig-fish culture	Ha	-	-	-	-	12	12.5
	Beneficiaries	Nos.	-	-	-	-	-	64
	Construction of new pond, Barak Valley Dev. Programme	Ha	-	-	-	-	7	7.21
	Beneficiaries	Nos.	-	-	-	-	-	50
	Input & Material for Fish & Fish Seed production in	Ha					11	11
	4	Fishery Extension Service						
i	Women SHG supported through material supply for value added fish production	Nos.	-	-	15	15	-	-
Ii	Capacity building training of Matsya Mitra	Nos.	-	-	75	75	-	-
Iii	Training of Beneficiaries	No. of traing	-	-	-	100	-	54
	Trainee	Nos.	-	-	-	2500	-	1400
IV	Organisation of Awareness Camp	Nos.	220	220	-	430	-	-
V	Celebration of Fish Farmers day	Events	-	-	20	20	21	15
	Procurement Departmental vehicles	Nos.	-	-	-	-	-	32
	Honorarium of Matsya Mitra as support extension workers	No. of Matsya Mitra	-	-	-	-	75	75
5	Rural Infrastructure Dev. Fund (RIDF)							
i	Hygenic fish market	No. of market	-	1	-	-	-	-
Ii	Fish landing centre	No.	-	13	-	1	-	-
Iii	Marketing infrastructure	No.	-	2	-	2	-	-
IV	Construction of new individual ponds (Gen. & SC/ST)	Ha	-	-	-	-	-	1375
	Beneficiary	No.	-	-	-	-	-	7719
V	Community tank construction	Ha	-	-	-	-	-	429
	Beneficiary	No.	-	-	-	-	-	368

Source : Directorate of Fisheries, Assam Guwahati.

**CHAPTER-X****FORESTRY**

The state of Assam covers an area of 78,438 sq. km and its four distinct physiographic units, viz. the Brahmaputra valley of Assam proper, the Barak valley, the Karbi Anglong Plateau and the North Cachar Hills have rich flora and fauna diversity. Forestry, in Assam is a significant sector of the state economy. As per the constitutional provision the forestry has come in the concurrent list and the Forest Department of Assam has its authority to maintain the forest, its produce along with the all-round development of the wild life. The issue of environment protection, conservation of natural resources, flora and fauna especially herbs and shrubs with medicinal importance have gained tremendous significance from commercial as well as conservation points of view because of their extensive use as natural products. Conservation of forest was given importance since the times of earliest rulers. Historical data revealed that during the Ahom dynasty, a specific administrative branch was established to look after the management of timbers depots and exploitation of timber resources. The surnames of officials engaged during the times of Ahom rulers carry the evidence of this to the present times. The Ahom kings engaged officials for example, *Hatibaruah*, to look after the elephants; *Kath Bharali*, to look after the timber depots etc. The state of Assam is one of the most well-known sites in the world for unique wildlife. The conservation of various species of endangered wildlife is always a challenging task. Assam is harboring the big mammals – like Rhino, Tiger, Genetic Dolphin, Asiatic Buffalo etc. The state of Assam is enriched with extensive forest area and wealth like valuable forest product and also rich with different species and strains of flora and faunas. People of Assam from the immemorial have also depended upon the forest to meet their daily needs. The medicinal plants of the state have tremendous potential to contribute to the state economy. The state forest department has initiated many programs to promote commercial exploitation and conservation of bio resources. The government of India enacted Schedule Tribe and other forest dwellers (Recognition of forest rights) act 2005, for recognition of rights of schedule tribes and other forest dwellers living in forest fringe villages from centuries on their rights to use forest resources. Assam has a wide range of forests viz. evergreen, semi-evergreen, mixed deciduous, moist forest, dry sal forest, riverine forest, moist Savannah, dry Savannah and Miscellaneous type of forests. According to the National Forest policy the minimum desired area which is considered, for proper environmental and ecological security, the country should have 33% of forest cover in tropical zone, 60% of forest cover in Himalayan & peninsular region and 20 % of forest cover in the Great Plains. Biodiversity estimate of Assam reveals that there are large numbers of species of different plant and animals are found in the forest of Assam. The following table depicts significantly rich in biodiversity of the state.

**PLANTS AND ANIMALS AND THEIR SPECIES IN ASSAM**

Sl. No.	Name plant and Animals	No. of Species
1	Flowering Plant	3017
2	Wild Orchids	193+
3	Bamboo	42
4	Canes	14
5	Mammals	164+
6	Primates	10
7	Birds	800( 280 migrants)
8	Amphibious	60+
9	Butterfly	1500 (approx)
10	Reptiles	116 (approx)

Source: Assam Forest at a glance (2011-12)

To develop the forest sector, the state government had allocated Rs. 200 lakh during 2017-18 to set up 400 medicinal plant nurseries at the cost of Rs 50,000/- for each of the nurseries under the scheme of Raising People's Nurseries/Plantation of Medicinal and Aromatic plant. The state government is also implementing the Tribal Sub Plan and Schedule Caste Component Plan under which the government has procured large numbers of *Agar* and *Chandan* seedling to encourage the common people to plant the Agar and Chandan trees for their economic benefit.

### RECORDED FOREST AREA

The recorded forest area in Assam is 26,832 square km. which is 34% of the total geographical area of Assam and 3.21% of country's total forest area as per India State of Forest Report (ISFR) 2019. Out of total recorded forest area, reserved forest area constitutes 17,864 square km. which is 66.58 % and Unclassified State forest constitutes 8,968 square km. which is 34.21 % to the total geographical area. As per India State of Forest Report (ISFR) 2019, the total forest and tree cover in India has increased over 3976 square km. (about 39.76 million hector) which is 0.56 percent increase as compared to the area 2017 ISFR . Assam has also shown increase in forest and tree cover as per assessment made in 2019 over its previous figure of 2017 marginally.

### FOREST COVER

The total forest and tree cover in the country spreads across 807276 sq. km. which is 24.55% of the geographical areas of the country. According to State of Forest Report 2019 of Forest Survey of India (FSI) Dehradun, the forest cover of Assam has increased by 222 sq. km. compared to the forest cover as assessed in 2017, which is about 0.79% of geographical area. The main reason for this increase was detected due to plantation outside the forest area. Some more details about forest and tree cover statistics of the state of Assam as per 2019 ISFR are furnished below.

#### Statistics of forest and tree cover in Assam

➤ Total Forest cover area	:	28,105 square km.
➤ Area of tree cover	:	1,408 sqkm.
➤ Forest Cover to total geographical area	:	36.11%.
➤ Assam share of country's total forest cover	:	3.21%
➤ Reserve Forest area	:	1359026.70 hect.
➤ Per capita Forest and tree cover	:	0.09 hector.
➤ Extent of total wetland within recorded Forest area	:	67,857 sq. km.
➤ Percentage of wetland within recorded forest Forest area	:	2.46%
➤ Area under Very Dense Forest Cover	:	2,795 sq.km.
➤ Area under Moderately Dense Forest Cover	:	10,279 sq.km.
➤ Area under Open Forest	:	15,253 sq.km.

The State has witnessed significant change in composition of its forest cover during last few assessments made on biennial basis. For the sake of comparison the area under different forest cover type assessed during 2013, 2015, 2017 and 2019.

**TABLE -10.1**

#### TRENDS IN THE FOREST COVER IN ASSAM (Area in square km.)

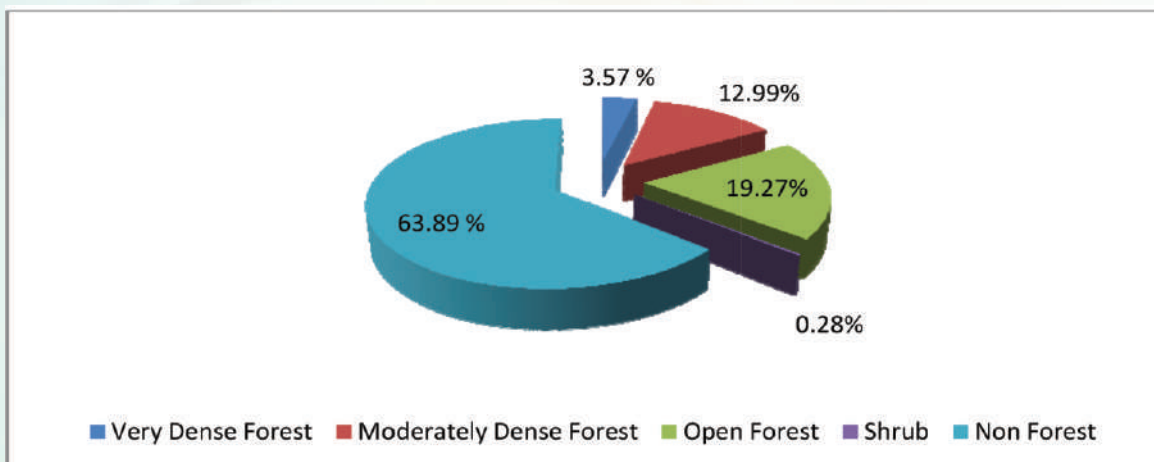
Item	Very Dense Forest	Moderately Dense Forest	Open Forest	Shrub	Non Forest	Geographical Area
As per Assessment in 2013 ISFR	1,444 (1.84)	11,345 (14.46)	14,882 (18.97)	182 (0.23)	50,585 (64.50)	78,438 (100.00)
As per Assessment in 2015 ISFR	1,441 (1.84)	11,268 (14.37)	14,914 (19.01)	384 (0.49)	50,431 (64.29)	78,438 (100.00)
As per Assessment in 2017 ISFR	2797 (3.57)	10192 (12.99)	15116 (19.27)	217 (0.28)	50116 (63.89)	78,438 (100.00)
As per Assessment in 2019 ISFR	2795 (3.56)	10279 (13.10)	15253 (19.44)	173 (0.22)	49,938 (63.66)	78,438 (100)

Note: Figures in brackets indicate percentages to the total geographical area.

Source: India State of Forest Reports, 2013, 2015, 2017 and 2019

Figure-10.1

Forest cover in Assam (Percentage to total geographical area), 2019



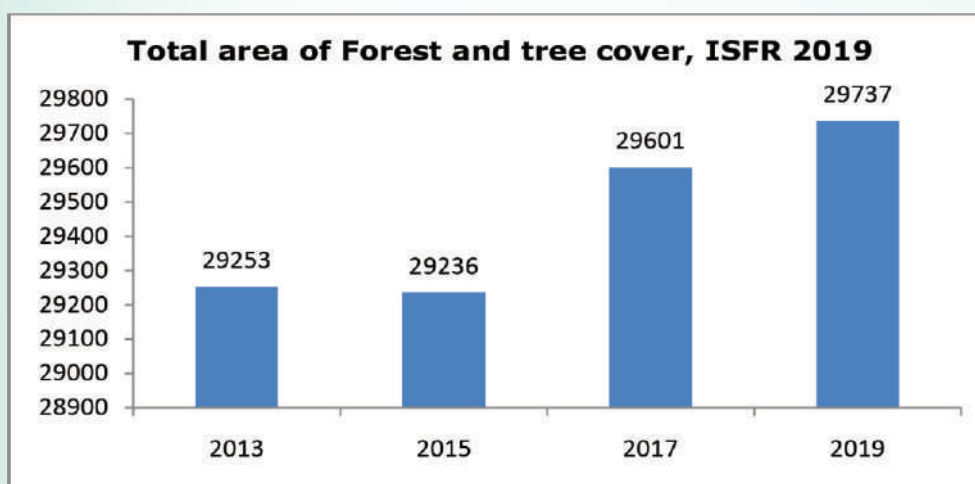
State has also witnessed significant changes in tree cover outside the forest areas. Table 10.2 shows forest cover and tree cover as assessed during last three assessments made by Forest Survey of India.

TABLE-10.2  
FOREST AND TREE COVER IN ASSAM

Items	Units	2013	2015	2017	2019
Area of Forest Cover	Sq. km.	27671	27623	28105	28329
Area of Tree cover	Sq. km.	1582	1613	1496	1408
Total area of Forest and tree cover	Sq. km.	29253	29236	29601	29737
Forest and tree cover to the Total Geographical area of the state	%	37.29	37.27	37.74	37.91

Source: India State Forest Report 2013, 2015, 2017, and 2019.

Figure-10.2



**BAMBOO RESOURCES IN THE FOREST:**

Assam is rich in bamboo resources and most of its forest are richly stocked with bamboo and cane of various species. Assam bearing only 6.58 % of total country bearing area. The total bamboo bearing tree area in the country is 160037 sq. Km.(ISFR 2019) against the area 156808 sq. Km. As per 2017 ISFR report which is significantly increase 3229 sq. Km. As reported there is 10525 Sq. Km. Bamboo bearing area within the forest area in the state as per ISFR 2019 against 8955 Sq. Km. As reported in ISFR 2017. Bamboo is versatile group of plant, which is capable of providing ecological, economic and livelihood security to the people. It is an integral part of the lifestyle and economy of Assam. There

are 42 numbers of Bamboo species are found in the Assam forest area as reported by forest department. The North East region of India has the highest concentration of bamboo, accounting for more than 60% of the total bamboo resources of the country as a whole. For promotion of bamboo sector in the government of India and government of Assam has taken initiative to develop its potentiality. Government of Assam has already set up a Bamboo Technology Park with an investment of Rs. 62.28 Crore at the Industrial Growth Centre, Chaygaon of Kamrup district with an innovative facilities from where hundred of MSMEs that produce incense stick and handicraft products getting benefit directly. Now Assam has become the first country's state of the art of Bamboo Technology Park to boost cultivation in the state and the region.

#### STATE FOREST PROFILE:

As per Forest profile of the State the total reserved forest area of Assam, according to the forest department estimation in 2018-19 is 13,59,026.70 hectares., in where 3,64,145.02 hectares presently encroached by 2,05,209 households. The reserved forest area constitutes about 17 percent area, and the total forest area excluding un-classed forest constitutes about 22 percent of the total geographical area of the state. The state however depicts a gloomy picture in terms of degradation of forest areas. During the period 2001 to 2018 India's greenest region, the North East States have been consistently losing tree cover over last 20 years. Data available with Deccan Herald shows that the net loss of tree cover during the period in India is 16,744 sq. KM. Out of this Assam has lost 2388.46 sq. Km. In addition to encroachment of forest lands, the practice of shifting cultivation has also induced degradation of forest land as well as loss of rich biodiversity of the state.

The state forest department has identified few thrust areas and initiated the following actions:

1. Preservation of the existing bio diversities.
2. Arresting the trend of existing degradation and reverting to the process of reforestation and extension of the forestry with multiple stake holders.
3. Preservation and development of the existing protected area network and their expansion in suitable areas.
4. Development activities and research in forestry and wildlife.
5. Bridging the gaps in infrastructural and logistical fronts.

#### FOREST ROADS:

The state forest department is entrusted the task of maintenance and management of forest, forest product and wildlife in the state. For the purpose of patrolling inside the forest area of Assam, to harvest the forest produces, for both improvement, development and creation of infrastructure the existence of proper roads in the forests are very essential. Accordingly, the state forest department has given special thrust to development of forest roads. The government of Assam has recently improved 92.25 km roads and constructed 8 culverts and proposed to improve 72.5 km of forest road with culvert and drainage system. Under the component of **Development of forest Village** government of Assam has proposed to allot Rs.100 lakh for different Forest Divisions under UAZ and LAZ wing to develop the infrastructure of forest villages. The National Highway 37 acts as a boundary to the Kaziranga Tiger Reserve, also for one horned rhino. The forest department of Assam has given special emphasis on this matter, and proposed to improve the road connectivity for better protection and conservation of forest biodiversity and wildlife. Table 10.3 presents data on forest roads in Assam.

TABLE-10.3

#### FOREST ROADS IN ASSAM (CUMULATIVE):

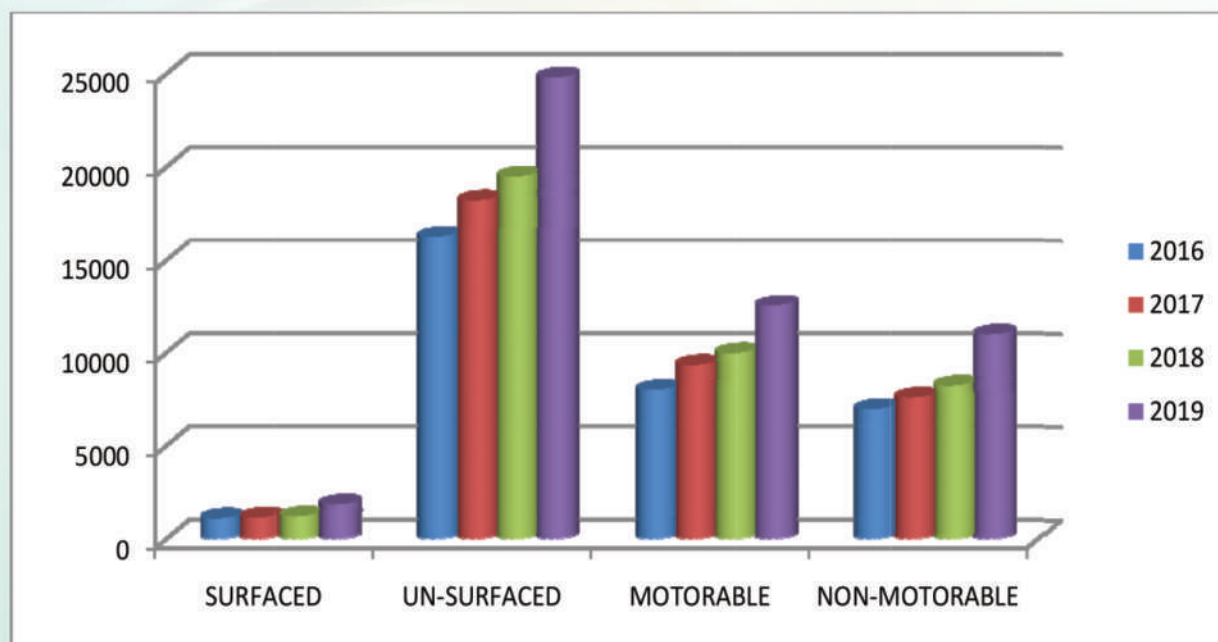
Category of Roads	Surfaced	Un surfaced	Motor able	Non- Motor able
2016	1077.953	16229.357	7972.050	6938.570
2017	1122.403	18187.632	9310.375	7558.52
2018	1180.218	19459.197	9946.08	8194.38
2019	1825.187	24779.121	12513.273	10947.111

Source: Office of the Principal Chief Conservator of Forest Force, Assam



Figure-10.3

## Forest Roads in Assam (K.M.) (cumulative)

**OUT TURN OF FOREST PRODUCE & REVENUE:**

Forests are sources of natural resources to be used for various manufacturing activities. In the context of conservation, forests are however not seen as a source of revenue generation. The forests are, however, source of livelihood of people living in forest fringe villages. The forests in the state are being harvested following the laid the principles of working plan of forest to ensure sustainability. The major forest produces in the state includes industrial wood or timber namely Teak, Shisam, Sal, Chir, Kait, Hollong, Makai etc. and other products like pulp, match wood, round wood and fuel wood, minor forest products including bamboo. At present, however, the major sources of forest revenue are sand, gravel, stone, silt, clay, thatch etc. The production of various forests produces and out-turns in the state are presented in table 10.4. Table 10.5 presents revenue generated from forest in the state.

TABLE: 10.4

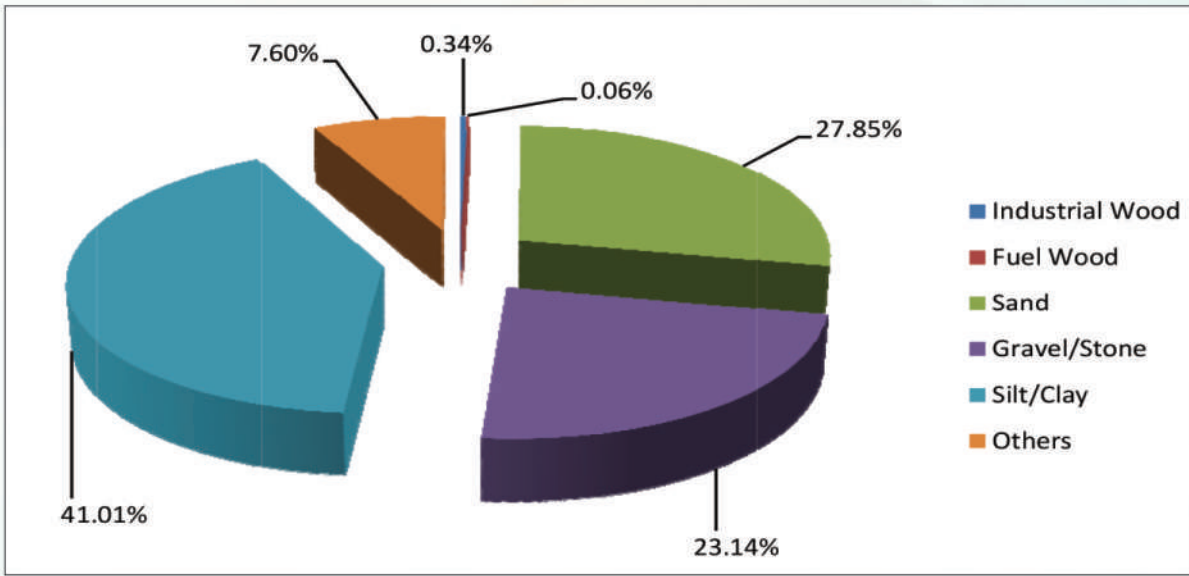
**PRODUCTION AND OUT-TURN OF FOREST PRODUCTS IN ASSAM**

Forest Produces	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Industrial Wood/Timber	Cubic metres	78629	14074.53	24546.48	14274.97	29199.30
Fuel Wood	Cubic metre	3469	15151.47	10410.4	1381.37	5566.31
Sand	Cubic metre	4775406	338604.69	527010.7	397608.26	2423495.22
Gravel/Stone	Cubic metre	8587090	806423.47	1542003.1	838361.33	2013390.43
Silt/Clay	Cubic metre	1186372	1986018.72	3734861.1	2270042.29	3568832.71
Others	Cubic metre	128988	22604.3	201120.9	140962.1	661661.1
TOTAL	Cubic metre	2651610	3182877.2	6039952.5	3662630.9	8702145.07

Source: Office of the Principal Chief Conservator of Forest, Assam.

Figure-10.4

Contribution of different forest product to the total forest product (in %)



REVENUE EARNED FROM VARIOUS FOREST PRODUCTS IN ASSAM (Rs. in lakh)

ITEM	2016-17	2017-18	2018-19
Timber	385.07	422.00	270.19
Fuel Wood	-	3.00	5.6
Sands and Gravel/ Stone	9728.77	9491.00	10720.58
Silt/ Clay	2736.92	4956.00	4483.03
Others (General)			
Revolving Fund	400.61	244.00	115.73
Others (Wild Life)	754.88	896.00	940.73
Total	14006.26	16012.00	16535.86

Figure-10.5

Contribution of forest product to total forest revenue, 2018-19 (%)

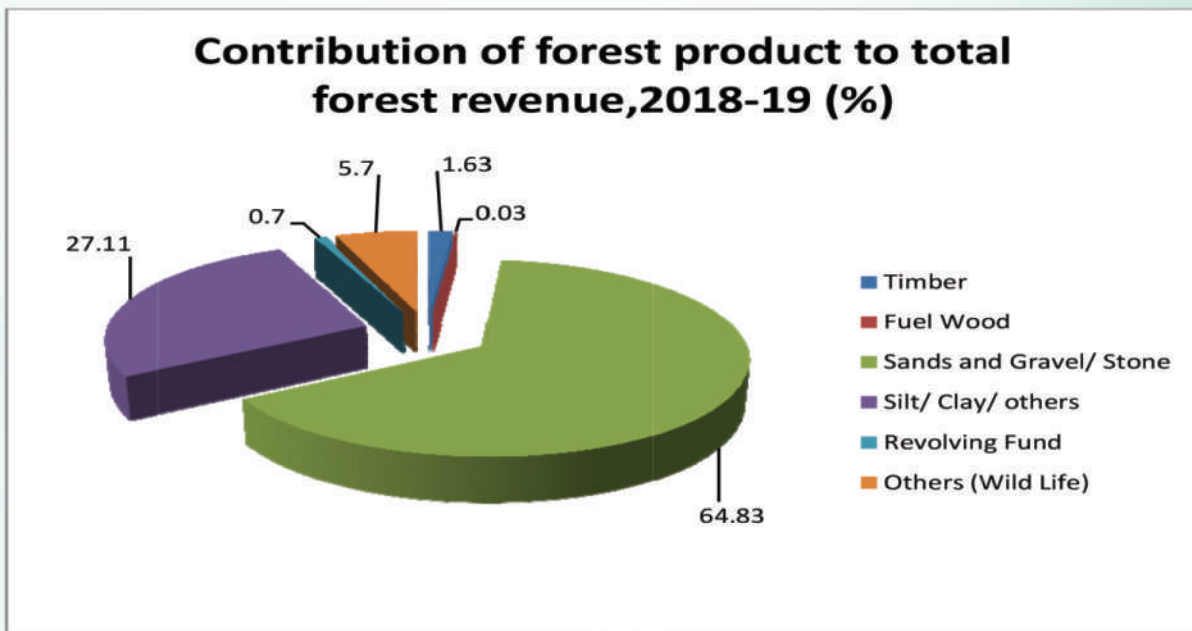


Figure 10.5: Contribution of different forest products to total forest revenue, 2018-19

**PROTECTED AREA - NATIONAL PARK AND SANCTUARIES:**

The Protected Area Network (PAN) of Assam includes 5 National parks and 18 wildlife sanctuaries covering an area of 0.40 million hectares constituting 4.98 percent of the total geographical area of the state. The state has four Tiger reserves. The wildlife sanctuaries in Assam are a heterogeneous mixture of a variety of landscapes, plants, birds and animals. Suitable climatic conditions, geographical location and vast forest reserves have made Assam a favorable habitat for birds, animals and natural vegetations. The wildlife sanctuaries and national parks of the state are the breeding ground for some of the rarest global species. Many wildlife sanctuaries of Assam are home to large number of precious wildlife species from the golden langur to the one horned rhinoceros. Two national parks of the state are designated as world heritage sites by the UNESCO in 1985. The total wildlife protected areas of the state at present is 3817.38 sq km.

Category wise wildlife protected areas of the state is presented in Table 10.6.

**TABLE-10.6**

**AREA OF THE NATIONAL PARKS, in Assam, 2018-19**

Name of the National Park	Location (District)	Area in sq. km.
Kaziranga National Park	Golaghat, Nagaon, Sonitpur and Biswanath.	858.98
Manas National Park	Chirang and Baksa	500.00
Orang National Park	Udalguri and Sonitpur	78.81
Nameri National Park	Sonitpur	200.00
Dibru-Saikhowa National Park	Dibrugarh and Tinsukia	340.00

**TABLE-10.7**

**AREA UNDER WILDLIFE SANCTUARIES (WLS)**

Name of the Wildlife Sanctuaries	Location (District)	Area in sq. km
Bhejan-Borajan-Padumoni WLS	Tinsukia	7.22
Panidehing WLS	Sivasagar	33.93
Gibbon WLS	Jorhat	20.98
Nambor-Doigurung WLS	Golaghat	97.15
Garampani WLS	Karbi Anglong	6.05
Nambor WLS	Karbi Anglong	37.00
East Karbi Anlong-WLS	Karbi Anglong	221.81
Marat Longri WLS	Karbi Anglong	451.00
Burhachapori WLS	Sonitpur	44.06
Laokhowa WLS	Nagaon	70.13
Pabitora WLS	Morigaon	38.31
Sonai-Rupai WLS	Sonitpur	220.00
Barnadi WLS	Udalguri	26.22
Chakrasila WLS	Kokrajhar	45.56
Dihing-Patkai WLS	Dibrugarh and Tinsukia	111.19
Barail WLS	Cachar, Karimganj	326.25
Amchang WLS	Kamrup (Metro)	78.64
Deepor Beel Wildlife Sanctuary	Kamrup (Metro)	4.14

**TABLE-10.8**

**AREA UNDER PROPOSED WILDLIFE SANCTUARIES**

Name of the Proposed Wildlife Sanctuaries	Location (District)	Area in km <sup>2</sup>
North Karbi Anglong WLS	Karbi Anglong	96.00
Bardoibam Beelmukh WLS	Lakhimpur	11.25

Source: Chief Conservator of Forest (WL), Assam

**CONSERVATION of WILDLIFE: THE FIVE NATIONAL PARKS OF ASSAM**

The state has five national parks and two national parks of the state are recognised by the UNESCO as world heritage sites.

**Kaziranga National Park:**

The Kaziranga National Park spread across the floodplains of the Brahmaputra River. Its forests, wetlands and grasslands are home to deer, tiger, elephant and one horned Rhinoceros. It also has the world's largest population of Asiatic Wild Buffalo and nearly 500 species of birds. It is a UNESCO World Heritage site. The park has an area of 858.98 sq km. During the year 2018-19 altogether 1,76,181 tourists visited the Kaziranga National Park including of 7443 tourists from other countries.

**1. Manas National Park:**

Manas National Park was declared as world heritage site by UNESCO in 1985. MNP is also declared as project tiger reserve, elephant reserve and a biosphere reserve. The Park is located in the Himalayan foothills and is contiguous with the Royal Manas National Park in Bhutan, covering an area of about 500 sq km. The Park is known for its rare and endangered endemic wild life such as the Assam roofed turtle, hispid hare, golden langur and pygmy hog. During 2018-19, altogether 42987 tourists visited to the Manas National park including of 658 foreign tourists.

**2. Orang Rajiv Gandhi National Park:**

The Orang National Park is also known as Rajiv Gandhi National Park. The park is located on the north bank of the river Brahmaputra in the Darrang and Sonitpur districts of Assam. It covers an area of 78.81 sq km. It is the smallest of Assam's five National Parks. The landscape, flora and fauna of Orang National Park are similar to the Kaziranga National Park. It was established as a sanctuary in 1985 and declared a National Park on 13 April 1999. The Park has a rich of flora fauna, including the great Indian one horned rhinoceros, pygmy hog, elephants, wild buffalos, and tiger. There were 1269 no. of Tourist visited to this park in where 725 nos. were Foreigner.

**3. Nameri National Park:**

Declared as a National Park in 1978, Nameri National Park is in the foot hills of the eastern Himalayas in the Sonitpur district of Assam, and about 35 km from Tezpur town. The Park covers an area of 200 sq km. The Park is the second tiger reserve of Assam and is also important for the commutation of elephants. Apart from 30 species of mammals recorded in this area, the rich wildlife includes tiger, black bear, elephant, leopard, clouded leopard, pangoline, Indian wild dog, deer, civet cat, capped langur, jackals etc. various species of birds such as endangered white winged, wood duck, four species of hornbill, butterflies and reptiles are also found in the Park. A large numbers of tourist visited to this park in every year. During the year 2018-19, the total nos. of tourist visited to this park were 14963 nos. in where 1116 were foreigner.

**4. Dibru-Saikhowa National Park:**

Dibru-Saikhowa National Park is located in Dibrugarh and Tinsukia districts. It was designated a Biosphere reserve in July 1997 with an area of 340 sq. km. The Park mainly consists of moist semi evergreen forest, canebrakes and grass lands. It is the longest swamp forest in north eastern India, with a tropical monsoon climate with a hot and wet summer and cool usually dry winter. It is heaven for many endangered species and rich in fish diversity. Animal life to be viewed in their natural habitat includes Royal Bengal Tiger, hoolock gibbons and leopard. It is also home to some restricted range of Bird species.

**TABLE- 10. 9**

**NUMBER OF TOURISTS VISITED TO DIFFERENT NATIONAL PARKS DURING DURING 2018-19.**

Natinal Park	Domestic Tourists	Foreign Tourists	Total
Kaziranga National Park	168738	7443	176181
Pabitara National Park	34606	605	35211
Manas National Park	42329	658	42987
Orang National Park	8544	725	9269
Dibru Choikhowa National Park	1793	24	1817
Nameri National Park	13847	1116	14963

Source : Tourist deptt. Assam.

Figure-10.9

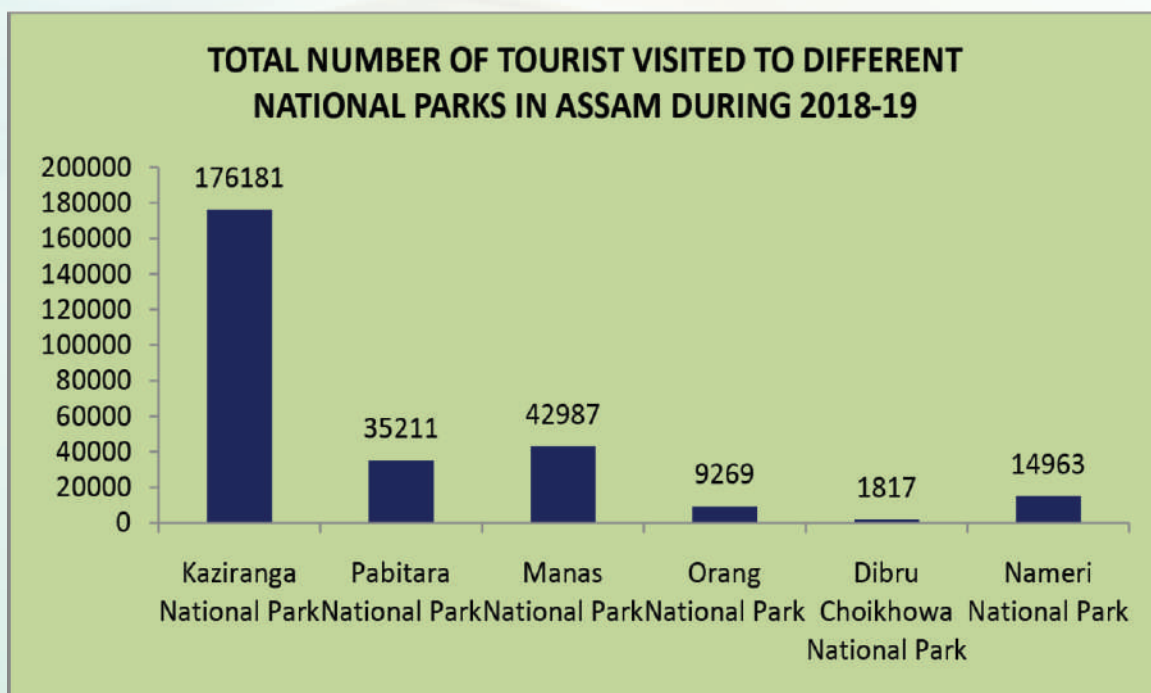


TABLE -10.10

**VISITORS AND REVENUE COLLECTION FROM ASSAM STATE ZOO-CUM BOTANICAL GARDEN**

Year	No. of Visitors			Revenue collection (in Rs)
	Indian	Foreigner	Total	
2016-17	604522	173	604695	18949096
2017-18	279945	86	280031	21226923
2018-19	751065	306	751371	22197791

Source : PCCF &amp; Head Forest Force, Assam

**PROJECTS ON CONSERVATION OF FORESTS AND WILDLIFE:****Project Tiger**

Assam has four tiger reserves namely Orang, Kaziranga, Manas and Nameri. The first country wide tiger census conducted in 1972 estimated about 1800 tiger population. The tiger conservation programme, Project Tiger was launched in 1<sup>st</sup> April 1973 by the government of India. The project aims at ensuring a viable population of Bengal tigers in their natural habitats, protecting them from extinction and preserving area of biological importance as a natural heritage forever represented as close as possible the diversity of ecosystems across the tiger distributions in the country. The Government has set up a tiger protection force with intensive protection of tiger areas and stopping poaching. Royal Bengal Tigers are found in 18 states of India including of the state of Assam. Project tiger is being implemented in all the 18 states in collaboration with respective state governments. During 2016-17 total sanction amount for this project was Rs. 2477.53 lakh and utilisation was Rs. 2449.63 lakh. In the year 2017-18 allocation for the project was increased to Rs. 3532.29 lakh, but in the year 2018-19 Rs. 1980.00 lakh was allocated for all round development of infrastructure and security for tiger. The total area under the project tiger is 70,244.10 sq km of the country.

TABLE-10.11

**Population of Rhinos, Elephants, Tiger and Swamp Deer as per Census Report**

Category	Year of Census	Numbers
Tiger	2014	167
Elephant	2017	5719
Rhino	2018	2650
Swamp Deer	2018	1007

Source: O/o Principal Chief Conservator of Forest (Wild Life)

**Project Elephant:**

Project elephant was launched in 1992 by the government of India to provide financial and technical support of wildlife management efforts by states for their free ranging population of wild Asian elephants. The project aims to ensure long term survival of viable conservation resilient population of elephant in their natural habitats and migration corridors. Other goals of Project Elephant are supporting research of the ecology and management of elephant, creating consecration awareness among local people, providing improved veterinary care for captive elephants.

During the year 2017-18 total allocation for project elephant were Rs. 842.99 lakh and utilisation was Rs. 3,05.29 lakh. The physical target during the year 2107-18 were formation of anti-depredation squad, running charge of vehicles, population estimation of wild elephant, veterinary support, reward to informer, publicity and awareness and purchase of drugs for tranquilizing gun. In 2018-19 total allocation for Project Elephant was Rs.222.97 lakh and sanctioned amount was 202.70 lakh. However of the sanction amount only Rs. 95.61 lakh was utilised. The amount during 2018-19 was spent for establishment of of anti poaching camp, immunization of livestock, logistic support quick action to scare way elephant form human habitation and crop fields.

**Assam Project on Forest and Biodiversity Conservation (APFBC):**

Assam Project on Forest and Biodiversity Conservation Society (APFBCS) was constituted by government of Assam and registered under the Societies Registration Act 1860. The Society has the mandate for planning and implementation, monitoring, coordination and management of all the activities proposed in conservation contexts under the project. The activities of the project put special emphasis on creating sustainable livelihood opportunities for forest dependent communities with a view to promote sustainable forest management and restore forest ecosystems. The society came into existence on 28<sup>th</sup> June 2012. The project is funded by the French Development Agency under Indo-French Development co-operation. To achieve the goals APFBC adopts participatory micro planning by forming Joint Forest Management Committee (JFMC) and Eco Development Committee (EDC) among the forest dependent communities.

The project has four technical components:

1. Institutional strengthening of the forest department
2. Multi-level strategic planning
3. Sustainable forest management
4. Value addition and openings of market opportunities for the goods and services produced by the JFMCs and EDCs.

**Participation of NGOs and People in APFBC**

The state views NGO's as not only as agencies that will help them to implement the programs but also as agencies who will bring transformation in conservation strategies of the government.

NGOs are now playing an important role in framing the environmental policy, mobilizing public support for environmental conservation and protecting be endangered species of forest and animals. Some of the NGOshaveplayedanactiveroleintheconservationandpreservationofwildlife.Wildlife

protection society of India collaborates with state government to monitor illegal wild life trade. The

APFBC has able to ensure participation of villagers by forming Joint Forest Management Committees (JFMCs) Eco Development Committees (EDCs) to become part of the conservation drive.

#### **OTHER INITIATIVES IN CONSERVATION CONTEXT**

The state has created a task force – Special Rhino Protection Force, for protection of one horned Rhino. To mitigate man-animal conflicts, the state has allocated Rs. 1045 Lakh under SOPD budget during 2019-20 and proposed to install 100 km elephant proof solar powered fencing and around the reserve forest areas of the state. The state also plans to dig 100 km length of elephant trenches in different areas and provide some logistical support to the villagers to deal with depredation caused by the herds of elephants in the villages. More than 50 percent of notified forest area in the state fall under the category “Open Forests”; restoration of such areas, enhancing of human and infrastructural capacity of the state Forest Department along with the need to provide livelihood opportunities and alternatives to forest dependent communities, requires infusion of various funds, at a very large scale and forms.

#### **Integrated Development of Wildlife Habitat Areas:**

Integrated Development of Wildlife Habitats (IDWH) is an ongoing centrally sponsored scheme which has been made operational by adding more components and activities. Allocation for the scheme during 2018-19 was Rs. 330 lakh. The forest department received Rs. 265.32 lakh of the total allocation of Rs. 330 lakh. An amount of Rs. 117.79 lakh was spent for by construction of anti poaching camps at Dibru Saikhowa WLS, water retention structure for wild animal at Chakrasilla WLS, provisioning of piglets to fringe villagers under eco development activity at Nambar WLS. The scheme includes preparation of management plans, surveys, and demarcation of boundaries for protection of wildlife habitats areas and prevent anti-poaching activities. During 2018-19 government had sanctioned Rs.2549.95 lakh to meet the physical targets for overall development of forest conservation under different programme. During 2017-18 under External Aided Project (EAP) schemes for capacity building for Management and Training of Personal and for APFBC, total allocation was Rs. 22006.19 lakh and sanctioned amount was Rs. 5200.00 lakh and the entire released amount was utilised.

#### **STATE CAMPA and its achievement during 2016-17 to 2018-19:**

State Compensatory Aforestation and Fund Management and Planning Authority (State CAMPA) is intended as an instrument to accelerate activities for preservation of natural forest, management of wildlife, infrastructure development in the sector and allied works. On the basis of Compensatory Afforestation Fund Act, 2016 and Compensatory Afforestation Fund Rule, 2018 The government of Assam has constituted State Compensatory Aforestation Fund (SCAF), Assam on 11<sup>th</sup> Feb, 2019 and carries various activities under State CAMPA . During 2016-17 to 2018-2019 under State CAMPA the state has planted 4376.24 ha of plants, including of 40 ha of *Apurugia Brikhya* plantations, 4.5 ha of nurseries and implemented various activities under different components. The following Table presents physical and financial achievements of STATE CAMPA during 2016-17 to 2018-19.

**TABLE-10.12**

ACTIVITIES	TARGET	PHYSICAL ACHIEVEMENT	FINANCIAL ACHIEVEMENT (Rs. in lakh)
Site Specific Plantation	1194.27 Ha.	901.24 Ha.	1490.01
Aided Natural Regeneration	500 Ha.	500 ha.	461.01
Afforestation	2150 Ha.	1975 Ha.	1767.88
Sal Coppice Management	1100 Ha.	1000 Ha.	676.44
Apurugiya Brikhya Plantation	40 Ha.	40 Ha.	266.97
Building Construction	77 Nos.	76 Nos.	-
Improve forest Road	100 K.M.	100 K.M.	234.00
Patrolling Path	37 K.M.	37 K.M.	9.27
Elephant Proof Trench	80 K.M.	68 K.M.	51.50

## ANNEXURE-10.1

## FOREST DIVISION WISE AREA UNDER RESERVED FORESTS AND ENCROACHMENT IN ASSAM, 2018-19

Sl. No.	Forest Division	Reserved Forest Area (in hecets.)	Encroached Forest Area (in hecets.)	No. of Encroachers in forest Areas (Household)
1	2	3	4	5
1	Goalpara	25249.66	5798.25	3668.00
2	Kamrup	35329.55	6384.90	15546.00
3	Kamrup West	68133.89	21069.00	2450.00
4	Kamrup North	4518.61	132.30	882.00
5	Dibrugarh	21794.65	1445.97	0.00
6	Digboi	55714.65	2272.10	665.00
7	Doomdooma	30904.35	9344.80	2306.00
8	Golaghat	94078.87	87213.46	39243.00
9	Jorhat	25037.15	18651.29	1765.00
10	Sivasagar	24085.99	9788.00	3319.00
11	Hamren	10268.00	6282.32	0.00
12	Karbi Anglong East	48033.95	4635.51	2035.00
13	Karbi Anglong West	89371.66	1273.00	0.00
14	Dima Hasao	132633.60	810.16	2674.00
15	Baksa	13323.33	6686.00	4142.00
16	Lakhimpur	31096.55	6856.87	2683.00
17	Dhemaji	49553.45	31001.50	13072.00
18	Nagaon	33640.78	3668.50	486.00
19	Nagaon South	49049.00	12070.00	9658.00
20	Sonitpur East	47428.00	37574.00	39415.00
21	Sonitpur West	44067.77	32200.00	25000.00
22	Cachar (Silchar)	78897.64	5592.20	4030.00
23	Hailakandi	53834.97	11616.00	6786.00
24	Karimganj	48056.81	14018.00	4357.00
25	Aie Valley	6086.80	483.32	237.00
26	Dhubri	1344.97	72.86	321.00
27	Haltugaon	47876.12	16865.83	10944.00
28	Kachugaon	82199.00	2719.26	2796.00
29	Dhansiri	17270.94	3862.20	4094.00
30	Parbatjhora	32023.18	3020.02	1870.00
31	Chirang	55967.81	737.40	765.00
32	Nagaon WL	2155.00	-	-
33	Manah National Park	-	-	-
<b>Assam</b>		<b>1359026.70</b>	<b>364145.02</b>	<b>205209.00</b>

Source : PCCF &amp; Head, Forest Force, Assam, Panjabari, Guwahati-37



**CHAPTER-XI****INDUSTRY, TRADE AND MINING**

Assam though has rich and diverse natural and mineral resources, during the colonial period the state experienced an early industrialisation, Assam today is considered as one of the industrially backward states of the country. Notwithstanding, the state is making attempts to accelerate the pace of industrialisation focusing on the state's existing resources, augmenting investment, and improving necessary infrastructure including power. Towards this the state on one hand focuses on development of the transport and communication sector and on the other hand, a series of benefits and incentives have been offered to the entrepreneurs willing to take up industrial activities in the state. Besides, many innovative business models have been promoted depending on the advantages the state can offer. The state, despite several constraints, now has able to create a favourable environment for industrial development.

The state organised a Global Investors' Summit 'Advantage Assam' at Guwahati during February 3-4, 2018 to attract investments in the state. This was the largest event organised ever by the government of Assam in the state for industrial investment promotion and facilitation. Within the broad ambit of the Look (Act) East Policy, the Summit highlighted the state's geostrategic advantages in promoting industrial activities related to export oriented manufacturing and services to tap the potential and growing economies of the ASEAN and BBN countries. The Summit, accordingly, emphasized on potential sectors like Pharmaceuticals & Medical Devices, Plastic & Petrochemicals, IT & ITES, Tourism, Hospitality & Wellness, Power Agriculture & Food Processing, Inland Water Transport, Civil Aviation, Petroleum and Natural Gas, Handloom, Textiles, Handicrafts and Bamboo crafts. It is envisaged that the Summit will go a long way in ushering in a new era of industrialisation in the state and contribute immensely to the process of development in the state.

**11.1 CONTRIBUTION OF INDUSTRIAL SECTOR TO STATE ECONOMY:**

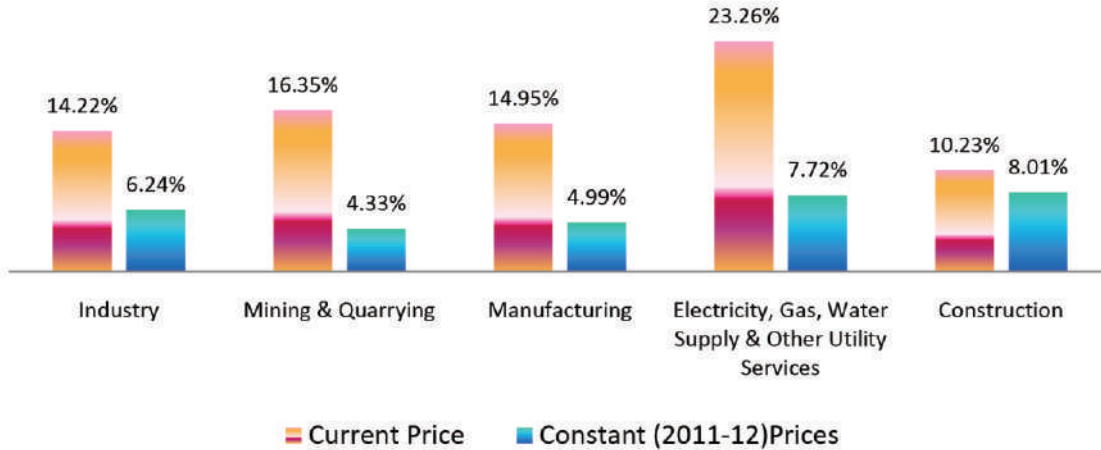
Industry sector comprises of mining & quarrying, manufacturing, electricity, gas, water supply & other utility services and construction. As per quick estimates for 2018-19 at constant (2011-12) prices, annual growth rate in industry sector is estimated at 6.24%; the growth rate being 14.22% at current prices. At constant prices, the contribution of the sub sectors to the industry sector for 2018-19 (A.E.) is estimated at 4.33% for mining and quarrying, 4.99% for manufacturing, 7.72% for electricity, gas, water supply & other utility services and 8.01% for the construction sector. All the sub-sectors of Industry have recorded encouraging growth both at current and constant prices over the previous year. The contribution of Industry Sector to the state's Gross Domestic Product (GDP) is 33.51% at current prices during the year 2018-19 which was 30% during 2017-18.

<b>Sector</b>	<b>Current Price</b>	<b>Constant Prices (2011-12)</b>
Mining & Quarrying	16.35%	4.33%
Manufacturing	14.95%	4.99%
Electricity, Gas, Water Supply & Other Utility Services	23.26%	7.72%
Construction	10.23	8.01%
<b>Industry Sector</b>	<b>14.22%</b>	<b>6.24%</b>

*Source: Directorate of Economics and Statistics, Assam*

Annual Growth Rate of GSDP in sub-sectors of Industry sector during 2018 -19(Q.E.) is shown in the following bar-diagram.

**Annual Growth Rate during 2018-19**



**11.2 INDEX OF INDUSTRIAL PRODUCTION (Base: 2011-12=100):**

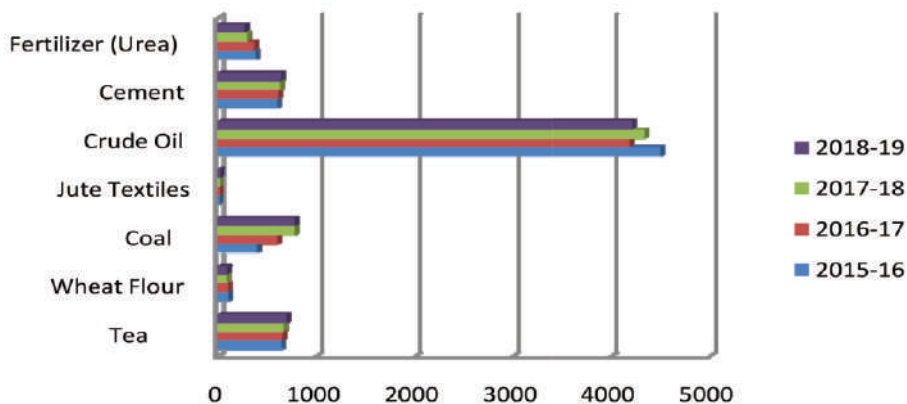
During 2018-19, the Index of Industrial Production (Base: 2011-12=100) in respect of manufacturing sector is calculated at 125.46 (Prov.) showing a positive growth of .75 percent over the previous year 124.55. Index of industrial Production of Assam during 2018-19 has been worked out at 111.24 (Prov.) registering a growth of 1.8 percent over 109.25 in 2017-18.

**TABLE-11.2  
PRODUCTION OF SOME SELECTED INDUSTRIES IN ASSAM**

Year	Tea (000' tonnes)	Wheat Flour (000' tonnes)	Coal (000' tonnes)	Jute Textiles (000' tonnes)	Crude Oil (000' tonnes)	Cement (000' tonnes)	Fertilizer (Urea) (000' tonnes)
2015-16	653	110	397	22	4513	609	390
2016-17	657	104	600	23	4202	617	368
2017-18	667	94	782	23	4345	639	299
2018-19	702	98	783	32	4222	640	277

Source: Tea: Tea Board of India; Minerals: Indian Bureau of Mines, Nagpur.

**PRODUCTION OF SOME SELECTED INDUSTRIES IN ASSAM ('000' TONNES)**



**MINING SECTOR:**

The state is endowed with mineral resources, and the minerals are major contributors to the state's industrial performance. The contribution of Mining and Quarrying sector to the economy has been around 11-12% at Current Price in 2018-19. During the year 2018-19, production of coal increased marginally but the production of crude oil declined by 2.8% compared to the previous year. The Index of Industrial Production is calculated at 89.55(Prov.) during 2018-19 compared to 90.15 during 2017-18.

The Table 11.3 shows the trend of production of some major minerals in the state during the last three years.

**TABLE-11.3**  
**MINERAL PRODUCTION IN ASSAM**

Year	Coal ('000MT)	Crude Oil ('000MT)	Natural Gas Utilised (MCM)	Limestone ('000MT)	Sulphur ('000 MT)
2015-16	397	4513	2903	442	4322
2016-17	600	4202	2907	1597	6571
2017-18	782	4345	3034	1432	8339
2018-19	783	4222	3083	1651	6956

Source: Indian Bureau of Mines.

The trend shows that during the year 2018-19, production of Coal and Natural Gas (1.6%) increased marginally compared to the previous year. On the other hand, production of Sulphur declined by 16.60 % and Crude Oil by 2.83%. Production of Lime stone in the state during 2018-19, however, has increased by 15% compared to the previous year.

#### **INDUSTRIAL INFRASTRUCTURE FACILITIES IN ASSAM**

The mandate of Industries and Commerce Department, Assam is to create a conducive environment for industrialisation in the state. As Industrial Infrastructure is a pre-requisite for industrial development, the department has been creating industrial infrastructural facilities as well as upgrading the existing ones located in different parts of the state. Infrastructural infrastructure and facilitation centres in the form of Export Processing Industrial Park (EPIP), Integrated Infrastructure Development Centre (IIDC), Industrial Growth Centres (IGC), North East Mega Food Park, Food Processing Park, Bamboo Park, Industrial Estates, Industrial Areas, Commercial Estates, etc. are now established in the state.

The department has established one Export Processing Industrial Park (EPIP) at Amingaon in Kamrup district, 3 Industrial Growth Centres at Balipara, Matia & Chaygaon-Patgaon-Jambari, 11 Industrial Infrastructure Development Centres (IIDCs), one Food Processing Park at Chaygaon and one North East Mega Food Park at Nalbari district. Besides, there are 24 Industrial Estates, 7 Mini Industrial Estates, 20 Industrial Areas, 28 Growth Centres under the department. At present about 850 industrial units are functioning in these industrial estates and infrastructures.

#### **INDUSTRIAL ESTATE AND INDUSTRIAL GROWTH CENTRE:**

##### **1. Export Promotion Industrial Park (EPIP):**

The Export Promotion Industrial Park was established at Amingaon in Kamrup district at a total project cost of Rs.1462.0 lakh. At present total seven (7) industrial units are functioning in the park.

##### **2. Industrial Growth Centre (IGC):**

The Industries and Commerce Department of the state has initiated three (3) centrally sponsored projects on Industrial Growth Centre (IGC) at Balipara (Chariduar), Matia and Chaygaon -Patgaon-Jambari.

##### **(i) Industrial Growth Centre, Balipara (Chariduar):**

Industrial Growth Centre, Balipara (Chariduar) is located in the district of Sonitpur. The total cost of the project was Rs.1600.00 lakh; the share of the central government being Rs.1500.00 lakh and the rest Rs.100.00 lakh is shared by the state government. Till the year 2017-18 the Government of India had released Rs.1216.00 lakh from its total share, while the state government had released Rs.22.20 lakh. The first phase of the project covering construction of boundary wall, internal road, water facilities, construction of power works etc have been completed. In this centre 20 bigha of land have been allotted for a pharmaceutical unit. In the year 2018-19 altogether 14 units were functioning at the Centre implemented by the Assam Industrial Development Corporation (AIDC).

##### **ii) Industrial Growth Centre, Matia:**

The total project cost of the Industrial Growth Centre, Matia in Goalpara district is being implemented by the AIDC Ltd. The total cost of the project is Rs.2200 lakh. The central government shares Rs.1500 lakh, and the share of the state government is Rs.700 lakh. Till the end of 2017-18, the government of India had its entire share of allocation while the state government had released Rs. 367.14 lakh. The first phase of the project covering construction boundary wall, internal road, electrical sub-station etc. is completed. An amount of Rs. 1867.14 lakh was spent for the project till the year 2017-18. Plots of the centre have been allotted to various industrial units and construction activities of M/S Kohinoor Paper & Pulp industry is going on. At present four (4) industrial units are functioning in the centre.

##### **(iii) Industrial Growth Centre, Chaygaon-Patgaon-Jambari:**

The Industrial Growth Centre initiated at split locations at Chaygaon-Patgaon & Jambari in Kamrup district is being implemented by Assam Industrial Infrastructure Development Corporation (AIIDC). The

total cost of the project is Rs.1615.24 lakh, out of which, Rs.1500.00 lakh was shared by the government of India and Rs.115.24 lakh was shared and released by the state government. The IGC project at Chaygaon, Chatabari & Patgaon locations was completed in 2007. The extension of IGC, Chaygaon project at Jambari location was completed in 2012. All the plots of IGC Chaygaon-Chatabari, Patgaon & Jambari were allotted to the industrial units within two years from the time of inception. At present (2018-19) altogether 30 units at Chatabari location, 26 units at Jambari location and 6 units at Patgaon are functional.

### 3. Border Trade Centres:

Assam shares borders with 7 states and 2 countries viz. Bhutan and Bangladesh with 2276.3 km interstate and 529 km international borders. India's Look (Act) East Policy visualizes Assam as one of the strategically important and key players in opening up India's economic opportunities by engaging in trades with the neighbouring countries. For facilitating the Border trade with the neighbouring Countries of Bangladesh, Bhutan and even Myanmar, government of Assam and government of India have taken initiatives to create infrastructure facilities establishing Border Trade Centres at 5 (Five) locations: Sutarkandi in Karimganj district, Mankachar and Golokganj in Dhuburi district, Darranga in Baksa District and Jagun in Tinsukia District.

#### (i) Border Trade Centre, Sutarkandi:

The Border Trade Centre, Sutarkandi in Karimganj district was approved by government of India in the year 2000 under Critical Infrastructure Balance (CIB) and ASIDE scheme. The total cost (both the 1<sup>st</sup> and 2<sup>nd</sup> phase) of Sutarkandi project was Rs. 2563.00 lakh; a larger share of Rs. 2400.00 lakh was borne by the central government and the rest by the state government. The project was implemented through AIDC and the trade centre is now functional.

#### (ii) Border Trade Centre, Mankachar:

The government of Assam had approved setting up of this Border Trade Centre under ASIDE scheme at Mankachar of present South Salmara district. The approved cost of the project was Rs.466.00 lakh. The central government shared Rs.380.83 lakh of the costs and the state government's share was 85.00 lakh. The project was implemented by AIIDC and is operational with normal trade transactions.

#### (iii) Trade Facilitation Centre, Jagun, Tinsukia (Along Stilwell Road-to Myanmar)

A Trade Facilitation Centre (TFC) has been set up at Jagun, located about 3 Km from Jairampur (the Assam - Arunachal Pradesh border point) and 20 Km from Panchu Pass (the Indo- Myanmar Border on the Stilwell Road). Infrastructure development for the Trade Centre was done by the AIIDC in a plot of land measuring 12 acres with a project cost of Rs. 5.98 Cr. The project is now completed with amenities of warehouse, parking yard, loading and unloading platform. The Government of India has released 530.98 lakhs for this project till the end of the year 2017-18.

#### (iv) Border Trade Centre, Golokganj (Sonahat, Gate No-24)

This Border Trade Centre is located near Gate No: 24 of Sonahat, Dhubri district and implemented by AIDC Ltd. with a project cost of Rs.1938.00 Lakh. This centre has a competitive advantage and may be a Hub in coming years. On 28<sup>th</sup> April, 2014, the first consignment of Coal crossed this border point to Bangladesh and it was inaugurated on December 12, 2015. The central government has released Rs. 1839.00 lakh for the project.

### 4. Food Processing Industrial Park:

The Ministry of Food Processing Industries, government of India has approved setting up of a Food Processing Industrial Park at Chaygaon in Kamrup district with a project cost (revised) of Rs.496.0 lakh. The central government share for this project is Rs.350.0 lakh and state government share is Rs.146.0 lakh. The government of India has released Rs.262.50 lakh while the government of Assam has released Rs.146.00 lakh against their shares till the year 2017-18. The project is completed by ASIDC and plots allotted to 16 units, out of which 8 units are operational. The rest of the units are in the process of to establish their required infrastructure. .

### 5. Integrated Infrastructure Development Centres (IIDC):

The Ministry of MSME, government of India has approved setting up 11 (eleven) Integrated Infrastructure Development Centres (IIDCs) at different locations of Assam. These are located at Naltali-Bhomoraguri in Nagaon district, Tihu (Nathkuchi) in Nalbari district, Rangia in Kamrup district, Bandardewa in Lakhimpur district, Titabar in Jorhat district, Dalgaon in Darrang district, Malinibeel in Cachar district, Silapathar in Dhemaji district Demow in Sivasagar district, Serfanguri in Kokrajhar district and Parbatipur in Tinsukia District. Government of India has released Rs.2411.66 lakh and the government of Assam has released Rs.665.88 lakh for the Centres. All the projects have been completed. At present a total of 63 units are functioning in different IID centres as indicated below:

1. IID Centre, Nalbari	:	Nil.
2. IID Centre, Malinibeel	:	15
3. IID Centre, Titabar	:	1
4. IID Centre, Dalgaon	:	8

5. IID Centre, Demow	:	3
6. IID Centre, Bhomoraguri	:	12
7. IID Centre, Rangia	:	19
8. IID Centre, Bandardewa	:	3
9. IID Centre, Parbotipur	:	2
10. IID Centre, Serfanguri	:	Nil
11. IID Centre, Silapathar	:	Nil

### 6. North East Mega Food Park, Nathkuchi, Nalbari:

With the objective of providing adequate infrastructure for the food processing industries of the region along with creation of value chain from farm to market, a Mega Food Park is under construction at Nathkuchi (Tihu) in Nalbari district. The park is being developed in PPP model with assistance from the Ministry of Food Processing Industries, government of India in an area of 50 acres. The total project cost is Rs. 8085.37 lakhs where central share is Rs.5000.00 lakhs, while the state share is Rs. 3085.37 lakhs including promoters' contribution and term loan. The central government has released Rs 4500 lakhs and the state government has released Rs 2824.16 lakh against their shares till 2017-18. The park is located along the NH-31 at a distance of 90 KM from Guwahati and will accommodate 27 food processing units. Construction for the Mega Food Park was started on May 28, 2015; as on 2018-19, a total of 14 units are functioning in the park. One new food park is also under process of initiation at Ulupathar covering 1.7 lakh sq. mt. area near Margherita in Tinsukia district.

#### ONGOING INFRASTRUCTURE PROJECTS:

##### 1. Border Trade Centre at Darranga, Baksa (Indo-Bhutan Border)

In view of growing Indo-Bhutan trade, it is proposed to set up a Border Trade Centre at Darranga, Baksa district of Assam in a plot of land measuring 48 bigha (16 acres). The estimated cost of the project is Rs.1433.88 lakh and the construction is under progress. To facilitate formal trade with Bhutan, it is proposed to have cold storage, parking yard, warehouse, residential quarters for custom officials, weighbridge, loading and unloading platform in the trade centre. The project is being completed by AIIDC Ltd. The central has released Rs 1402.71 lakhs for the project.

##### 2. Plastic Park:

To facilitate development of downstream industries based on the products of the Assam Gas Cracker Project (Brahmaputra Cracker and Polymer Ltd), government of Assam has proposed to set up a Plastic Park at Gelapukhuri in Tinsukia district. The primary aim of the proposed park is to facilitate polymer based downstream industries. The project site is located 3-4 km from the Tinsukia town and about 60 km from the Assam Gas Cracker project site. It is proposed to provide following facilities in the park

- Developed plots.
- Internal roads.
- Water supply system.
- Captive power plant.
- Internal drainage system.
- Boundary wall.
- Street lighting.
- Medical/ recreation/ canteen
- Tool Room
- Recycling plant, etc.

The park shall have an area of 500 acres and approved project cost of the park is Rs.9365.00 lakhs. The government of India shall share Rs. 4000.00 lakh for the project and the state government shall bear Rs.5365.00 lakh. AIDC Limited has been designated as the nodal agency for implementation of the project. The central government has released Rs 2200.00 lakh and the state government has released Rs 4765 lakh. Till date construction of 10 working sheds has been completed and 5 sheds have been allotted to entrepreneurs.

##### 3. Bamboo Park:

A Bamboo Technology Park is under construction at Chaygaon in Kamrup district, about 60 km from Guwahati city. The proposed park is being developed in PPP model with the assistance from the Ministry of Commerce and Industry, Government of India, Government of Assam and private promoters. Estimated cost of the project is Rs. 6228 lakh out of which the share of central government is Rs. 5263 lakh, and the state government shall contribute Rs 390.00 lakh. The project budget shall have a term loan of Rs 575.00 lakh. The government of India has released Rs 5105.21 lakh and the state government has released Rs. 151.4 lakh of which Rs 101.40 is equity share and Rs 50.00 lakh is grant. Objective of the park is to create integrated infrastructure for promotion of bamboo based industries in the state. The project is already commissioned with one unit functioning in the park.

#### 4. Tea Park :

The first Integrated Tea Park of the North East is being set up at Chaygaon in Kamrup District. Common facilities planned in park are space for ea Auction Centre, Tea Research and Development facilities, exhibition hall, convention centre, packaging of tea and tea tasting facility etc. The Assam Industrial Development Corporation Ltd. is the nodal agency for construction of the Tea Park. The state had received revenue of Rs. 30.63 lakh during 2016-17 from renting out the sheds of Industrial and Commercial Estates under DI&CC. The revenue from rent increased to Rs.44.36 lakh in 2017-18; but decreased to Rs.26.98 lakh during 2018-19.

#### Major Schemes being implemented by Department of Industries and Commerce, Assam:

##### 1) Prime Minister Rojgar Yojana (PMRY)/Prime Minister Employment Generation Programme (PMEGP):

The Prime Minister Rojgar Yojana (PMRY) was a Centrally Sponsored Scheme launched on October 2, 1993 with the objective of providing employment to the educated unemployed youth. The scheme facilitates self-employment through setting up of manufacturing or service enterprises and business ventures. The scheme provisioned a limited amount of bank loan with a proportion of subsidy for the interested and qualified educated youth on the recommendation of Task Force Committees constituted for the purpose. The programme was effective till March 31, 2008; and thereafter a new scheme namely Prime Minister Employment Generation Program (PMEGP) was introduced by merging the PMRY and REGP with the same aims and objectives. The KVIC is implementing the PMEGP scheme as the nodal agency at the national level and at the state level the scheme is implemented by the state KVIC Directorate, state KVIB and the District Industries and Commerce Centres and Banks. The government subsidy for the scheme is being routed through the identified Banks.

**TABLE-11.4**  
**TARGET AND ACHIEVEMENT OF PMEGP**

Year	Physical target (in nos.)	Total Cases sanctioned (in Nos.)	Physical achievement (in no.)	Financial achievement (Rs. In lakh.)	P.C. of Physical achievement	P.C. of financial achievement to sanction	Remakes
2016-17	3776	3773	3773	3499.4	99.92	92.7	—
2017-18	6386	3267	2166	2269.6	33.92	69.00	—
2018-19	4203	2080	3736	4165.7	88.88	49.00	—
2019-20	4382	265	934	1145.3	21.31	6.04	Under Process

Source: Commissionerate of Industries and Commerce, Assam

Note: Physical and financial targets are subject to revision from time to time.

#### 2. Promotion of Micro, Small and Medium Enterprise (MSME):

The MSME sector has a vital contribution towards the process of industrialisation of the state. The enterprises categorized into Micro, Small and Medium enterprises based on investment made in plant and machineries (for manufacturing sector) or in equipment (in case of service enterprises) as under

##### A) Manufacturing Enterprises:

- a) **Micro:** Fixed investment in plant and machinery up to Rs.25 lakh.
- b) **Small:** Fixed investment in plant and machinery above Rs.25.0 lakh and up to Rs.5 Cr.
- c) **Medium:** Fixed investment in plant and Machinery above Rs.5 Cr up to Rs.10 Cr.

##### B) Service Enterprises:

- a) **Micro:** Fixed investment in equipment up to Rs.10 lakh.
- b) **Small:** Fixed investment in equipment above Rs.10 lakh and up to Rs.2 Cr.
- c) **Medium:** Fixed investment in equipment above Rs.2 Cr and up to Rs.5 Cr.

In the year 2017-18, the state had 47048 SSI/MSME units providing employment to 282942 of persons. In 2018-19 the number of SSI/MSME units was increased to 48171 with an addition of 1123 numbers of registered units and employment by 8543. From the year 2016-17 the state shows declining trend both in number of SSI/MSME registered and number of employment generated (Table 11.5).

**TABLE- 11.5**  
**SOME STATISTICS ON SSI/MSME OF ASSAM**

YEAR	No. of SSI/MSME	Employment (in nos.)	Average no. of Employment in MSME	Investment in Plant & Machinery (Rs. in lakh)	Average Investment Per Unit (Rs. in Lakh)
Up to 31-03-2001	14453	64623	5	22009.00	1.5
2013-14	1860	12971	7	31099.08	16.71
2014-15	2629	20496	8	26923.29	10.24
2015-16	1898	13848	7	25597.96	13.48
2016-17	2177	19355	9	60687.43	27.88
2017-18	1539	14442	9	47452.20	30.83
2018-19	1123	8618	8	20081.26	17.88
Cumulative Total	48514	294114	6	828956.54	9.43

*Source: Commissionerate of Industries and Commerce, Government of Assam*

### (3) Biponi:

Biponi is an innovative marketing scheme for micro and small entrepreneurs of Assam. The basic objective of the scheme is to provide support to participate in different trade fairs and events within the state, in the country and as well as in abroad to market their products. All registered micro and small entrepreneurs are eligible for this scheme. Till the end of November 2019 altogether 4001 entrepreneurs have availed the benefit under this scheme. The nature of assistance under the scheme is as follows:

- Within the state: Maximum ceiling of Rs. 5,000.00 per entrepreneur towards the rent of the stall and TA/DA of Rs. 500.00 per day per stall for 5 days. The participant not resident of the district where the event takes place get TA/DA at the rate of Rs. 600.00 per day per stall for 5 days.
- Outside the state: Selected participants is reimbursed 50% of the stall rent subject to a ceiling of Rs. 15,000.00 and actual sleeper class return railway fare for 2 (two) persons per unit. In addition an amount of Rs. 500.00 per person per day is provisioned for the fair period towards food and lodging expenses.
- Outside the country: Selected participants is provided free stall space on sharing basis and economy class air fare for one person per unit along with Rs. 1000.00 per person per day for the towards food & lodging expenses.

### (4) Sarothi: The Start-Up Assam:

The Sarothi scheme is for first generation entrepreneurs of the state to provide assistance to set up their entrepreneurial venture. This support scheme is conceived to assist in getting loan or financial assistance from bank/financial Institutions for any new venture. A major problem as observed in the state is banks and financial institutions are reluctant to provide loan for new ventures considering the risks involved. The Chief Minister's Start-up Fund named **Sarothi** was started in 2016-17 with an endowment amount of Rs. 10 Cr. The fund is placed under the control and management of the Industries and Commerce Department as per its operational guidelines. The scheme is proposed for a period of five years starting with 2016-17. The underlying idea is to provide financial assistance in the form of loan with interest subvention through a designated bank covering the entire state. The beneficiaries who avail the loan will be supported by the state government through an annual interest subvention of 5%. In the year 2016-17 altogether 253 entrepreneurs were supported under this scheme with an amount of Rs. 10 crore. The physical target for the year 2017-18 was to support 1298 entrepreneurs.

### (5) Svayem:

Swami Vivekananda Assam Youth Empowerment Yojana (SVAYEM) announced in the state Budget in 2017 is a flagship programme to provide financial support to youths of Assam to take up income generating activities in the manufacturing, trading and service sector. The target is to provide suitable credit support for taking up income generating enterprises to about one lakh youths of the state. The main objective of the scheme is to generate employment opportunities in rural as well urban areas through setting up of new ventures as well as expanding and/or scaling-up of the existing ventures. This scheme particularly aims at providing financial assistance to micro and small business entities engaged in the manufacturing, trading and service sectors as well as traditional artisans for enhancement of their income level by ensuring sustainable growth. For the financial year 2018-19 Rs.110.00 crore has been released and the scheme is under progress.

**(6) Assam Agribusiness & Rural Transformation Project:**

Assam Agribusiness and Transformation Project (APART) is a world bank funded project implemented by the Government of Assam with a project period of 7 years, which was signed on 30<sup>th</sup> Oct, 2017. Assam Rural Infrastructure and Agriculture Services (ARIAS) Society is the co-ordinating agency for the project. The project will be implemented by eight line departments of the state.

**INSPECTOR OF FACTORIES:**

Altogether 216 new factories were registered with the office of the Inspector of Factories in 2018. With this addition total number of registered factories in the state reached 6945 with a growth of 3.2 per cent over the previous year. The number of daily workers engaged in the factories in 2018 was 279246; average number of daily worker engaged per factory being 40.

**TABLE-11.6**  
**REGISTERED FACTORIES IN ASSAM**

Year	Number of Factories	Number of daily workers	Average no. of daily workers per Factory
2001	2512	98862	39
2015	5799	219903	38
2016	6158	243821	39
2017	6729	269276	40
2018	6945	279246	40

Source: O/o The Chief Inspector of Factories, Assam

**SOME MAJOR INDUSTRIES IN ASSAM:****TEA INDUSTRY:**

The Tea industry occupies an important place in Assam's economy. The first Indian tea produced in Assam was sent to United Kingdom for public sale in the year 1838. Although the tea cultivation was extended to other parts of the country in the 50's and 60's of the 19<sup>th</sup>, as of today, Assam Tea has maintained its international reputation and commands significant share in the World Tea Market. The total area under tea cultivation in Assam accounts for more than half of the country's total area under tea. In addition to the existing tea estates owned by reputed Indian as well as multinational Companies, common people of the state also ventured into the profession of tea plantation establishing small tea gardens. The tea industry of the state now provides average daily employment to more than 6.86 lakh persons, which is more than 60 percent of the total average number of labour employed in a day (i.e. on an average 11.1 lakh labour are employed per day) in the tea sector of the country in tea industry.

Assam has witnessed a spurt in the growth of small tea holdings during the last three decades and there is more than 1.0 lakh small holdings accounting for about 200 hundred million kg of made tea. Most of the Small Tea Growers (STGs) are first generation young and educated entrepreneurs who have started contributing immensely towards transformation of socio-economic life of rural Assam. The data of Tea Board of India, 2018, there are 1,01,085 registered Small Tea Growers (with an area up to 10.12 hectares of land) in Assam. Total number of small tea gardens in the state is 87,675 which together produced about 304,490 thousand kg of tea in 1,05,291 hectares of land. The number of tea estates (i.e. with holding above 10.12 hectares) in the state is 765 (2018); the estate sector produces 387,420 thousand kg of tea in total 232,400 hectares of land. The production of tea in Assam was 651,910 thousand kgs in 2018; produced in 337 thousand hectares of land; a decline by 2 % from 665,330 thousand tonnes produced in 314 thousand hectares in 2017.

**TABLE-11.7**  
**TEA STATISTICS OF ASSAM**

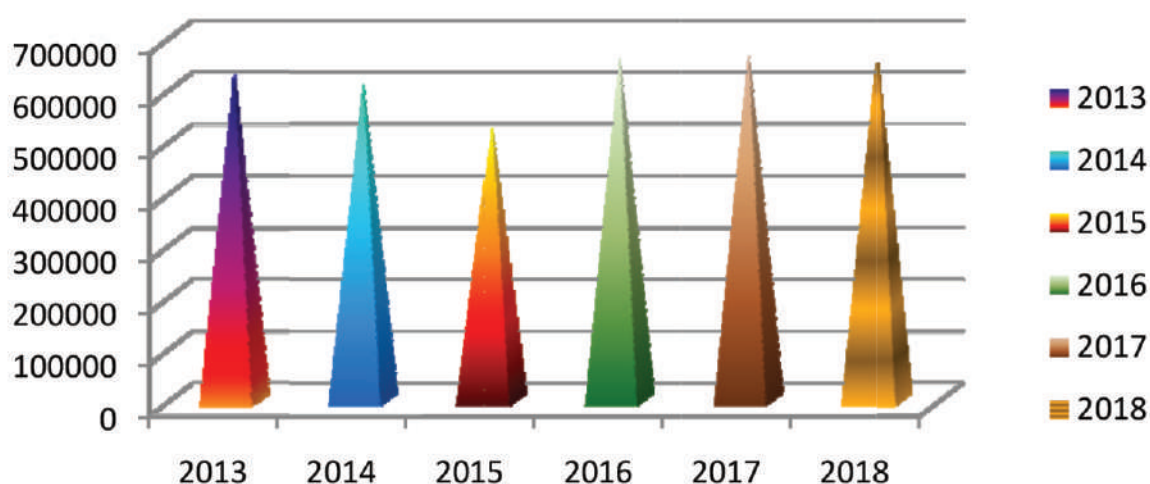
Year	No of Tea Gardens	Area under Tea ('000 hectares)	Total Tea Production ('000 kg)	Average yield
2013	69220	322	629050	1953
2014	77710	304	610970	2010
2015	83566	316	526185	1665
2016	85344	311	659740	2121
2017	88442	314	665330	2119
2018	101850	337	651910	1934

Note: Area, Production and Average yield have been estimated and subject to revision.

Source: Tea Board of India.



### Production of Tea in Assam ('000'Kg)



The Guwahati Tea Auction Centre, since its establishment in 1970 is actively taking part in trading of the tea produced in the states of North-eastern region of India. Table 11.8 presents the statistics of quantity and average price of tea sold in the Guwahati Tea Auction Centre.

**TABLE-11.8**

#### QUANTITY AND AVERAGE PRICE OF TEA SOLD IN GUWAHATI TEA AUCTION CENTRE

Year	Leaf				Dust			
	CTC		Orthodox		CTC		Orthodox	
	Quantity (million kg)	Average Price (Rs. per kg)	Quantity (million kg)	Average Price (Rs. per kg)	Quantity (million kg)	Average Price (Rs. per Kg)	Quantity (million kg)	Average Price (Rs. per kg)
2015	86.7	140.93	1.40	186.40	41.20	146.80	Nil	Nil
2016	38.12	137.71	0.32	186.03	17.78	143.65	Nil	Nil
2017	116.43	136.01	1.47	186.36	47.76	151.02	Nil	Nil
2018	115.06	130.00	1.361	70.93	50.59	141.30	Nil	Nil
2019 (Upto August)	52.86	135.78	1.06	200.97	26.28	135.00	Nil	Nil

Source: Guwahati Tea Auction Centre

#### RUBBER PLANTATION:

The rubber plantation has gained popularity in Assam due to congenial agro-climatic condition in the state. The Rubber Board has identified Assam as a "Potential state" from the "productivity" point of view as the state has ample scope for expansion of rubber plantation. Accordingly, the Rubber Board had planned to extend rubber plantation areas to 2 lakh hectares by the end of Twelfth Five Year Plan (i.e. 2017) to cope with the growing demand of rubber in the country which is expected to reach 1.78 lakh MT by the end of 2025.

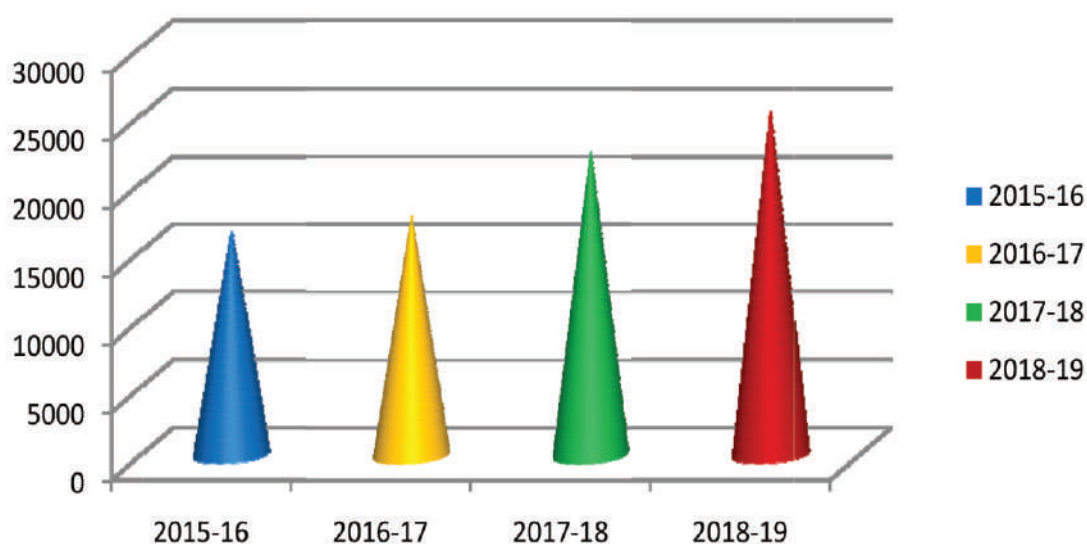
The area under rubber cultivation has grown from 16.5 thousand hectares in 2006-07 to 57.94 thousand hectares in 2017-18. The tapping area as well as production of rubber has also increased considerably during the same period. During 2017-18 the production of Rubber had increased by 27 percent as compared to previous year. In 2018-19 the production of rubber has increased by 13%. The data on growth of area, production and employment generation in rubber plantation sectors are presented in the Table 11.9. Considering the growth of plantation areas and production trend of rubber, there is vast potential for setting up of industries to add value of rubber in the state.

**TABLE-11.9**  
**AREA AND PRODUCTION OF RUBBER IN ASSAM**

Year	Area (in hectare)	Production (in MT)	Tapping Area (in hectare)	Employment Generation (Man-days)
2015-16	55990	16400	12308	174763
2016-17	57646	17574	15139	179856
2017-18	57945	22324	16099	189790
2018-19	58120	25246	20858	182873

Source: The Rubber Board, Zonal Office, Guwahati.

**Production of Rubber in Assam ( M. Ton)**



#### COFFEE PLANTATION:

Coffee is grown in Assam and the rest of North Eastern states, but not in abundance. Coffee is planted in two districts, Karbi Anglong and Dima Hasao of the state. Meghalaya, Nagaland and Mizoram are the important coffee producing states in the North East region of India.

**TABLE-11.10**  
**AREA PRODUCTION AND EMPLOYMENT GENERATION IN COFFEE BOARD, ASSAM**

Year	Area (in hectares)	Production (in MT)	Price* (Rs./Kg) Arabica	Price (Rs./Kg) Robusta	Employment Generation (Nos.)
2015-16	1119.00	41.50	180	116.00	1228
2016-17	1158.24	42.90	152.00	102.00	1318
2017-18	1248.82	39.50	118.66	110.53	1543
2018-19	1278.02	39.15	124.33	124.66	1625

\*Price /Kg is quoted as per average price realized on ICTA

Source: Coffee Board N.E. Region, Guwahati.

#### KHADI AND VILLAGE INDUSTRY (KVI)

With a view to generate rural employment and uplift the rural economy, various Khadi and Village Industries are being promoted in the state by the Khadi and Village Industries Commission and Assam

Khadi and Village Industries Board since their establishment. The value of production of the commodities produced under KVI was Rs.27.45 Crore in 2018-19; an improvement compared to Rs. 26.76 crore in 2017-18 and Rs.22.35 crore in 2016-17. Total person engaged in KVI was 79737 in 2018-19; an improvement compared to 66844 in 2017-18 and 74960 in 2016-17.

**SERICULTURE:**

Traditionally, sericulture has been a major cottage industry of the state. Sericulture is practiced in Assam from time immemorial and continues to be an important farm based labour-intensive activity providing gainful livelihood to more than 3 lakh families in rural and semi-urban areas of the state. Moreover, sericulture has been able to create sustainable forward linkages with establishment of value adding yarn reeling and weaving activities primarily in the rural household sector of the state. These activities require relatively low investments, but yield higher returns.

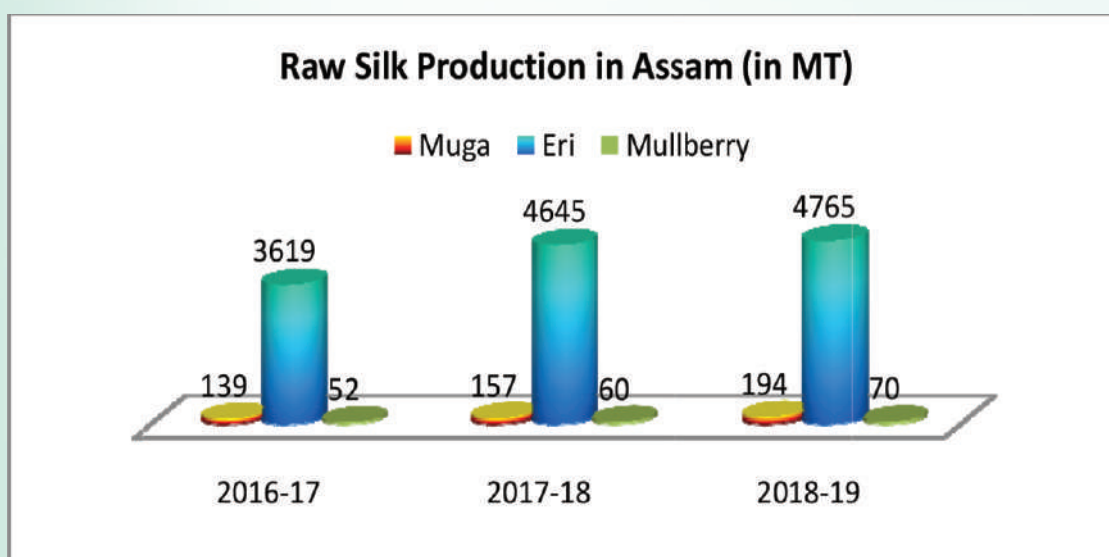
The Muga (the golden silk) yarn is very specific to the state; now has received geographical identity. In addition to the traditional Muga, Eri and Mulberry are other two important natural yarns produced in the state. The state has also seen introduction of Oak Tassar in the hills districts. The state accounts for more than 85 percent of global Muga Silk produced. During 2017-18, the state government has started the project "Muga Mission" for enhancement of Muga Silk production with a project cost of Rs.465.00 crores. The state is also a Major producer of Eri Silk (about 62 percent) of the country.

Table 11.11 provides the detail on the variety of raw silk produced in the state during past 3 years.

**Table 11.11: Production of natural yarn in Assam**

Item	2016-17	2017-18	2018-19
Muga	139	156.96	194.12
Eri	3619	4645	4764.52
Mullberry	52	59.50	70.20
Total	3810	4861.46	5028.84

Source: Directorate of Sericulture, Assam



The sericulture industry has undergone changes with respect to loom, fabric, design and technology. Non-mulberry silk in general and Muga silk in particular has been closely associated with the rituals and traditions of Assam and thus, silk production and its usage has been an important household activity in the state. Muga Silk and Eri Silk have good demand in the national and international market. Rearing of Eri, Muga and Mulberry silkworm are playing an important role in the economic development of a large section of rural population of the state. The engagement of villages and families in sericulture activities however have declined to an extent in recent times because of various reasons (Table 11.12). The production of silk in the state however has increased from 4861.46 MT in 2017-18 to 5028.84 MT

in 2018-19 recording a growth of 3.35 percent. The performance of sericulture sector is presented in Table-11.12

**TABLE-11.12**  
**SERICULTURE ACTIVITIES IN ASSAM**

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1. Sericulture Villages (Nos.)	10740	10746	11411	11281	11281	9935	8726	8726
2. No. of Families Engaged	254516	291592	282073	652406	496901	319405	310582	307877
3. Area under Silk Worm food Plants (In Hect.)	24268	26827	33790	15417	11434	15983	11585	
3.1 Eri	8044	9172.5	15796	6601	5510	7176	5936	
3.2 Muga	9400	10230	10371	5995	4383	5931.58	4369	
3.3 Mulberry	6824	7424	7623	2821	1541	2875	1280	
4. Yield of Cocoons								
4.1 Eri-cut Cocoons (in MT)	1622.51	2514.16	3182	3050	3317	4350.58	6300	
4.2 Muga Cocoons (in lakh Nos.)	5812	5450	6361	6528	6864	6480.00	7865	
4.3 Mulberry Reeling Cocoons (in MT)	129.28	225.0	340.5	268	328	439.05	576	
5. Production of Silk Yarn (in MT)	1187.42	2068.0	2700.04	2497.40	2712.80	3647.49	4866.46	
5.1 Eri Raw Silk	1061.61	1934.0	2545.6	2345.0	2555.00	3468.25	4650	
5.2 Muga Raw Silk	114.56	109.0	127.2	126.0	127	129.60	156.96	
5.3 Mulberry Raw Silk	11.25	25.0	27.24	26.4	31.02	49.64	59.50	

Source: Directorate of Sericulture, Assam.

#### HANDLOOM:

Handloom weaving is a precious part of generational legacy and has been kept alive by the skilled weavers engaged in the age old tradition since antiquity in Assam. In Assam, handloom weaving is inexorably linked with Assamese culture and heritage. In the handloom sector women are involved in significant number, primarily with subsidiary capacity. The sector continues to play very important role in terms of employment generation and socio-economic development of Assam. The sector in Assam has gradually grown to meet market demand with commercial production. The state had an estimated number of 19.48 lakh weavers during 2017-18. There are 221 handloom demonstration circles in the state covering 14273 villages. In the year 2017-18 9 Yarn Banks were established by the Directorate under state sponsored scheme. In 2018-19 there were 102 Handloom Training Centres in the state accommodating 1181 trainees. Handloom production during the year 2018-19 was 5,160 Meters. In addition, 98 Weavers Extension Service Units produced 49,339 meters of cloth during 2018-19.

#### TOURISM:

Tourism in Assam is based on wildlife, natural beauty, unique flora & fauna, holy shrines, lush green tea gardens, turbulent rivers, vibrant and colourful cultural festivals. Eco-tourism is one of the fastest growing segments of the tourism sector and therefore the government of Assam has given thrust on this sector. In Assam the ideal time to visit for tourism is November to April. To make Assam as 365 days tourist destination and to boost the Tourism sector in the state, government has made endeavours to promote 'Monsoon Tourism'. A good campaign has been undertaken both in national and international forum to promote the tourism destinations in the state.

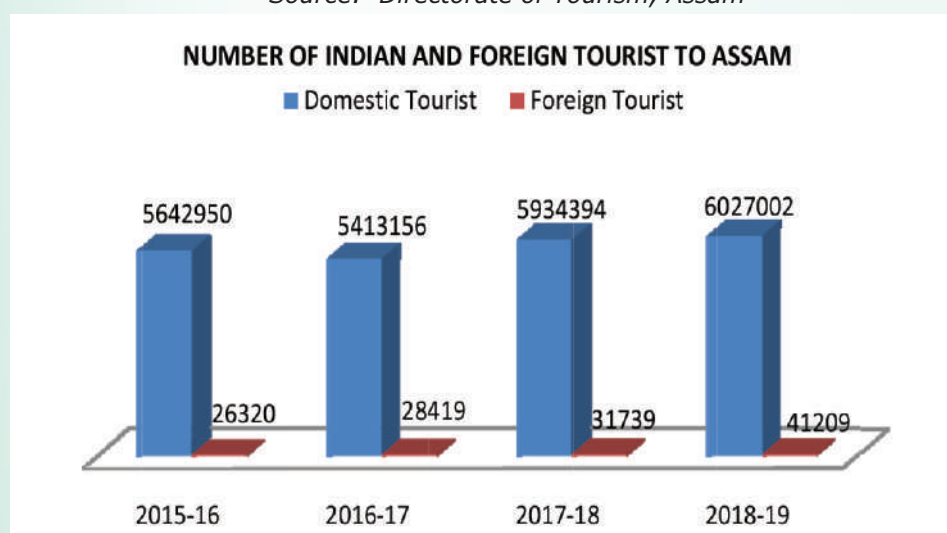
The tourism department of the state has made considerable amount of investment in infrastructure as well as in creation of other facilities over the years with the financial assistance from the central government, state government and the NEC. To tap the unexplored potentials and growth of the tourism sector, special emphasis has been given on Tourism Circuit Development, Destination Development, Wayside Amenities etc., through public and private partnership approach. Under the scheme Swadesh Darshan the state government through the ATDC has undertaken a project with

financial allocation of Rs. 9835.54 lakh for development of Tezpur-Majuli- Sivasagar as the Assam Heritage Circuit. Some small projects like *Amar Alohi* (Home-stays), livelihood linked tourism schemes at Majuli and Chandubi, Punya Dham Yatra etc. are implemented for the benefit of different sections of the society and tap all sources of tourism potential. The state government has made all basic arrangements for construction of a chain of 5 Star Hotels in collaboration with private investors and IndianHotelCompanyLtd. Eco-tourism aims at the appreciation of both nature and traditional cultures. Assam has several ethnic groups residing in harmony in spite of the differences in practices of rites and rituals, festivals and attires. The fascinating legacy of art and crafts, the three unique varieties of Silk, the Golden Muga, the White Pat and Warm Eri provide opportunities to discover the rich heritage of the state. In the state, one can hear the rhythms of the shuttles of looms in the craft village, which get momentum with the advent of spring. The state has also put special priority for development of religious tourism and cultural festivals like "Ambubachi Mela" in Kamakhya Temple and Dol Utsav in Barpeta. One can opt for short cruises or can avail longer sailing to Kaziranga National Park or to the sits of Vaishnavite culture at Majuli or to the remnants of the Great Ahom Kingdom in Sivasagar. The Brahmaputra Beach Festival, Kite festival, Kaziranga Golf Competition etc., are organised in collaboration with the Tourism Department are important endeavour to attract tourists. The Table 11.13 shows the number of arrival of tourists in the state during past three years.

**TABLE-11.13**  
**NUMBER OF INDIAN AND FOREIGN TOURIST TO ASSAM**

Year	Domestic Tourist	Foreign Tourist
2015-16	5642950	26320
2016-17	5413156	28419
2017-18	5934394	31739
2018-19	6027002	41209

Source: Directorate of Tourism, Assam



**TABLE-11.14**  
**STATUS OF REVENUE EARNED FROM THE TOURISTS LODGE** (Rs. in lakh)

Lodge/Year	2015-16	2016-2017	2017-18	2018-19
Kaziranga	1554390	900601	1021570	983650
Sivasagar	735175	762694	802957	1027444
Bhalukpong	177000	85600	51600	144200
Chandubi	107400	214800	178040	524800
Barpeta Road	163100	262400	376100	350800
Total	2737065	2226095	2430267	3030894

Source: Directorate of Tourism, Assam

The state has seen increase in arrival of foreign tourists over the years. The Table- 11.15 shows the trend of number of tourists visited the National Parks in Assam during the last three years.

**TABLE-11.15**  
**NUMBER OF TOURIST VISITED NATIONAL PARKS IN ASSAM**

Name of The National Park	Domestic Tourist				Foreign Tourist			
	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19
Kaziranga N. Park	464945	462741	475061	1,68,738	6679	7891	8467	7443
Nameri N. Park	184763	195305	196491	13847	1165	1206	1263	1116
Orrang N. Park	111667	112037	114399	8544	897	907	911	527
Manash N. Park	214230	217464	261201	42,329	897	904	1565	658
Dibru Saikhowa N. Park	207655	261303	274660	1793	1005	1112	1167	24

Source: Directorate of Tourism, Assam

Considering the potential and importance of development of the tourism sector the government of Assam has launched a new tourism Policy 'Tourism Policy of Assam 2018' with a aim to double the tourist inflow to the state in next five years.

#### Key Highlights of 'Tourism Policy of Assam 2018'

- The policy aims at creating a policy framework to push tourism as a major economic sector of Assam, increasing the inflow of tourists' by at least two to three folds in the next five years.
- The main focus of the policy is to make Assam a film making destination by offering a range of incentives to movie producers to come and shoot in the state.
- The policy also encourages the private sector to pro-actively participate and invest in tourist places in order to promote the tourism sector.
- A special incentive will be offered as additional 10 per cent capital grant up to Rs. 25 lakh for investment in remote/potential tourist destinations of Assam.
- The policy also offers a range of financial benefits for constructing approach roads and installing renewable energy sources at tourist places/units.

## ANNEXURE-11.1

**NUMBER OF REGISTERED MSME UNITS, INVESTMENT IN PLANT & MACHINERY AND WORKERS UNDER THE COMMISSIONERATE OF INDUSTRIES, ASSAM**

District	Unit Registered during the year 2018-19				Investment in Plant & Machinery (Rs. In Lakh)	No. of workers
	Micro	Small	Medium	Total	2018-19	2018-19
1	2	3	4	5	6	7
Kokrajhar	10	3	1	14	1423.26	117
Dhubri	24	1	0	25	251.83	167
Goalpara	59	8	0	67	111.00	489
Barpeta	66	10	0	76	907.76	429
Morigaon	15	3	0	18	459.30	140
Nagaon	71	8	0	79	446.16	687
Sonitpur	31	2	0	33	462.93	227
Lakhimpur	14	0	0	14	24.33	50
Dhemaji	40	14	0	54	706.00	1132
Tinsukia	48	12	0	60	498.46	323
Dibrugarh	41	12	0	53	768.89	367
Sivasagar	71	61	0	132	3360.36	854
Jorhat	20	1	0	21	105.67	97
Golaghat	62	41	0	103	1980.38	655
Karbi Anglong	7	1	0	8	77.54	62
Dima Hasao	12	0	0	12	49.71	49
Cachar	22	5	0	27	220.45	176
Karimganj	6	1	0	7	64.08	31
Hailakandi	4	0	0	4	13.74	4
Bongaigaon	7	2	0	9	120.91	47
Chirang	18	3	0	21	277.32	194
Kamrup	41	2	2	45	1746.79	323
Kamrup (M)	94	31	2	127	3948.00	1281
Nalbari	53	3	0	56	457.27	335
Baksa	12	5	0	17	331.78	107
Darrang	21	2	0	23	212.47	108
Udalguri	18	0	0	18	48.96	92
Assam	887	231	5	1123	19075.35	8543

Source : Commissionerate of Industries and Commerce, Assam.

**ANNEXURE-11.2**  
**INDUSTRIAL ESTATES AND OTHER INFRASTRUCTURE IN ASSAM, 2018-19**  
**(A) Industrial Estate**

District	Name of Industrial Estate	Total Area (In Sq. Mtr.)	Total No. of Sheds constructed	No. of Sheds Allotted	Open Area Allotted (In Sq. Mtr.)	No. of Units Functioning
1	2	3	4	5	6	7
Kokrajhar						
Dhubri	Gauripur	13591.64	7	1	652.00	0
Goalpara	—	—	—	—	—	—
Barpeta	Tikagaria	66914.50	0	0	0	0
Barpeta	Bichankuchi	3305.66	3	0	0	0
Morigaon	Dolbari	13382.80	0	0	0	1
Nagaon	Senchowa	28104.08	24	24	7839.59	23
Sonitpur	Dhekiajuli	38338.00	30	24	2074.00	8
Lakhimpur	Rajabari, Bihpuria	130909.09	6	4	91.13	2
Dhemaji	—	—	—	—	—	—
Tinsukia	Tinsukia (Borguri)	149833.60	50	50	34788.00	46
Tinsukia	Ulup Pathar, Margherita	169735.00	0	0	0	0
Dibrugarh	Lahowal	21421.63	12	11	14548.14	9
Sivasagar	Sivasagar (Darikapar)	40140.00	28	28	10006.00	28
Jorhat	Cinamora	34069.77	29	29	16041.50	19
Golaghat	Numaligarh	12754.00	0	0	12754.00	1
Karbi Anglong	Bokajan	80266.00	5	5	0	5
Karbi Anglong	Hamren	20066.00	4	0	0	0
Dima Hasao	Umrangsu	2675.52	8	6	0	5
Cachar						
Karimganj	Badarpur Ghat	29442.00	28	25	2151.43	14
Hailakandi	—	—	—	—	—	—
Bongaigaon	New Bongaigaon	38795.00	35	34	23133.00	43
Chirang	Bengtol Gate	93680.30	0	0	35788.09	0
Chirang	Amguri	121450.00	0	0	20074.30	0
Kamrup (M)	Bamunimaidan	86836.00	63	63	16656.00	73
Kamrup						
Nalbari	Nalbari	48776.00	25	21	13951.00	10
Baksa	Bennibari	329143.00	11	11	123428.00	11
Baksa	Dhepargaon	48640.32	1	1	3242.69	1
Darrang	—	—	—	—	—	—
Udalguri	—	—	—	—	—	—
<b>Assam</b>	—	<b>1622169.91</b>	<b>369</b>	<b>337</b>	<b>337218.87</b>	<b>299</b>



**(B) Industrial Area**

District	Name of Industrial Area	Total Area (In Sq. Mtr.)	Total No. of Sheds constructed	No. of Sheds Allotted	Open Area Allotted (In Sq. Mtr.)	No. of Units Functioning
1	2	3	4	5	6	7
Golaghat	Jonaki Nagar	77445.00	7	1	63049.09	16
Tinsukia	Buraburi, Sadiya	267600.00	0	0	267600.00	0
Tinsukia	Doomdooma	749347.00	1	1	749347.00	1
Tinsukia	Lakhimpuria Nepali	401400.00	0	0	0	0
Sonitpur	Dolabari	61470.00	8	8	50051.00	15
Sonitpur	Dhekiajuli	31728.00	0	0	0	0
Sonitpur	Sundarbari	46749.00	3	3	15131.00	2
Sonitpur	Gotlong	9090.00	0	0	7681.09	4
Sonitpur	Biswanath Chariali	16052.00	5	5	1308.00	2
Darrang	Mangaldai	63345.00	20	18	36306.88	15
Darrang	Dolgaon	29324.66	0	0	5351.22	0
Dibrugarh	Beheating	32373.79	12	11	17251.53	14
Kamrup	Kalapahar	14049.00	13	13	6074.00	29
Kamrup	Rani	82974.00	40	40	21505.60	29
Dima Hasao	Umrangsu	2675.52	6	6	0	0
Cachar	Malinibeel	43151.00	3	3	42151.00	14
Kamrup	Bamunimaidan	160595.00	34	34	25789.00	52
Kamrup	Bonda	32573.97	21	21	7775.00	36
Lakhimpur	Bechagaon	120398.40	0	0	0	0
Goalpara	Kothakuthi, Rongjuli	7224.00	0	0	0	0
<b>Assam</b>		<b>2249565.34</b>	<b>173</b>	<b>164</b>	<b>1316371.10</b>	<b>229</b>

Source : Commissionerate of Industries and Commerce, Assam.

## CHAPTER-XII

### POWER

Rapid population growth along with the need to be used as input for agriculture, infrastructure and industrial development have resulted in considerable upsurge of electricity demand in the country. Moreover, domestic consumption constitutes a significant share of electricity consumption. At present, growth and development of a country is determined by energy availability and per capita consumption of energy. The data of Central Electricity Authority reveal that the Northeast region of India has hydro power potential of 63,257 MW, which is about 43 percent of the total assessed hydro power potential of the country. The production potential of hydro electrical power of the state of Assam is 680 MW.

The total demand of energy in the state of Assam at present is about 1400 MW. It is about two times of the demand what it was five years back. At present total power made available by the state is 1200 MW of which 250 MW from its own sources. In addition to the shortage to meet the demand, the state has been facing the problem of generation of electricity as well as the problems associated with transmission and distribution, putting the energy sector in crisis.

In pursuance of the Indian Electricity Act 2003, and as a part of the programmes of Assam Power Sector Development of Government of Assam; all being fallout of power sector reforms that was initiated in the country in the later part of 1990s, the state had disintegrated the Assam State Electricity Board (ASEB) in the year 2004, into three Government companies namely:

1. The Assam Power Generation Corporation Limited (APGCL),
2. The Assam Electricity Grid Corporation Limited (AEGCL), and
3. The Assam Power Distribution Company Limited (APDCL)

These initiatives were taken in the electricity sector in the state, in the interest of its stakeholders, namely consumers, shareholders, suppliers, creditors, infrastructure builders and the government of Assam. However, some of the schemes such as externally aided projects, rural electrification, accelerated power development and reform programmes (APDRP) are still executed under APGCL. The Assam Power Generation Corporation Ltd. (APGCL) is constituted to see to the power generation in the state sector and started its operation in August, 2005. This company is responsible for development of both Thermal and Hydro Power Projects, to generate electricity to meet the energy demands in the state to the possible extent.

The Assam Power Distribution Company Limited (APDCL) has a vision "to be the catalyst for holistic growth of the state of Assam by powering agriculture and industry: lighting homes – rural and urban, and generating internal resources for continually improving technology and delivery systems to induce customers' delight". Its mission is to make APDCL the pride of Assam with its 15 Key Strategies to be undertaken to achieve its mission. These are as follows:

- ❖ Advance planning for procurement of electricity to cater to the consumers according to demand.
- ❖ Enhancing the capacity of electrical sub-divisions and distribution networks by investing in infrastructure development.
- ❖ Expanding the distribution networks to supply power to all the villages.
- ❖ Increasing awareness among the consumers about the economic use of electricity.
- ❖ Replacing of electro-mechanical meters with electronic meters.
- ❖ To give emphasis on 100% revenue collection, energy audit and error free billing.
- ❖ Engagement of franchisee to improve the services to the consumers.
- ❖ To setup vigilance cell to detect unauthorized use of electricity, if any.
- ❖ Training the employees for consumer-friendly behaviour practice.
- ❖ To setup state-of-art customer care centers and carry out consumer indexing.
- ❖ Strong resolve for following and maintaining financial discipline.
- ❖ Take up proper steps to increase faith among consumers.
- ❖ Proper planning for an effective HT/LT ratio.
- ❖ To reduce AT&C losses by augmenting I-Ph lines wherever required.
- ❖ Installation of underground cables in lieu of overhead lines as far as possible and feasible.

Present installed capacity of APGCL was 376.96 MW on 31/3/2019. However generation of power has been much less as indicated in the following table in the plants of APGCL.

*All units in MW	2016-17	2017-18	2018-19
Namrup Thermal Power Station (NTPS)	97.0	97.0	77.0
Lakwa Thermal Power Station (LTPS)	120.0	105.0	90.0
Karbi Langpi Hydro Electric Project (KLHEP)	100.0	100.0	100.0
Myntriang Hydro Electric Project (M. SHEP St-II)	3.0	3.0	3.0

The 18th Electric Power Survey of India conducted by the Central Electricity Authority (CEA) for forecasting electric energy requirements, electric load and power station bus bars (utilities only) for all the states and union territories projected energy requirements for Assam at 8947 MU and peak electric load at 1817 MW by the end of 12<sup>th</sup> five year plan. To meet this projected peak demand, APGCL has given emphasis on development of power projects based on coal and natural gas, along with the following steps.

- Development of new projects on hydro energy.
- Distributed growth of small hydro projects.
- Repair and maintenance of old power stations.
- Upgradation of infrastructure related to distribution, reduction of transmission and distribution losses; which would lead to an added capacity of 1452 MU.
- Introduction of Sub-Station automation and reliable communication system with OPGW, to reduce the system downtime which in turn will help in predictive maintenance.
- Identification and construction of new transmission and transformation networks.
- Transmission capacity expansion for evacuation of power from central sector generating stations for distribution network systems, transmission line capacity addition of length 614 CKMS and MVA additions of 1310 MVA.
- To become less dependent on power purchased from outside the state.

**TABLE-12.1**

**LONG TERM FORECAST OF ELECTRICAL ENERGY REQUIREMENTS AT POWER STATIONS BUS BAR MW (Utilities only)**

State	2011-12	2016-17	2021-22
Assam	1257	1817	2534
India	124995	199540	283470

Source: 18th Electric Power Survey Report.

**I. INSTALLED CAPACITY AND GENERATION OF POWER:**

At present, installed capacity of power generating plants – thermal, hydro and gas based plants in the State is 376.96 MW (as on 31/3/2019). This figure is an improvement to the figure of 329.7MW of the previous year (31/3/2018). In March 2017 installed capacity of generation of power in the state was 364.7 MW. The state has severe shortfall in power generation to meet the rising as well as peak hour demands. The shortfall is however being met by purchasing power from the Central Government grids and neighbouring states. Gross power generation in the state during 2016-17 was 1650.607 MU; declined to 1489.848 MU in 2017-18 and improved to 1594.459 MU in 2018-19.

The installed capacity of the power generation plants of the state and generation of power during the last three years is presented in table 12.2.

**TABLE-12.2**  
**INSTALLED CAPACITY AND GENERATION OF ELECTRICITY IN ASSAM FOR THE YEARS 2016-17, 2017-18 and 2018-19.**

Installed Capacity of Generating Plant (MW)		2016-17	2017-18	2018-19
Hydel	KLHEP	100	100	100
	M. SHEP St-II	3.0	3.0	4.5
Gas	LTPS	120.0	105.0	90.0
	NTPS	97.0	97.0	97.0
Waste Heat Recovery Unit	LTPS WHRU	37.2	37.2	37.2
	NTPS WHRU	22.5	22.5	22.5
Total	APGCL	364.7	329.7	376.96
Gross Unit Generation (MU)				
Hydel	KLHEP	397.130	490.057	369.288
	M. SHEP St-II	5.725	10.739	8.731
Gas	LTPS	891.400	663.401	472.091
	NTPS	356.352	325.652	314.373
Total	APGCL	1650.607	1489.848	1594.459
AUX Consumption(MU)				
Hydel	KLHEP	1.986	2.450	1.846
	M. SHEP St-II	0.057	0.107	0.087
Gas	LTPS	68.136	53.490	48.603
	NTPS	23.168	19.252	21.206
Total	APGCL	93.347	75.300	84.688
Net Unit Generation (MU)				
Hydel	KLHEP	395.144	487.607	367.442
	M. SHEP St-II	5.667	10.631	8.644
Gas	LTPS	823.265	609.911	423.488
	NTPS	333.184	306.400	293.167
Total	APGCL	1557.260	1414.548	1509.771

Source: Assam Power Generation Corporation Ltd (APGCL).

#### POWER SUPPLY POSITION:

Energy requirement in Assam was worked out at 9144 Million Units (MU) for the year 2018-19. The requirement was 8694 MU for the year 2017-18 and 9200.37 MU for the year 2016-17. The state however generated 1594.459 MU of power in 2018-19 (about 17.5% of the requirements), 1489.848 MU in 2017-18 and 1650.607 MU in 2016-17. The peak demand of electricity in the state has increased from 1679 MW in 2016-17 to 1823 MW in 2017-18 and further to 1894 MW in 2018-19. The shortfall of power was 46 MW in 2016-17, 79 MW in 2017-18 and 85 MW in 2018-19. In percentage point shortfall overall was 3 to 4 percent during the period 2016-17 to 2018-19. The requirement and shortage of electricity in Assam is shown in table 12.3.

**TABLE-12.3**  
**PER CAPITA AVAILABILITY STATUS**

Item	2016-17	2017-18	2018-19
Energy requirement (MU)	9200.37	8694	9173
Energy input (availability)	8239.77	8694	8678
Shortage (MU)	960.60	0	0
Peak demand (MW)	1679	1823	1894
Peak demand met (MW)	1633	1744	1809
Shortage (MU)	46	79	85
Shortage in %	3%	4%	4%

**TRANSMISSION, DISTRIBUTION & COMMERCIAL LOSSES:**

The power, supplied through various stages of transformations from sources to final consumers involves energy losses; known as transmission, distribution and commercial losses. The aggregate transmission and commercial losses in the state was 24.70% in 2016-17, 16.08 % in 2017-18 and 19.24% in 2018-19. Wastage of power at the stages of transmission is a matter of concern in the state having serious shortage of power supply, though the state has put efforts to mitigate the losses. The state has taken the following measures to bring down transmission and distribution losses -

- Energy accounting and electricity live ring fencing under capital R-APDRP.
- Repair and maintenance and re-conducting or 33KV, 11KV and LT lines.
- Changing and replacing of electro mechanical meters to electronic meters.
- Establishment of police stations in different circles for theft detection.
- Energy bill payments through net banking procedures.

The figures of transmission, distribution and commercial losses in the state are presented in table 12.4.

**TABLE-12.4**  
**TRANSMISSION & DISTRIBUTION (T&D) LOSSES AND AGGREGATE TRANSMISSION & COMMERCIAL (AT&C) LOSSES**

Item	2016-17	2017-18	2018-19
Energy Input (MU) (at APDCL end Available)	7948.08	8273	8574
Energy Billed (MU)	6525.91	6814	6968
T&D Losses (MU)	-	-	19.70
T&D Losses (%)	-	17.64	18.72
Amount Billed (Rupees in crore)	4327	4764.75	5223.97
Amount Realized (Rupees in crore)	3968	4876.22	5076.40
Collection Efficiency (%)	91.71	102.34	97.18
Overall Efficiency (%)	75.30	84.28	-
AT&C Losses (%)	24.70	16.08	21.97

*T & D losses: Transmission and Distribution losses;  
AT&C losses: Aggregate Transmission and Commercial Losses.  
Source: Assam Power Distribution Company Ltd.*

**NUMBER OF ELECTRICITY CONSUMERS:**

The domestic categories of consumers include Jeevan dhara, LT (Dom A, Dom B) and HT (Dom) categories, while commercial categories include LT(Com) & HT(Com) categories.

The total numbers of consumers in Assam -, domestic and commercial are shown in tables 12.5.

**TABLE-12.5**  
**TOTAL NUMBER OF CONSUMERS IN ASSAM**

Year	Domestic	Commercial	Total
2016-17	3605099	241652	3846751
2017-18	3931021	256001	4187022
2018-19	5037642	273205	5310847

*Source; Assam Power Distribution Company Ltd.(Commercial Wing)*

Sector wise electricity consumption in Assam is shown in table 12.6.

**TABLE-12.6**  
**SECTOR WISE ELECTRICITY CONSUMPTION IN ASSAM, ALL FIGURES IN MU, EXCEPT STATED OTHERWISE**

Sector	Period			% change in 2018-19 over 2017-18
	2016-17	2017-18	2018-19	
Industrial Including irrigation)	1377	1463	1661	14%
Agriculture	15	20	28	40%
Domestic	3423	3704	3478	-6%
Commercial	1013	979	1097	12%
Public services*	190	84	102	21%
Others	508	564	603	7%

*Note: \*government office, government institution (school, college etc), public lighting and water supply works.*

Table 12.7 present the total amount of electricity generated in Assam in Million Units (MU) from central and state sectors plants.

**TABLE-12.7**

Source wise electricity generated in Assam, All figures in MU, except stated otherwise

Source	Electricity generated			% change in 2018-19 over 2017-18
	2016-17	2017-18	2018-19	
In the state (excluding central sector)				
Thermal	-	-	-	Nil, APGCL DOES NOT HAVE ANY.
Natural gas	1247.752	989.053	1216.440	23.0%
Hydro	397.130	490.057	369.288	-24.6%
Renewable	5.725	10.739	8.731	-18.7%
From the Central Sector				
CSGS	6124	-	-	

In order to meet the shortage of electricity generated from its own sources and also to meet the growing demand of consumers in the state, the power distribution company of the state has been purchasing electricity from different sources and agencies. Table 12.8 presents the sources from where the state purchases energy from time to time.

**TABLE-12.8 :  
ELECTRICITY PURCHASED, ASSAM**

Name of the organizations	Year 2016-17		Year 2017-18		Year 2018-19	
	Units (MU)	Total cost (Rs. In Cr.)	Units (MU)	Total cost (Rs. In Cr.)	Units (MU)	Total cost (Rs. In Cr.)
APGCL	1557.26	596.62	1403.92	453.89	1509.67	553.13
Kopili	514.29	106.05	550.89	57.71	526.65	73.26
Kopili2	52.93	8.58	57.6	7.7	47.35	8.48
Khangdong	106.39	19.70	141.73	22.6	108.15	24.24
Ranganandi	534.95	128.17	600.51	174.43	436.57	134.83
Doyang	107.65	54.13	113.64	54.72	94.75	5175.02
AGBP	812.50	280.70	824.96	280.64	841.42	354.72
AGTPP	371.36	109.10	267.53	98.62	236.13	106.75
AGTPP-2	-	-	-	-	-	-
NHPC	210.40	58.21	238.31	58.21	238.31	63.94
Farakha	277.26	94.18	277.26	94.18	228.75	82.51
Kahel gaon-1	130.99	44.35	130.99	44.35	118.80	42.28
Kahel gaon-2	524.56	179.57	524.56	179.57	555.03	194.92
Talcher	136.50	38.16	136.50	38.16	145.92	39.01
Farakha-3	-	-	-	-	-	-
BTPS	1020.85	542.93	1020.85	542.93	1007.75	645.4
MeEcl	17.72	10.78	17.72	10.78	0.55	0.40
IOCL(AOD)	9.27	4.39	9.27	4.39	-	-
NWNN(solar power)	7.88	9.56	7.88	9.56	7.19	9.83
SEIPL	4.4	4.27	4.4	4.27	6.15	5.45
SECI	38.05	24.93	38.05	24.93	35.72	24.41
NNBNL(Coal Power)	36.40	11.07	36.40	11.07	36.12	11.48
IEX	239.31	58.74	-	-	-	-
OTPC	1287.24	464.95	1269.32	384.08	1486.06	457.95
HHPCPL	8.97	3.69	8.55	3.51	6.87	2.82
Pare	-	-	-	-	133.13	67.11
PTC (Wind)	-	-	-	-	6.19	1.99
JNNSAM Coal Bundled	-	-	35.62	11.48	33.59	10.07
Trading Purchase	-	-	632.09	250.34	564.23	234.39
PSA	-	-	-	-	40.75	1.22
Renewable Energy	-	-	-	22.04	-	51.11
Deviation Settlement Mechanism	-	-	350.92	93.93	79.9	26.96
Transmission & SLDC Charges	-	-	-	1194.99	-	1135.77

**RURAL ELECTRIFICATION:**

The Power Department has taken up a number of initiatives for electrifying the rural areas of the state under the flagship programme of Rajiv Gandhi Gramin Vaidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

**Rajiv Gandhi Gramin Vaidyutikaran Yojana (RGGVY)**

The RGGVY is a scheme for attaining goal of providing access to electricity to 8406 non-electrified villages and connection to around 10 lakh BPL households in 13081 already electrified (villages of the state. In Assam, RGGVY was implemented from April 2007 with assistance of 90% grant from Government of India and rest 10% of the requirement procured as loan by the Rural Electrification Corporation (REC); the nodal agency for the programme. Under RGGVY, electrification works of 8348 un-electrified villages and 12841 partially electrified villages have been completed. In addition electricity connection is provided to 1214398 BPL households free of cost.

**Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**

The DDUGJY was announced in the budget of 2014-15. This scheme envisages feeder separation, strengthening of sub transmission and distribution network, metering at all levels - including the input points, feeders and distribution transformers, minor grid and off grid distribution network and rural electrification to complete already sanctioned projects. This scheme will help in power supply to rural households and adequate power supply to agricultural consumers.

Under the DDUGJY 928 un-electrified villages were electrified till 2016-17 and additional 1022 un-electrified villages were covered till May, 2017. Under this scheme 5,41,953 BPL beneficiaries received free electricity connections.

The following tables present status of electrification and coverage in the villages of Assam under different scheme.

**STATUS OF ELECTRIFICATION IN VILLAGES UNDER DDUGJY:**

Total villages in Assam as per census 2011	Un-electrified village as on 31.03.2015	Achievement under XII plan/DDUGJY as on 31.12.2017	Villages which could not be electrified due to un-inhabited /PGR/VGR	Total villages electrified in Assam
26,395	2,892	2,732	160*	26,235

Note: un-inhabited (138) nos - PGR/VGR (22) nos = 160 nos

**STATUS OF PROJECTS AWARD:**

No. of Projects sanctioned	No. of packages	No. of packages awarded	Remarks
27	219	219	Works under progress

**COVERAGE AND ACHIEVEMENT AS ON 30.11.2018**

No. of projects sanctioned	UEV (No.)		IEV (No.)		SAGY (No.)		BPL HHS (No.)	
	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
27	2892	2732*	10970	7846	117	21	735054	563931

Note: \*un-inhabited + villages which cannot be electrified (PGR/VGR) = 160 nos.

Newspapers and media reportage often indicate non-coverage of many villages of the state. The non-coverage is largely because many habitations got de-electrified due to damage of infrastructure caused by multiple waves of floods.

The following table presents the sanctions and financial utilisation under the DDUGJY in Assam.

**PROGRESS UNDER DDUGJY  
(as on 30.11.2018)**

Plan	Sanctioned Cost (Rs. In Cr.)	Amount Released (Rs. In Cr.)	Utilization (Rs. In Cr.)	Balance (Rs. In Cr.)
XII Plan, DDUGJY	1621.07	946.30	977.74	-31.44
DDUGJY (Ph-I)	1267.74	337.36	353.65	-16.29
DDUGJY (Ph-II)				
DDG	288.00	160.94	143.28	17.66
SAUBHAGYA	2271.24	248.08	159.84	88.24
TOTAL	5448.05	1692.68	1634.51	58.17

**SAUBHAGYA and GRAM SWARAJ ABHIYAN (GSA):**

Pradhan Mantri Sahaj Bijli Har Ghar Yojana – ‘Saubhagya’ a new scheme was launched by the Honorable Prime Minister on 25th September 2017. The scheme provisioned free electricity connections to all households (both APL and poor families) in rural areas and poor families in urban areas. The Saubhagya scheme was launched in Assam by the Chief Minister of Assam on 23rd January 2018. The drive to make people aware of scheme was started on 16th March 2018.

A detailed project report for the scheme Saubhagya was submitted on 23<sup>rd</sup> March, 2018 involving an amount of Rs. 5098.17 crores. The REC Limited has released Rs. 248.08 crores as ad-hoc advance to implement the scheme. The following tables present the detailed progress report and progress of the Saubhagya scheme.

**Detailed Project Report of the Saubhagya Scheme**

Particulars	Cost (Rs. In Cr.)	No. of Revenue village (no.)	No. of Household (no.)	Revised provisional sanction (Rs. In Cr.)
Rural on grid	4932.59	25015	18,62,823	2235.39
Rural off grid	74.58	365	6376	31.88
Urban (economically poor household)	91.00	96	8,817	3.97
Total	5098.17	25476	18,78,016	2271.24

**Progress under the Saubhagya Scheme**

SAUBHAGYA	Household connections as per SUBHAGYA Dashboard (in Lacs)		Balance HH (In Lacs)
	Coverage	Achievement (as on 30.11.2018)	
	19.04	9.47	9.57
HH connections released against SAUBHAGYA only w.e.f 11th Oct 2017 to 30th Nov 2018			5.62 Lacs
HH connections released against XII plan/DDUGJY w.e.f 11th Oct 2017 to 30th Nov 2018			3.85 Lacs
Total HH connections released w.e.f 11th Oct 2017 to 30th Nov 2018			9.47 Lacs

**GRAM SWARAJ ABHIYAN (GSA-I):**

Target		Achievement as on 30.11.2018	
Village	Household	Village	Household
3042	282625	1687 (55%)	194385 (69%)

**GRAM SWARAJ ABHIYAN (GSA-II):**

Target		Achievement as on 30.11.2018	
Village	Household	Village	Household
2728	425984	1065 (39%)	239114 (56%)

Under the DDUGJY scheme a total of 928 un-electrified villages have been electrified during 2016-17. The scheme completed power supply connection to the remaining 1022 unelectrified villages by 1 May 31, 2017. Moreover, a total of 5,41,953 BPL beneficiaries received electricity connections free of cost under the scheme.

The following tables present physical progress of electrification and status under the DDUGJY.



**Progress of Electrification under XII Plan (2016-17 to 2018-19)**

Items	Target	Achievements			Total Achievements in last 3 years.
		2016-17	2017-18	2018-19	
Un-electrified Villages (nos.)	887	621	266	-	887
Partially Electrified Villages (nos.)	9515	2210	2650	2595	7455
BPL HHS (nos.)	521128	99898	81291	323584	504773
11KV LINE (CKT Kms)	8553.06	2278.11	1745.55	2465.68	6489.34
LT 3-Ph Line (CKT Kms)	7132.21	2081.21	1156.24	2417.80	5655.25
LT 1-Ph Line (CKT Kms)	9922.70	2720.94	1797.30	3227.87	7746.11
63 KVA DTR (Nos.)	2160	718	398	631	1747
25 KVA DTR (Nos.)	12818	3199	2380	4875	10454
16 KVA DTR (Nos.)	843	120	161	269	550

**Status of Electrification under DDUGJY (2016-17 to 2018-19)**

Items	Target	Achievements			Total Achievements in last 3 years.
		2016-17	2017-18	2018-19	
Un-electrified Villages (nos.)	903	597	306	-	903
Partially Electrified Villages (nos.)	3890	241	984	1789	3014
BPL HHS (nos.)	184218	15275	34838	133905	184018
11KV LINE (CKT Kms)	4645.90	402.01	1163.70	3013.62	4579.34
LT 3-Ph Line (CKT Kms)	2594.19	367.27	770.83	1377.25	2515.35
LT 1-Ph Line (CKT Kms)	4796.98	480.16	1198.20	2834.15	4512.52
63 KVA DTR (Nos.)	1795	127	264	1065	1456
25 KVA DTR (Nos.)	3593	564	1586	1069	3219

**Status of Electrification under DDUGJY (2016-17 to 2018-19)**

Items	Target	Achievements			Total Achievements in last 3 years.
		2016-17	2017-18	2018-19	
Households (Nos)	1279116	-	-	1066098	1066098
11KV LINE (CKT Kms)	6530.42	-	-	3691.81	3691.81
LT 3-Ph Line (CKT Kms)	6532.16	-	-	3653.03	3653.03
LT 1-Ph Line (CKT Kms)	12252.60	-	-	6545.91	6545.91
63 KVA DTR (Nos.)	4311	-	-	2273	2273
25 KVA DTR (Nos.)	6164	-	-	3193	3193

**Financial status under XII plan, DDUGJY and Saubhagya (2016-17 to 2018-19)**

Rs. in Crores.

Plan	FY2016-17		FY2017-18		FY2018-19	
	Amount Received	Amount Expenditure	Amount Received	Amount Expenditure	Amount Received	Amount Expenditure
XII Plan	386.71	279.97	155.34	360.91	327.58	330.9
DDUGJY	80.65	64.39	231.54	133.77	287.01	327.3
SAUBHAGYA	-	-	41.99	-	814.95	854.04
TOTAL	467.36	344.36	428.87	494.68	1429.54	1512.24

**INITIATIVES ON SOLAR POWER GENERATION IN ASSAM:**

Solar power has become a key strategic choice for high growth economies. Renewable energy is no longer considered an “alternate energy” source, but has increasingly become a key part, to meet a nation’s growing energy needs. As the demand for electricity exceeds the supply in Assam, the state now has taken initiatives on solar power generation to complement the existing sources of supply.

**STATUS OF DDG (DDUGJY SCHEME), NRE, APDCL:**

The government of India has already sanctioned DPRs involving 288 crores for electrification of remote villages of Assam through Solar Standalone System and Solar Micro grids. The project will be implemented under DDUGJY.

The total households to be covered under Standalone system & Micro grid is 41,822

**INITIATIVES TAKEN UP BY APGCL FOR PROMOTION OF RENEWABLE ENERGY:**

Government of Assam has provisioned a separate budget for various renewable energy programmes in addition to the financial assistance received from the Ministry of New and Renewable Energy. The government of Assam, has allocated budgetary support for the deployment of community based rural electrification model through mini and micro solar plants for providing basic lighting facilities to the inhabitants of un-electrified villages and widely dispersed un-electrified hamlets of electrified villages. Provisioning of solar power becomes handy for the remote Char (riverine islands of Brahmaputra River) villages of the state. The households of villages are often forced to shift, due to frequent inundation caused by River Brahmaputra. Solar photovoltaic based home lighting system has become a welcome relief for the people living in such remote villages. Hybrid Solar and Wind lighting prototypes is another useful application now being developed based on renewable energy sources. The hill areas of the state are ideal for placing wind generated power stations.

Different Wind Resource Assessments have been done in Assam with Collaborative Projects between The Assam Energy Development Agency and the National Institute of Wind Energy, Chennai under MoNRE (GOI) have done some assessment of wind resources of the state. The state has already commissioned few Wind Monitoring Stations in the state (ANNEXURE table 121). Solar Photovoltaic Power Plants (off-Grid) are also installed in Assam under Jawaharlal Nehru National Solar Mission (JNNSM) and Special Area Demonstration Project Programme ( ANNEXURE table 12.5).

Grid interactive solar photovoltaic power plan on the roof top terrace of buildings is a viable option to generate solar energy. It has been proposed to set up grid connected solar photovoltaic power plants on roof terrace of buildings or ground based projects with provisions of net-metering. The scheme targets large roofs or vacant land of government/ semi government offices, hospitals and educational institutions. Implementation of the projects would meet partial load of office buildings during working days and contribute the surplus power available to the Grids during weekends and holidays.

APGCL has also been taking initiatives to make use of solar energy and energy efficiency measures for public street lighting as a part of smart street lighting solutions. The Government has announced its priority for the provision of sufficient and reliable power to everyone in the state. However, with the given resource position and infrastructural constraints, it would take some time to put the system in place for supply of quality and uninterrupted power supply. However, as a beginning, it is proposed to take steps in this direction to cover a few important places of tourist attraction which needs a good infrastructure including uninterrupted power supply. Towards this it was proposed to have budgetary provision of Rs, 3000.00 lakh to install dedicated feeder line to provide uninterrupted power supply at tourist places of Kamakhya, Kaziranga, Majuli, Tezpur, Sualkuchi, Manas, and Pabitora.

Various new projects have been taken up in the State in renewable power sector in recent past. In 2017-18, six new power projects with an installed capacity of 247 MW have been proposed in the Budget. Moreover, Ministry of New and Renewable Energy (MNRE), Govt. of India has proposed 688 MW of Generating capacity from the renewable energy sources in Assam till 2021-22, out of which 663 MW will be from Solar and 25 MW will be from hydro electric power projects.

Under Restructured Accelerated Power Development and Reform Programme (R-APDRP), advanced IT implementation has been successfully completed in 67 towns across Assam, including Guwahati. Initiatives have been taken to reduce AT & C losses in these towns with introduction of Supervisory Control and Data Acquisition system along with Smart Grid Pilot Project. These two projects are expected to help in maintaining round the clock power supply in Guwahati City.

In the Financial year 2017-18, the state planned to launch a ‘Flagship’ Programm of setting up of 2 solar power plants having capacities of 69 MW at Amguri in Sivasagar District and of 20 MW at Chandrapur in Kamrup District of Assam, for providing round the clock power supply to five towns in the state, namely Guwahati, Dibrugarh, Sualkuchi, Rangapara and Jorhat. Many states in the country now have segregated HT (Industry) and LT (Non-industry) feeders and this has resulted in reduction of AT & C losses of DISCOMs. The state government plans to support proposals for dedicated HT feeders for the HT Consumers by keeping budgetary provisions. The proposal is also to revise the electricity duty, under the relevant Act in due course of time. The tables in ANNEXURE present initiatives and the status of progress in the non-renewable energy sector in the state.

**ANNEXURE-12.1  
NUMBERS OF WIND MONITORING STATIONS COMMISSIONED**

Tower Height (in metres)	Quantity (in nos.)
25	4
80	9
50	11

**ANNEXURE-12.2  
WIND RESOURCE ASSESSMENT IN ASSAM (COLLABORATIVE PROJECTS BETWEEN ASSAM ENERGY DEVELOPMENT AGENCY AND NATIONAL INSTITUTE OF WIND ENERGY, MNRE (GOI))**

Sl. No.	Name of Site	District	Height of Tower (M)	Commissioned in (Year)	Remarks
1	2	3	4	5	6
1	Kismat Haz Daha	Dhubri	80	2016	Project completed
2	Kayakuchi	Barpeta	80	2016	Project completed
3	Bahjani	Nalbari	80	2016	Project completed
4	Dhupguri	Kamrup	80	2016	Project completed
5	Dubapara	Goalpara	80	2016	Project completed
6	Tukura	Goalpara	80	2016	Project completed
7	Hasanpur	Karimganj	80	2016	Project completed
8	Narainpur	Hailakandi	80	2016	Project completed
9	Bhangarpar	Cachar	80	2016	Project completed
10	Kulajan	Dhemaji	50	2017	Project completed
11	Tarioni	Lakhimpur	50	2017	Project completed
12	Rajgarh Kachari	Lakhimpur	50	2017	Project completed
13	Gopalpur Grant	Gohpur	50	2017	Project completed
14	Bamgaon	Biswanath	50	2017	Project completed
15	Sagmootea Tea Estate	Nagaon	50	2017	Project completed
16	Bhurbandha	Morigaon	50	2017	Project completed
17	Borgaon	Kamrup Metro	50	2019	Under operation
18	Rangachakua	Sonitpur	50	2019	Under operation
19	Mugasong	Karbi Anglong	50	2019	Under operation
20	Kotohaporria	Jorhat	50	2019	Under operation

*Source : Assam Energy Development Agency, Bigyan Bhawan, Near IDBI Building, G.S. Road, Guwahati-5*

**ANNEXURE-12.3****ANNUAL AVERAGE WIND SPEED AND WIND POWER DENSITY AT SITES OF ASSAM  
(50 METRE TALL WIND MONITORING STATION)**

Sl. No.	Site Name	District	50 m AGL		48 m AGL		30 m AGL		10 m AGL	
			WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )
1	Bhurbandha	Morigaon	2.65	19.17	2.23	11.57	2.67	19.47	1.49	4.58
2	Bamgaon	Biswanath	3.09	31.67	3.05	30.87	12.62	23.13	1.98	14.40
3	Gopalpur Grant	Gohpur	2.67	23.30	2.67	24.17	2.31	15.38	2.25	12.68
4	Rajgarh Kachari	Lakhimpur	2.52	17.94	2.50	18.34	2.12	11.32	1.54	5.43
5	Sagmootea Tea Estate	Nagaon	1.86	15.08	1.86	14.99	1.68	10.81	1.41	6.67
6	Kulajan	Dhemaji	2.73	20.10	2.66	18.74	2.25	10.91	1.50	3.83

**ANNEXURE-12.4****WIND ENERGY, ANNUAL AVERAGE WIND SPEED AND WIND POWER DENSITY AT THE FOUR SITES OF ASSAM****(80 METRE TALL WIND MONITORING STATION)**

Sl. No.	Site Name	District	80 m North AGL		80 m South AGL		50 m AGL		40 m AGL		10 m AGL	
			WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )	WS (m/s)	WPD (W/m <sup>2</sup> )
1	Bahjani	Nalbari	3.39	43.93	3.47	46.355	2.74	22.89	1.97	18.25	1.09	3.44
2	Dubapara	Goalpara	3.29	39.57	3.35	48.9	2.93	27.64	2.40	15.45	1.42	4.4
3	Kayakuchi	Barpeta	3.36	44.45	3.28	43.35	2.84	27.94	2.41	18.81	1.79	11.1
4	Kismat Haz Daha	Dhubri	3.84	55.06	4.07	79.11	3.5	40.62	3.08	29.01	2.32	14.67

WS-Wind Speed, WPD-Wind Power Density, AGL-Above Ground Level

Source: Assam Energy Development Agency, Bigyan Bhawan, Near IDBI building, G.S. Road, Guwahati-5

## ANNEXURE-12.5

**SOLAR PHOTOVOLTAGE POWER PLANT (OFF GRID) INSTALLED UNDER JAWAHARLAL NEHRU  
NATIONAL SOLAR MISSION (JNNSM) AND SPECIAL AREA DEMONSTRATION PROJECT  
PROGRAMME**

**(AS ON 31<sup>ST</sup> MARCH, 2019)**

Sl. No.	District	Plant Size ( in KWP) and Numbers of Plant													Total	
		0.5	1	2.5	4	5	10	20	25	30	40	45	50	100	Nos.	Size
1	Kokrajhar			1											1	2.5
2	Dhubri			1		1				1					3	37.5
3	Goalpara			1											1	2.5
4	Barpeta			1											1	2.5
5	Morigaon		5	1		1									7	12.5
6	Nagaon		18	1		1					1	1	1		23	160.5
7	Sonitpur		14	1		1									16	21.5
8	Lakhimpur			1											1	2.5
9	Dhemaji															
10	Tinsukia			1				3							4	32.5
11	Dibrugarh			1				2			2			1	6	202.5
12	Sivasagar			1				4							5	42.5
13	Jorhat		16	1							1	1			19	103.5
14	Golaghat			1					1		1				3	67.5
15	Karbi Anglong		11		2	2									15	29
16	Dima Hasao															
17	Cachar			1											1	2.5
18	Karimganj															
19	Hailakandi													1	1	100
20	Bongaigaon			1											1	2.5
21	Chirang															
22	Kamrup	10	20	2		2	1	6					2		43	270
23	Kamrup (M)		2			1	2	1	1	1	2	1	4	1	16	527
24	Nalbari			2											2	5
25	Baksa															
26	Darrang		5	1		1									7	12.5
27	Udalguri		6			1									7	11
28																
29																
30																
31																
32																
33																
	<b>Total</b>	<b>10</b>	<b>97</b>	<b>20</b>	<b>2</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>183</b>	<b>1650</b>

**CHAPTER-XIII****TRANSPORT AND COMMUNICATION**

Investment on infrastructure sector helps to drive the economic and social sectors of a country. There has been substantial growth of investment in transport, energy, communication sectors of India since the independence. Provision of access to safe, affordable, accessible and sustainable transport systems for all and improvement in road safety measures are envisaged in Sustainable Development Goals (SDGs). On the other hand access to postal services, wireless telephone and internet services, along with radio, television and newspapers have become critical personal progress and wellbeing in a society.

The state of Assam being the gateway of the North East region of India, assumes a significant role to keep its transport sector, particularly the surface transport sector at complete state to facilitate speedier economic development of the region. Due to its geographical isolation, transport has been a major bottleneck in the process of economic progress of the not only of Assam, but for the entire north east region. The contribution of the transport and communication sector to the state Gross Domestic Product in 2018-19(Q) at constant (2011-12) prices (New base) is calculated at 5.49 percent. The table 13.1 and figure 1 show the trend of the contribution of the transport and communication sector to the GSDP of Assam.

**TABLE-13.1**  
**CONTRIBUTION OF TRANSPORT & COMMUNICATION SECTOR TO STATE ECONOMY**  
**(GSDP at Constant 2011-12 Prices)**

Year	Contribution to GSDP
2011-12	5.66
2012-13	5.89
2013-14	6.23
2014-15	6.23
2015-16	6.40
2016-17	5.69
2017-18 (P)	5.51
2018-19(Q)	5.49

Source: Directorate of Economics & Statistics, Assam

P: Provisional Q: Quick.

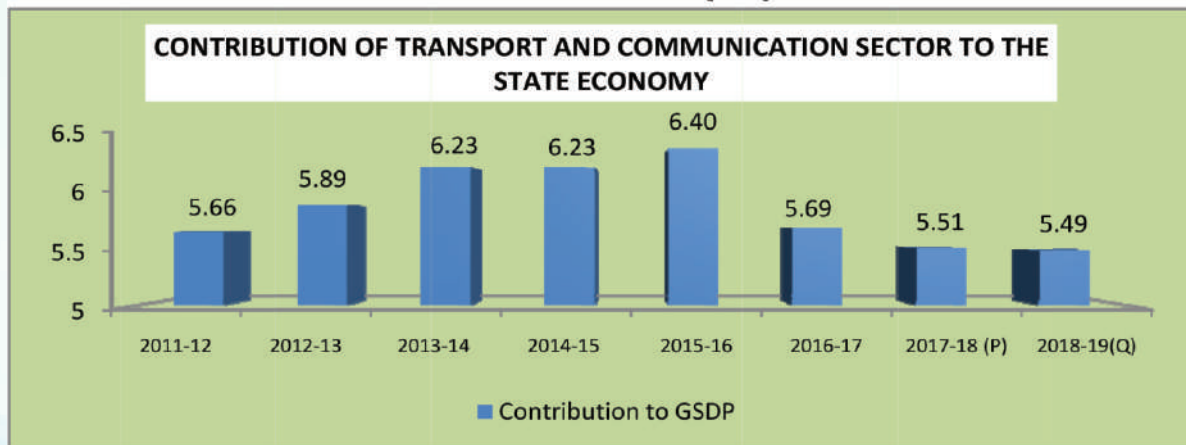


FIG-I

The position of the State with regard to the existing means of transport and communications is described briefly in the following paragraphs.

**ROADS:**

India has about 58.98 lakh km of road network, which is the second largest in the world. This comprises national highways, expressways, state highways, major district roads, other district roads and village roads. The road network in Assam comprises of total 57849 km of roads consisting of 3890 km national highways, 2530 km state highways, 4379 km major district roads, 1714 km urban roads and 45336 km rural roads.

At present 53958 km road network of the state excluding of 3890 km national highways (of which 193.74 km is under construction and 894.79 km is newly declared NH) is maintained by the state PWD. Out of the total 53958 km road length maintained by the PWD, 30048 km is blacktopped; 411 km is cement concrete, 2715 km is inter-locking cement concrete block pavement (ICBP) and

20784 km is metalled and un-metalled roads. Most of the state highways and major district roads are single lane roads and hardly 16 percent of the secondary roads are double lane and 20 percent are still unpaved. According to the India Road Congress Vision, 2021, the state highways should be 100 percent double lane and 40 percent of the major district roads should be doubled lane. The vision is also to strengthen the weak pavements and bridges to cope with heavy traffic. The table 13.2 shows the road length network maintained by the state PWD in Assam.

**TABLE-13.2  
ROAD NETWORK IN ASSAM**

(in Km.)

Item	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Surfaced Road*	23747	23948	25546	27003	28480	30048
Unsurfaced Road	21753	20914	19316	18551	18917	20784
National Highway	3069	3834.68	3862.53	2782.34	3900.44	3890
State Highway	3134	2530	2530	2530	2530	2530
Major District Road	4413	4379	4379	4379	4379	4379
Rural Road	36544	36544	36544	37030	40367	45336
Urban Road	1409	1409	1409	1615	1714	1714

\*Excluding National Highways, Source: Office of the Chief Engineer PWD (Roads), Assam.

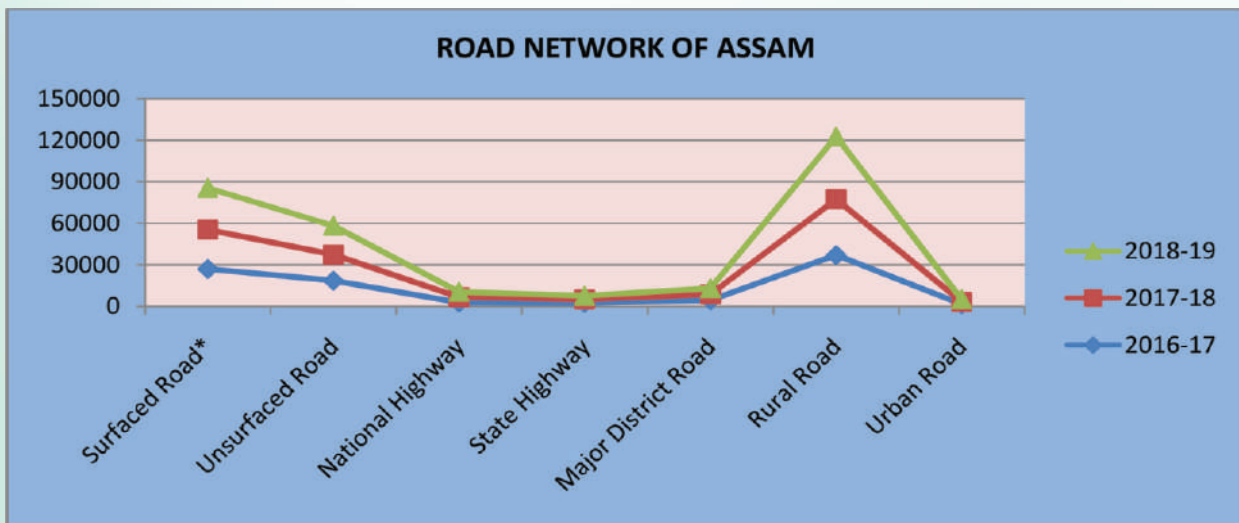


FIG-II

Table 13.2 shows that the length of national highway in Assam has increased by 811 km during 2013-14 to 2018-19. In the rural areas of the state the length of rural road has increased from 36544 km in 2013-14 to 45336 km an increase by 24 percent.

The effort of the state PWD is on to bring down the number of semi-permanent timber bridges from 5450 in 2001 to 1000 by March 2019. Out of the total 1000 number of RCC Bridges the PWD has sanctioned 208 in 2017-18 and the remaining are to be sanctioned in due course of time.

The government of Assam has proposed to construct 4 more bridges over River Brahmaputra namely (a) Dhubri - Phulbari (b) Gohpur - Numaligarh (c) Disangmukh - Tekeliphuta and (d) Kamalabari - Nematighat. This is in addition to the bridges over the Brahmaputra; the Government of India recently approved a bridge between Panbazar, in Guwahati and North Guwahati. Further nine additional flyovers at various locations on national highways are planned to be constructed by National Highway Authority of India (NHAI). Moreover to ease traffic congestion in Guwahati, an alternate Ring Road has been proposed from Changsari to Narengi via Jalah and Kurua passing through Narengi, Khanapara, Basistha, Azara, Jalukbari and Changsari utilising the proposed 6-Lane Bridge over River Brahmaputra between Narengi and Kuruwa.

#### NATIONAL HIGHWAYS:

The Ministry of Road Transport and Highways is responsible for the development and maintenance of the national highways. The capacity of national highways in term of handling traffic (passenger and goods) needs to keep pace with industrial growth. The government of India has approved the implementation of an umbrella programme for the national highways - "Bharatmala Pariyojana Phase-I" on 24th October 2017, for construction and up-gradation of national highways of 34,800 kms length over a period of 5 years (2017-18 to 2021-22) at an estimated outlay of Rs. 5,35,000 Crore. The programme focuses on optimizing efficiency of freight and passenger movement across the country by

bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor.

The programmes envisage development of ring roads/bypasses and elevated corridors to decongest the traffic passing through cities and enhance logistic efficiency. Hence 28 cities have been identified for ring roads; 125 choke points and 66 congestion points have been identified for their improvements. It is estimated that more than 35 crore man-days of employment shall be generated under Phase-I of the programme.

In line with 'Bharat Mala', the Government of Assam proposes a programme named 'Axom Mala to undertake the improvement of state highways and major district roads network and the reconstruction and maintenance of roads and rehabilitation of RCC bridges. An amount of Rs. 200 crore is earmarked for the year 2018-19 for this programme.

#### **NATIONAL HIGHWAYS IN NORTH-EASTERN REGION:**

Some of the important steps undertaken by the Government of India for the development of the national highways in the North Eastern Region are:

- The Ministry has been paying special attention to the development of national highways in the North- Eastern region by earmarking 10 per cent of the total budget allocation. The total length of national highways in North-East region is 13,678 km and these are being developed and maintained by four agencies -the state Public Works Departments (PWD), Border Roads Organisation (BRO), National Highway Authority of India (NHAI) and National Highway and Infrastructure Development Corporation Limited (NHIDCL). The NHIDCL develops and maintains 11,958 km of road, whereas the share of NHAI is 864 km, BROs is 856 km.
- The details of National Highways and their development and maintenance works taken up under various schemes in the North-East region are as follows :
  - A length of 110 Km of National Highway No. 44 in the State of Meghalaya (Jowai-Meghalaya/Assam border {Ratachhera} stretch) falls under NHDP Phase-III.
  - Under the Inter State Connectivity (ISC) & roads of Economic Importance (EI) scheme, 40 projects amounting to Rs. 1,670.09 crore are under progress.
  - Under the Central Reserve Force, 168 works amounting to Rs. 2,839.02 crore are in progress for the improvement of state roads.
  - Another 58 works costing Rs. 4,303.36 crore under National Highway Other Projects NH (O) are in progress.

#### **ASSAM:**

- v As on 31<sup>st</sup>December, 2019, 32 numbers of works on National Highways costing Rs. 1558.237 crore, are in progress under NH(O) under PWD(NH) in Assam.
- v A length of 721.44 Km connecting Silchar to Srirampur via Lumding-Daboka-Nagaon Guwahati in Assam has been entrusted to NHAI & NHIDCL as part of East West corridor under NHDP. Out of 721.44 km, a length of 690.44 km is under NHAI including 18 Km of Guwahati bypass. The rest 31 km lengths are under NHIDCL.
- v Under the Central Road Fund, 44 works amounting to Rs. 859.06 crore are in progress for the improvement of state Roads.
- v Under Inter-State Connectivity (ISC), Central Road Fund, two (2) works amounting to about Rs 81.52 crore are also under progress.
- v Government has approved implementation of Arunachal Pradesh Package of Roads & Highways covering 2319 Km of roads at an estimated cost of Rs 11,919 crore. Out of 2,319 Km, 73.747 km is under APWD (NH) Wing.

The Dhola-Sadiya 2-lane Bridge (bridge length is 9.15 Km.) connecting Dhola and Sadiya Ghats up to Islampur (NH 37 extension) constructed at a cost of Rs. 950 crore was inaugurated on 26<sup>th</sup> May, 2017. This longest river beam bridge in India is named after Dr. Bhupen Hazarika. This project not only saves 4 hours travel time between Assam and Arunachal Pradesh, but also promotes socio-economic activity around the area.

The physical achievement (in km) of SARDP-NE was 76.76 km out of the total 130.00 km planned in 2017-18 is under APWD (NH) Wing. The financial achievement is of this scheme was 171.01 crores during 2017-18. An amount of Rs. 832.00 crore was allocated for entire NER under this scheme for the year 2017-18.

#### **PRADHAN MANTRI GRAM SARAK YOJANA (PMGSY) :**

The PMGSY has been implemented with the objective of connecting rural habitations with all-weather roads in order of priority. Till end of March 2019, 15307 villages have been covered under rural connectivity programme. Out of the total 15307 villages, 5999 villages have population more than 1000, 4588 villages have population of 500 or more and 3166 villages have population in between 250 to 500.



**MOTOR VEHICLES:**

The state has seen rapid increase of number of motor vehicles on road in past few years. The number of vehicle on road in the state has reached 3725529 as on March 2019, compared to 3309551 vehicles on March 2018 and 2837829 vehicles on March 2017. An additional of 415978 (growth over 31 percent in two years) vehicles were added during the year 2018-19 over 2016-17. Out of the total 3725529 motor vehicles during 2018-19 on the road about 64.4 percent vehicles were two wheelers.

According to the motor vehicle registering authority of the State as many as 502525 new motor vehicles were registered during the year 2018-19 in the state whereas 416726 was added in 2017-18 which is 20.58 percent more than that of the previous year.

The total number of motor vehicles on road in the state was recorded about 16.62 percent growth during April 2018 to March 2019; compared to 12.57 percent growth during April 2017 to March 2018 showing an increasing trend.

The density of motor vehicles in Assam was 47.5 per sq km of road in 2018-19 compared to 42.2 per sq. km of road during the year 2017-18 and 36.2 vehicles per sq km of road during the year 2016-17. Motor vehicle density in road of Assam is significant increase from 6.8 per sq. km of road in the year 2000-01.

The time series data on number of motor vehicles registered as well as motor vehicles on road in the state are presented in table -13.3.

**TABLE-13.3  
NUMBER OF MOTOR VEHICLES REGISTERED AND MOTOR VEHICLE ON ROAD IN ASSAM**

Year	No. of Motor Vehicle Registered	No. of Registered Motor Vehicle per		No. of Motor Vehicle on road	No. of Motor Vehicle on road per	
		100 Sq.Km.	Lakh of Population		100 Sq. Km.	Lakh of Population
2000-01	52518	67	198	534885	682	2017
2010-11	199076	253	655	1363625	1738	4484
2011-12	226010	288	725	1528269	1948	4903
2012-13	227367	290	729	1725222	2199	5528
2013-14	249564	318	799	1984880	2530	6360
2014-15	267900	341	858	2384576	3040	7641
2015-16	290874	370	932	2666589	3400	8545
2016-17	292980	374	939	2837829	3618	9094
2017-18	416726	530	1335	3309551	4219	10606
2018-19	502525	640	1565	3725529	4749	11603

Source: Office of the Commissioner of Transport and Directorate of Economics and Statistics, Assam.

The Figure III below depicts the increase in the number of motor vehicles registered and the numbers of vehicles on- road which shows significant increase over the years.

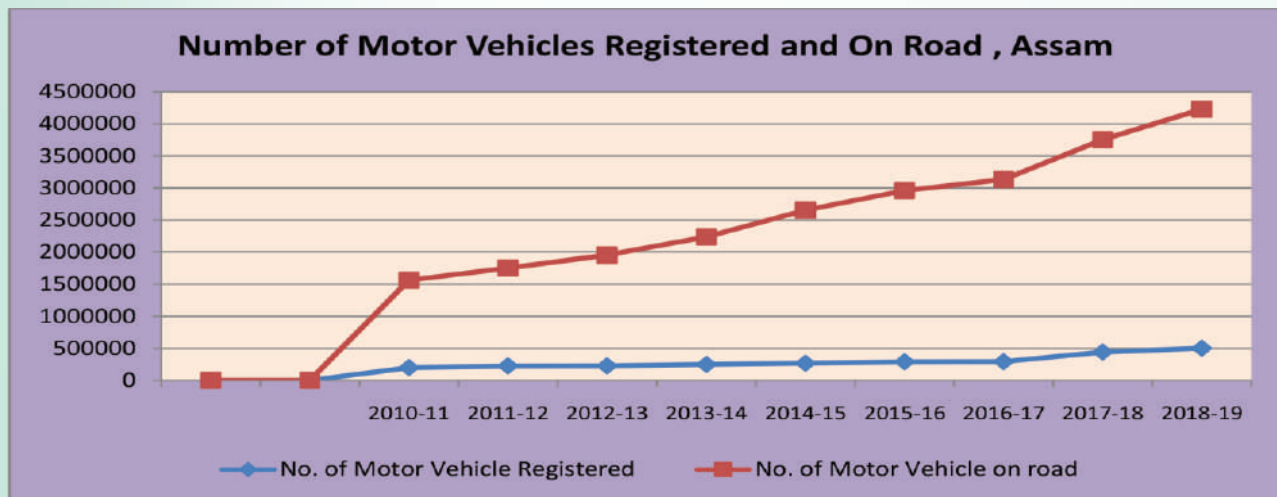


FIG-III

The state has recorded increasing number of road accidents over the years. During the year 2018-19, the number of road accidents reported in the state was 8248, a 15 percent increase over the previous year. During the year 2017-18, number of road accidents reported was 7170. The number of persons killed and injured as a result of road accidents during 2017-18 were 2966 and 7375 respectively; higher compared to 2783 and 6163 number of persons killed and injured respectively during 2017-18. The number of persons killed and injured in 2018-19 recorded 6.6 percent and 19.7 percent increase compared to the year 2017-18. The number of persons killed per 100 accidents recorded was 36 during

2018-19; marginally lower than the figure of 38.8 person killed per 100 accidents during 2017-18. The severity of road accidents in Assam is evident from the Table-13.4 below.

**TABLE-13.4**  
**NUMBER OF ROAD ACCIDENTS AND PERSONS KILLED AND INJURED IN ASSAM**

Year	Number of Accidents	Number of Persons		Accident Severity*
		Killed	Injured	
2000-01	2516	1021	3744	40.6
2010-11	5929	2250	7404	38.0
2011-12	6617	2375	6741	35.9
2012-13	6562	2252	6472	34.3
2013-14	7251	2407	6734	33.2
2014-15	7143	2465	6499	34.5
2015-16	6959	2397	7066	34.4
2016-17	7435	2572	6127	34.6
2017-18	7170	2783	6163	38.8
2018-19	8248	2966	7375	36.0

Accident Severity:\* Number of persons killed per 100 Accidents.

Source: Office of the Additional Director General of Police, Criminal Investigation Department, Assam.

The Figure IV below presents the number of road accidents and persons killed and injured.

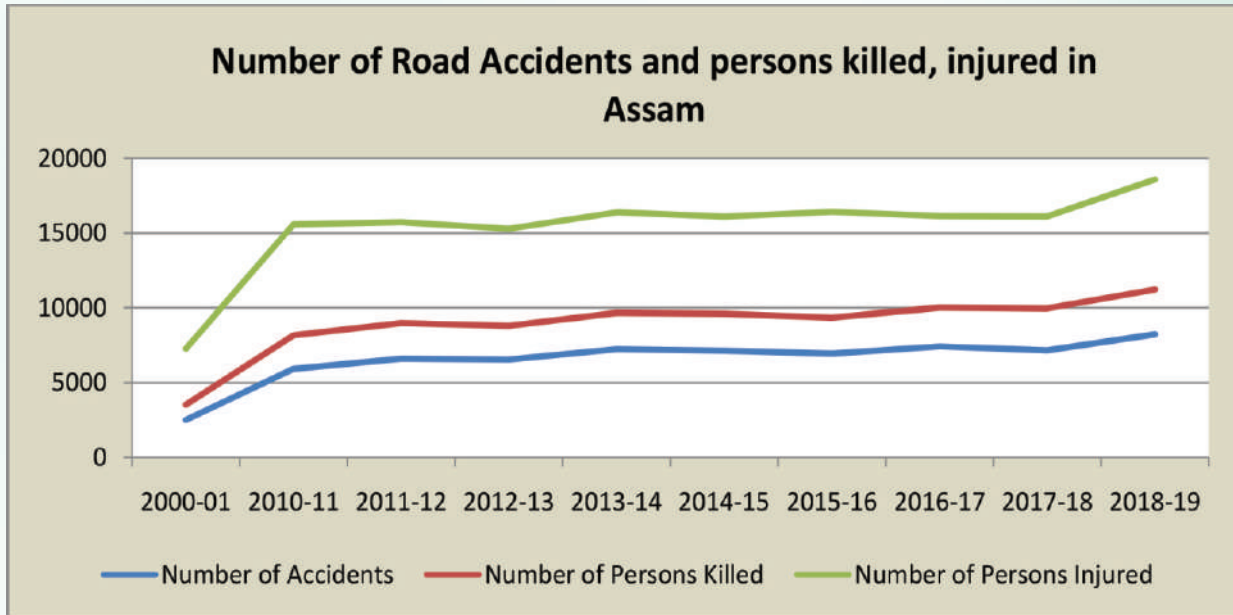


FIG-IV

The Commissionerate of Transport of Assam in addition to providing fast and comfortable services to the commuters has provisioned commuter taxi (trekkers) services and post-paid city taxi services to create self-employment avenues of unemployed youth. The scheme has become not only very popular in the greater Guwahati city, but across the state of Assam. The collection of transport revenue by the Department of Transport during the year 2018-19 was 899.87 crore; an improvement from Rs. 676.32 crore in 2017-18 and Rs. 546.65 crore in 2016-17. The collection of transport revenue during 2017-18 to 2018-19 recorded 33 percent growth.

**ASSAM STATE TRANSPORT CORPORATION:**

Public road transport system is the most important means of communication to provide affordable access to all knock and corners of the state as well as for movement of goods. In the road transport system of the state, both public and private sector operators are playing equally important role. Earlier, the Assam State Transport Corporation (ASTC), a state government undertaking, was one of the premier public enterprises of the state with its headquarters in Guwahati. ASTC primarily provided passenger services on the nationalized routes of the state, while the private sector road transport operators are involved in the intra-state movement of both goods and passenger traffic throughout the state. The ASTC has been providing efficient, safe, reliable and economic services to the people especially in the rural and other backward areas since its inception and have earned the appreciation of the people of the state.

As a step towards improvement of passenger amenities the state government has constructed two Inter-State Bus Terminus (ISBT) one at Guwahati and the other at Silchar to facilitate inter-state transportation of passengers. At present, both the ISBT are functional. ISBTs are also constructed at Jorhat, Dibrugarh and Sivasagar by the ASTC with all modern facilities for passengers and bus operators. For providing better passenger amenities, the ASTC has taken initiative to construct new bus terminuses at Guwahati City (City Service), Bongaigaon, Halflong, North Lakhimpur and Nalbari. The ASTC has also proposed to construct a modern Inter-State Bus Terminus at Adabari to cater to the demands of the increased number of buses and passengers and to reconstruct and improve the present status of existing 100 of station buildings, both major and minor, spread all over the state. To replace the existing super deluxe buses which are more than 3 years old, ASTC proposes to purchase six (6) super deluxe buses at a total estimated cost of Rs. 230.00 lakh.

Under the ASTC, the government of Assam has introduced two new schemes in 2017, namely Gramin Parivahan Yojana 2017 and Swachh Kamakhya-Clean and Green Technology in 2017.

#### GRAMIN PARIVAHAN YOYANA:

ASTC is inducting modern digital technology in its operation like e-ticketing, automatic break-down management system, GPS bus tracking system and integrated public transport management system etc. It is also in the process of inducting a highly skilled and technically qualified workforce to manage its affairs in the new working environment. In the light of this, it is proposed to implement the most optimistic programme of "Chief Minister Gramin Parivahan Yojana" by ASTC. The routes are planned to provide connectivity to remote villages to connect them to major road networks which will lead to sub-divisional or district head quarters. The scheme proposed to cover 3, 02,422 kms per day. This scheme will benefit the rural population by generating direct as well as indirect employment in the transport sector.

#### SWACHH KAMAKHYA-CLEAN & GREEN TECHNOLOGY:

Kamakhya Temple, one of the prime pilgrimage destinations of India, draws people from different parts of India throughout the year. The four day Ambubachi Mela, has its own significance and draws about 2 million pilgrims every year. To make provision of adequate transports and amenities of sanitation are major challenges to the state. The government of Assam has initiated a scheme called "Swachh Kamakhya -Clean and Green Technology, 2017". The ASTC is currently operating a fleet of 8 buses from morning to evening during the Ambubachi Mela days. Under the scheme the government has proposed to introduce 100 e-buses which will be purchased at the interval of 2 years up to 2027. The routes to be covered are from LGBI Airport, ISBT-Betkuchi, Khanapara-mini ISBT, Narengi, Jalukbari and Kamakhya Railway Station etc.

The performance of ASTC during the period 2010-11 to 2018-19 is evident from the table-13.5.

**TABLE-13.5**  
**PERFORMANCE OF ASSAM STATE TRANSPORT CORPORATION**

Year	Average No. of own vehicle held	Average No. of own Vehicle on road	Fleet utilisation (%)	Total km operated during the year (in lakh)	Monthly Av. Net income from own buses (Rs. In lakh)	Staff-Bus ratio	No of Private Buses operated under ASTC	Monthly Average Income from Privately operated buses (Rs. In lakh)
2010-11	357	299	84	159.45	85.30	6:01	1189	95.12
2011-12	538	441	82	222.36	123.61	5:01	1170	92.25
2012-13	665	540	81	248.48	136.64	4:01	1344	76.31
2013-14	751	559	74	279.30	138.32	4:01	1300	72.52
2014-15	815	570	69.88	284.45	148.40	6:01	1112	61.31
2015-16	1090	668	61.28	300.69	244.69	6:01	1009	56.82
2016-17	1074	650	60.52	266.89	167.90	6.01	1139	55.04
2017-18	865	634	73.29	291.41	187.31	5.04	1272	66.40
2018-19	953	639	67.05	245.83	218.50	5.01	1367	80.17

Source: Assam State Transport Corporation.

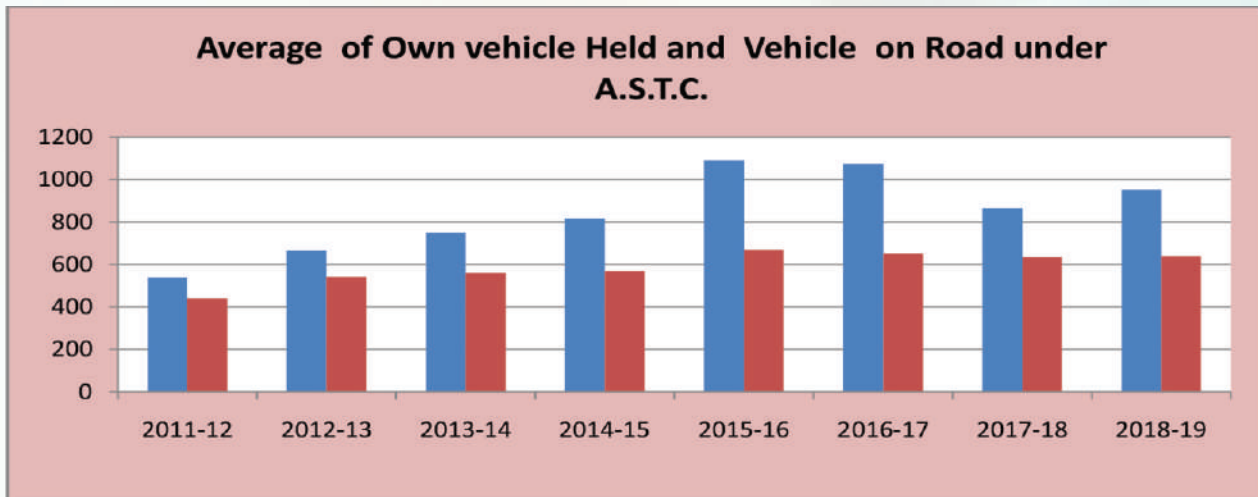


FIG-V

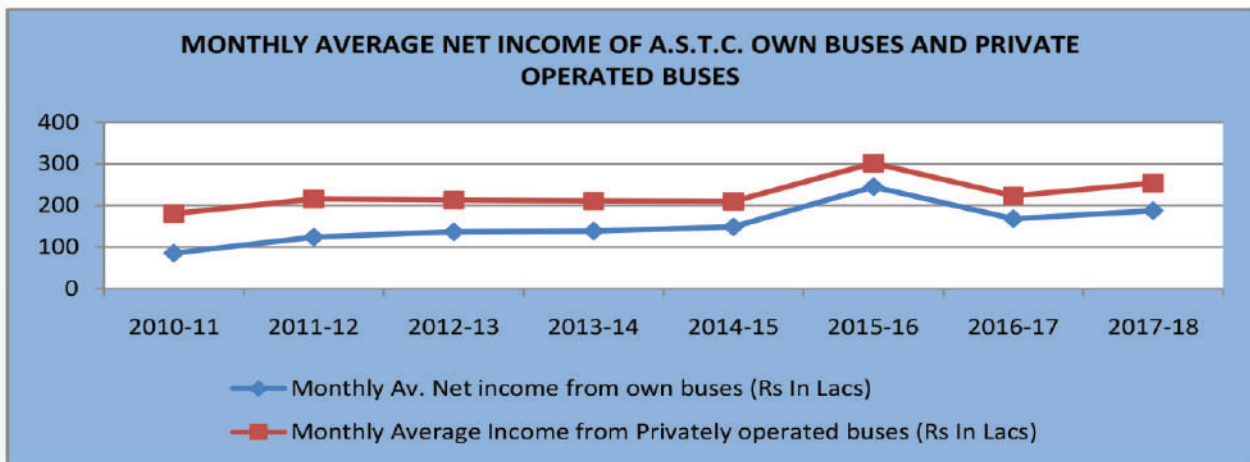


FIG-VI

The average number of own vehicles of the ASTC on road was 953 in 2018-19 compared to 1090 in 2015-16. The number of private buses operated under ASTC was 1367 in 2018-19, an increase from 1009 buses in 2015-16.

The ASTC is implementing Dharmajyoti Scheme, which provides 50 percent subsidy on bus fare to the pilgrims for visiting religious places within as well as outside the state of Assam. The scheme has become very popular and more than 2(two) lakh pilgrims have availed the facility.

#### **RAILWAYS:**

Assam at present has total railway route length 2464.89 km. The entire railway length is broad gauge railway. To the Indian Railway Statistical Publication 2017-18, the total railway route length of India as on 31<sup>st</sup> March, 2018 was 68442 km, of which electrified route length was 29376 km. Assam shares 3.6 percent of the total railway route length of the country; but has no electrified route. The total number of passengers carried by NF Railway was 122.25 million in 2017-18 compared to 113.74 million in 2016-17. The total cargo carried by railway in the N F Railway zone was 35.11 million tonnes in 2017-18, an increase from 30.65 million tonnes during 2016-17. The revenue generated from the goods carried was Rs. 1919.54 crores in 2017-18; an increase from Rs 1875.31 crores in 2016-17. The revenue generated from the passengers carried by NF railway was Rs1182.49 crores in 2017-18, an increase from Rs 1018.99 crores during 2016-17.

The Bogibeel rail-cum-road bridge, the fifth bridge across the Brahmaputra River is now a lifeline for the people of North-East region. The bridge is an attempt by India to shore up the requirements of Indian border. The project of 4.94 km rail cum Road Bridge is implemented by the North East Frontier Railway and was inaugurated by Prime Minister of India on 25<sup>th</sup> Dec, 2018. The project was completed at an estimated cost of Rs 5900 crore. It connects the two existing railway networks running at north bank and south bank of the river and will provide connectivity and livelihood to around five million people residing in upper Assam districts and Arunachal Pradesh. It starts from Chaulkhowa station and Moranhat Station at south bank and joins in between Sisibargaon and Siripani station of Rangia – Murkongselek section of railway in north bank.

The various development activities undertaken by the North East Frontier Railways during 2018-19 were as follows:-

- 1) The initiatives taken for improvement in passenger amenities has resulted growth of 7.28% passengers and 13.77% growth in earnings from the passenger during 2018-19.
  - 2) The N F Railway monitors 10 trains including the Rajdhanis, Shatabdis, and the iconic trains of the N E region like NE Express, Kamrup Express and Avadh Express as a measure to ensure timely running of the trains. The railway authority monitors 19 stations in the zones of Guwahati, Kamakhya, Dibrugarh and Mariani through sensors called Data Loggers. This mechanism feeds the timing of movement of trains to a central system without any human interference.
  - 3) The N.F Railway has introduced a regular weekly express train between Dibrugarh and Silchar from 8<sup>th</sup> April 2018. The train will further strengthen the rail connectivity between Barak and Brahmaputra valley.
  - 4) N.F Railway has planted 5,33,300 plant saplings along railway tracks, around office buildings, in stations, residential colonies, schools, workshops and various parks maintained by railways during 2017-18 as part of its continuous commitment towards a greener, safer and more sustainable environment
  - 5) Each of the stations in N.F Railway has been provided with 100% LED lighting.
  - 6) For conservation of the environment, a total of 6210 environmental friendly, zero- discharge bio-toilets have been fitted in 1730 coaches. Already the 81 km of railway track in the Chaparmukh-Silghat Town section has been converted into a discharge free Green Corridor in August, 2017.
  - 7) Stoppage time of 33 trains in Guwahati station reduced for better punctuality. This reduction in duration of stoppage time varies from 5 minutes to as much as 25 minutes with effect from 18<sup>th</sup> June, 2018.
  - 8) Digitization of the ticketing system has reduced the workload at reservation counters by more than 50 percent. Universal Payment Interface (UPI) has already been introduced in all Passenger Reservation System (PRS) and Unreserved Ticketing System (UTS) counters. E-ticketing has been introduced in all trains. Mobile ticketing (UTS on Mobile) introduced for cashless transaction of unreserved tickets.
  - 9) Mechanised cleaning has been introduced in 371 stations to provide passenger better cleanliness and hygienic environment at station.
  - 10) As part of Swachh Rail Mission and to empower women with opportunities of livelihood, N.F. Railway has taken a unique initiative wherein a number of Women Self Help Groups (SHGs) have been engaged to keep Railway stations clean in Hailakandi district of Assam.
  - 11) In an effort to ease the inconvenience faced by the Divyang (differently abled) in accessing toilet facilities in stations premises, NFR has constructed 377 numbers of Divyang friendly toilets in all of its stations.
  - 12) With a view to provide better safety and security to women passenger who normally used to travel by passenger trains either alone or with minors, NFR has started earmarking a portion of the Sitting cum Luggage Rake (SLR) coach with Pink colour. This special colour will help the women passenger to easily identify the coach in the platform even during rush hours.
- Guwahati now has India's first solar powered railway station. The project of installing solar panels was commissioned in April 2017. Nearly 2352 solar modules with a capacity of 700 kwp have been set up over the roof of the Guwahati railway station. The solar-powered station aims to reduce carbon-footprint and also to reduce power costs. The estimated project cost is Rs 6.7 crore. The solar power plant will save Rs 67 lakh worth of electricity. The average power generation capacity per day is 2048 KW. As of now the solar panels have generated 96,669 KWH of electricity.

#### **AIR TRANSPORT:**

Assam is well connected with the rest of the country through Air Transport. The state has six operational civil airports located at Guwahati, Tezpur, Jorhat, Dibrugarh, North Lakhimpur and Silchar. In addition, one more civil airport located at Dhubri (Rupshi) district of Assam is non-functional for long. This airport is in the process to reopen for passenger traffic, which would benefit the state as well as the people of Meghalaya. All major airlines including private commercial airlines viz., Indigo, Go-air, Air Asia, Vistara etc. are operating their flights to and from Guwahati from different locations of the country. In addition to these civil airports, small private airstrips in the interior areas are also present to address the need of the corporate houses.

In the Guwahati sector, the movement of air traffic as well as passenger traffic (both domestic and international) has been increasing rapidly. The records show that air traffic movement (for LGBI Airport, Guwahati and Mohanbari Airport, Dibrugarh and Silchar Airport published by the DGCA) has gone up by 27 percent during 2018-19 compared to the previous year. Similarly average number of flights handled has gone up by 23 percent in 2018-19. In respect of handling of freights, the growth was calculated at 29 percent in 2018-19 over the previous year 2017-18. The average number of flight per day is 164 in 2018-19 which was only 125 in 2017-18 (table 13.6).

**TABLE-13.6**  
**AIR TRANSPORT STATISTICS IN ASSAM**

Year	Air Traffic Movement (No.)	Passenger Handled (No.)	Freight loaded /Unloaded (Tonne)	Mail loaded/unloaded (Tonne)	Average number of flight per day	Average number of passenger handled per day	Average Cargo Handled per day (Tonne)
2004-05	20334	828640	5199	1320	57	2270	18
2012-13*	33535	2526434	6668	N.A.	92	6922	18
2013-14*	29426	2442613	8124	N.A.	81	6692	22
2014-15*	30363	2552861	10796	N.A.	83	6994	30
2015-16*	24392	3103961	11976	N.A.	67	8504	33
2016-17*	37383	3759494	17283	N.A.	102	10299	47
2017-18*	45554	5371859	23582	N.A.	125	14717	65
2018-19 #	60014	6639457	25567	N.A.	164	15741	70

\* Figures excluding Lakhimpur, Tezpur and Jorhat Airport. # includes all airports of Assam.

Source: Directorate General of Civil Aviation Statistical Division, New Delhi.

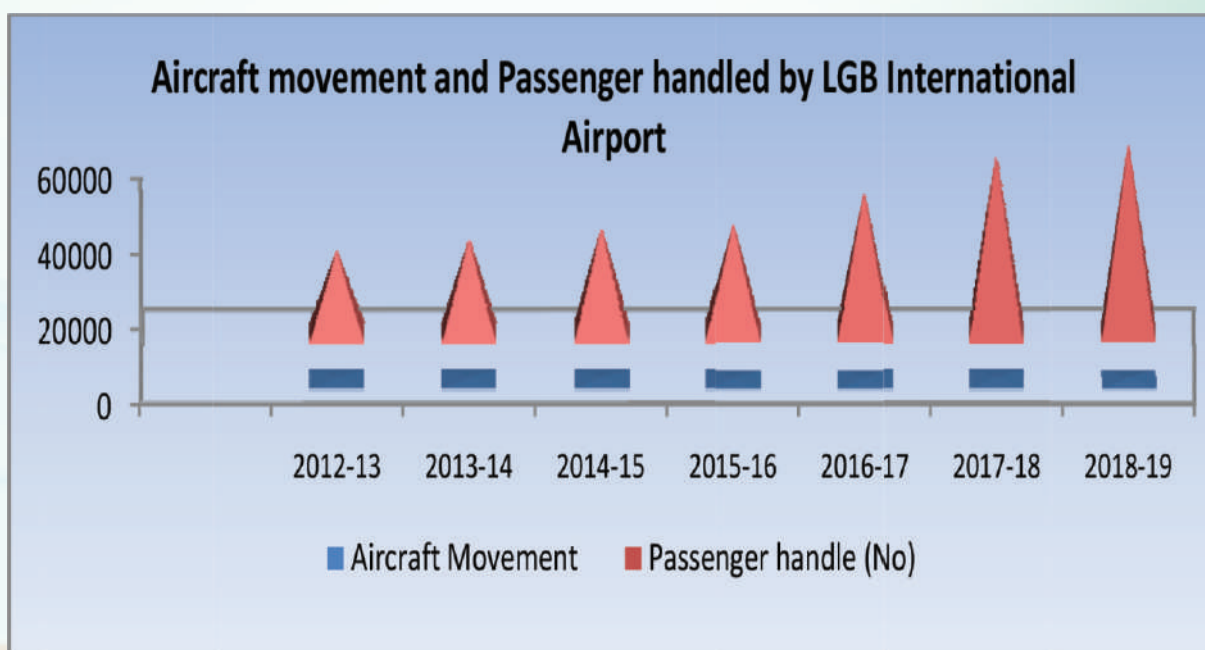
The Lokapriya Gopinath Bordoloi International Airport, Guwahati is the only International Airport in the North-East region of India.

The number of aircraft movement, passengers as well as freight handled in the LGB International airport during the period from 2011-12 to 2018-19 is detailed in the Table-13.7.

**TABLE-13.7**  
**AIR TRANSPORT STATISTICS OF LGB INTERNATIONAL AIRPORT GUWAHATI**

Year	Aircraft Movement	Passenger handle (No)		Freight loaded/unloaded (Tonne)
		Embark/Disembark	Transit	
2011-12	452	26864	NA	0
2012-13	416	21810	NA	94
2013-14	494	24633	NA	36
2014-15	474	27564	NA	15
2015-16	512	28913	NA	11
2016-17	490	37383	NA	03
2017-18	455	46680	NA	22
2018-19	643	49845	NA	27

Source: Directorate General of Civil Aviation Statistical Division, New Delhi and Airport Authority.



The figure VII above shows the aircraft movement and the passengers handled by the LGB International Airport, Guwahati which has considerably increased over the years.

**INLAND WATER TRANSPORT:**

Inland water transport is generally accepted as the most efficient mode of transportation from the point of energy consumption. It is also considered as the cheapest mode of transportation as well as labour intensive and environment friendly in nature. Assam is a riverine state. As much as 32 percent of the water resource of the country flow down through the river Brahmaputra, Barak and their myriad tributaries weave a vast network of waterways in the State. The Brahmaputra has 891 km navigable length of waterways from Sadiya to Dhubri as National Waterway No.2 while the Barak has 121 km length of navigable waterways between Lakhimpur and Bhanga as National Waterways No.6 for unified development of the waterways for shipping and navigation and transportation of cargo to the North Eastern Region particularly in the states of Assam, Nagaland, Mizoram, Manipur, Tripura and Arunachal Pradesh.

For effective exploitation of the waterways, being the cheapest mode of transport and in order to cater to the growing need for goods and passenger movement, two Government owned organisations of Assam viz, Central Inland Waterways Corporation and Directorate of Inland Water Transport (IWT), are operating the water transport services on the river Brahmaputra and Barak on commercial basis and have been trying to improve the water transport system in the region.

**FIBRE REINFORCED PLASTIC (FRP) BOATS:**

To introduce faster moving water transportation by Inland Water Transport (IWT) ferry services, government of Assam has proposed to procure Fibre Reinforced Plastic (FRP) Boats to be utilized as river taxi for development of ferry services on the river Brahmaputra. Further the government propose to set up floating terminals at different ferry points of the river Brahmaputra and Barak to provide safe, secure and easy embarking and disembarking to IWT vessels. IWT Assam is working in synergy with Inland Waterways Authority of India (IWAI) under the Ministry of Shipping. Government of India for development of floating terminals under Central Sector Scheme (100% Grant-in-Aid) at different ferry points in the states.

At present the Directorate of Inland Water Transport is operating 104 ferry services under 3(three) IWT Divisions on the river Barak, Brahmaputra and its tributaries for the purpose of public utility. The Directorate of Inland Water Transport has possessed 186 vessels of different capacity upto May 2017 and proposed to add a good number of vessels.

**RO-RO SERVICE**

On October 11, 2018, Inland Water Authority of India (IWAI) launched a Roll-on-Roll-off (RO-RO) service from Neamati to Manjuli Island in Assam.

- i. It will reduce the road route distance of 423 km to 12.7 km via river route.
- ii. For the commencement of the service a new vessel MV Bhupen Hazarika has been procured at a cost of Rs. 9.46 crore.
- iii. The vessel is 46.5-metre-long, 13.3-metre-wide and has the carrying capacity of 8 trucks and 100 passengers.
- iv. The IWAI is also planning to procure more such Ro-Ro vessels for use on river Brahmaputra.
- v. Earlier, IWAI had started a similar Ro-Ro service between Dhubri and Hatsingimari with 190 km of reduced travel distance.
- vi. Further, Floating terminals have also been constructed at 11 locations along the length of the Brahmaputra waterway. These are: Hatsingimari, Dhubri, Jogighopa, Tezpur, Silghat, Biswanathghat, Neamati, Sengajan, Bogibeel, Dibugarh/ Oakland and Oriumghat.
- vii. This will enable connectivity not only to Assam but also too many parts of North-east.

Besides these state owned organisations, large number of private owners conducted ferry services [including commonly known *Bhoot-bhooty* services] to transport goods and passengers to the remotest hinterlands under un-organised sector.

The total number of passengers carried by the waterways was 14,899,522 in 2018-19 as compared to 9,044,431 in 2017-18 and the total amount of goods carried is 306,040 quintals in 2018-19 in comparison to 431,271 quintals in 2017-18. The revenue earned by the IWT during 2018-19 is Rs 7.6 crore.

**OTHER ACTIVITIES:**

The Directorate of Inland Water Transport has introduced air-conditioned long distance river cruise service for the development for river tourism. The Directorate has leased out a vessel M. K. Charaidew to private entrepreneur on hire basis. The Directorate of Inland Water Transport has also introduced two luxurious A/C cruise vessels on the river Brahmaputra and they are being operated by the Directorate itself at Guwahati.

The Directorate of Inland Water Transport has also constructed a RCC jetty at Guwahati-North Guwahati Ferry Service. The Directorate has also constructed seven 25m long single Decker floating terminal at north bank and two 28m long double Decker floating terminal at the south bank of the Brahmaputra at Guwahati under centrally sponsored scheme.

**COMMUNICATION:****POSTAL COMMUNICATION:**

The Assam Postal Circle has a network of 4011 post offices and 12427 letter boxes [as on 31<sup>st</sup> March 2019] out of which 11304 post offices in 2018-19 and 3736 post offices in 2017-18 are located in rural areas. On an average, each post office serves a population of 22523 persons and covers 20.72 sq. in rural areas and 4.39 sq km in urban areas. There are 3 night post offices also functioning in the state located at Guwahati GPO, Dibrugarh HO and Silchar HO for convenience of the people. In addition, there are 624 modernised post offices and 624 computerised post offices in the state. Apart from the above, there are 4 National Speed Post Centre and 16 Speed Post Centre in the state and postal mail conveyance covers 4428 railway kilo metre.

The Assam Postal Circle has taken initiative to start Core Banking Solution (CBS) in 12 selected post offices of Assam under a pilot project to bring the postal customers under postal banking coverage so that the customers can access their savings bank accounts from any of the above selected post office. Assam is among the six states across India selected for the Pilot project. After successful implementation of CBS in these pilot offices, other post offices will be brought under coverage of CBS in a phased manner. In addition; Assam state has also been selected for the rural-ICT project for computerisation and networking of rural post offices (also called branch post offices). A total of 375 branch post offices of Sivasagar Postal Division comprising of three districts –Sivasagar, Jorhat and Golaghat are the pilot offices covered under Rural-ICT project for Assam Circle.

The Circle is utilising services of Indian Airlines and Jet Airways for transmitting outward airmails from all the Air Centres of the region. From Guwahati, outward airmails are transmitted in direct flight for Kolkata by Indian Airlines and for Delhi Sector by Jet Airways. For mail transmission in the North East Region freighter air craft service has been used which is running in the Kolkata- Guwahati-Imphal-Agartala Sector. The service of ASTC and private night buses are also utilised for transmission of local mails to all district headquarters except Morigaon and Dhemaji.

**TELECOMMUNICATION:**

Assam Telecom Circle of Bharat Sanchar Nigam Limited (BSNL) is the largest telecom operator in Assam which was formed in 1987, providing comprehensive range of telecom services in the State. BSNL is reaching the nook and corner of Assam with focused development thrust. At present 553 telephone exchanges with 7 Telecom Districts are functioning in the state (as on March 2019).

It is evident from the status of telecom facilities in Assam shown in the Table 13.8 that the overall tele-density (Telephone per 100 of population) of the state as on March 2018 was 76.87 as against the national average 93.27. While the urban tele-density of Assam stood at 175.45 as on March 2018 compared to 154.12 as on March 2017, the rural tele-density was only 57.29 as on March 2018 and was higher over the previous year (51.49). However, in respect of overall tele-density as well as urban tele density the position of Assam stood far below the national average [overall 93.27 and Urban 166.64 as on March 2018. In respect of rural segments also tele-density of Assam was considerably below the national average (Rural-59.25) during the same period

**TABLE-13.8**  
**TELECOM STATISTICS OF ASSAM**

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	
1	2	3	4	5	6	7	8	9	
Direct Exchange Lines Fixed	1492608	1430077	1463773	1427318	1503449	1667066	2124457	2672377	
Rural Telephone Connections	491881	445399	459014	449347	482397	547081	743833	926372	
Village Public Telephones (VPTs)	24415	24688	24692	24692	24663	5297	4876	4393	
Total Phones	Wire Line Phones (Fixed DELS)	229854	194395	183984	178191	167434	130810	134850	111518
	Wireless Phones (GSM+CDMA)	14208075	14387664	15278208	16433438	17150891	20536756	1989877	2560859
	Total	14437929	14582059	15462192	16611629	17318325	20694170	2124727	2672377
Tele-density (%) (Telephones per 100 population)	Urban	148.54	130.92	126.27	129.05	132.26	148.86	154.12	175.45
	Rural	28.35	31.13	34.36	37.41	39.18	46.63	51.49	57.29
	Total	46.61	46.51	48.74	51.9	53.95	63.25	68.41	76.87
Public Call Offices (Local+STD+Highway)	19307	11929	11207	10350	8909	6321	5379	4763	

Source: Annual Reports- 2017-18 of Department of Telecommunication, Govt. of India.  
BSNL, Assam circle.



The subscriber base basic services provided by the BSNL in the State were 2672377 as on March 2019 which shows a growth of 25.8 percent over the previous year 2018. The total number of telephone connections as on March 2017 was 25.8 percent more than that of March 2017. But there is a decrease of 17.3 percent in wire-line phones in 2018 in Assam. This is due to the increase of 28.7 percent in the use of wireless phones.

In respect of wireless phone [mobile segment] connections, there were 2.15 crore mobile subscribers in Assam as on March 2018. BSNL provides only around 10.84 percent of the total mobile connections in the state till March 2018. The private mobile service operators, on the other hand, provided about 1.92 crore mobile connections as on March 2018. Bharati Televentures (Airtel), Reliance Jio, Idea and Vodafone are the main private mobile service provider companies operating in Assam. BSNL also provided Village Public Telephones (VPTs) to 4393 inhabited villages of Assam till March 2018.

The table 13.9 shows no Reliance wireless network service due to the closure of the network in Assam. On the other hand, there is a remarkable increase in the Bharti-Airtel network customers from 3239681 in 2016-17 to 8418266 in September 2018, as most of the customers have ported to Airtel network due to unavailability of the Reliance Network. But the eye catcher is the huge market captured by Reliance Jio in 2018 which has 5028609 numbers. There is also increase in the number of customers of Vodafone from 3898309 in 2016-17 to 4406691 as on September 2018, as per the Annual Report 2017-18 of Telecommunications, Government of India.

**TABLE-13.9**  
**WIRELESS SUBSCRIBERS IN ASSAM (As on SEPTEMBER, 2018)**

Circle	Wireless Subscriber Group						Total
	Bharati	Reliance	Vodafone	Idea	Reliance Jio	BSNL	
Assam	8418266	-	4406691	1369539	5028609	2336741	21559846
India	343523345	28013	221857649	213106757	252252003	113048020	1169291183

Source: Annual Report 2017-18, Department of Telecommunications, GOI.

The table 13.9 above shows the wireless subscribers in Assam and All India, where Airtel network is the highest provider of the network both in Assam and India.

**ANNEXURE-13.1**  
**STATISTICS ON MOTOR VEHICLES IN ASSAM DURING THE YEAR 2018-19**

Sl. No.	Types of Vehicles	No. of Vehicles Registered as on 31.03.2019	No. of Vehicles Registered during 2018-19	No. of Vehicles on Road during 2018-19
1	2	3	4	5
1	Multi Axle Vehicle	2727	690	2804
2	Articulated Vehicles	4495	376	3801
3	Medium	21047	607	17453
4	Heavy	121868	4835	109980
5	Four Wheelers	132042	18961	118255
6	Three Wheelers	48449	5777	43718
7	Stage Carriage	1966	-	1372
8	Contract Carriage	19498	782	14332
9	Omni Buses	1415	137	1015
10	Mini Buses	2679	88	2261
11	School Buses	2159	177	2247
12	AATT	12305	64	9711
13	Motor Cabs	15740	3422	14075
14	Maxi Cabs	6828	1017	9345
15	Others Taxi	38307	2543	41676
16	Auto Rickshaw	117286	9710	138841
17	Two Wheeler	2587508	360295	2400197
18	Car	706192	66095	668890
19	Tractor	63831	12659	58112
20	Trailer	23163	6148	21008
21	Crane	1619	60	1725
22	Govt. Vehicle	23550	621	20029
23	Fire Brigade	95	12	113
24	Ambulance	2769	435	2615
25	Others	15117	1049	12728
26	E-Rickshaw	9200	5965	9226
	Total	3981855	502525	3725529

Source: Office of the Commissioner of Transport, Assam

**ANNEXURE-13.2**  
**REVENUE COLLECTION UNDER COMMISSIONERATE OF TRANSPORT, ASSAM**  
*(Rs. In Crore)*

Sl No.	District Authority	2017-18	2018-19	2018-19
		(Achievement)	Target	Achievement
1	2	3	4	5
1	Kamrup (R&L)	178.44	255.65	193.07
2	Kamrup (RTA)	1.94	2.70	1.52
3	Kamrup (Enforcement)	5.35	7.19	2.78
4	Kamrup (Rural)	29.23	34.27	31.62
5	Barpeta	17.52	20.43	20.95
6	Nalbari	12.29	14.05	13.11
7	Goalpara	11.91	14.05	12.25
8	Dhubri	13.94	18.53	14.63
9	Sonitpur	31.64	39.49	35.56
10	Darrang	13.06	19.10	12.87
11	Lakhimpur	20.47	26.08	20.81
12	Dibrugarh	37.49	50.88	52.73
13	Tinsukia	31.00	44.60	36.49
14	Dhemaji	7.08	8.36	8.72
15	Sivasagar	33.03	48.70	35.13
16	Jorhat	33.41	45.90	35.34
17	Golaghat	18.70	23.04	19.45
18	Nagaon	36.84	45.96	40.55
19	Morigaon	8.82	10.78	9.78
20	Dima Hasao	1.74	1.73	1.98
21	Karbi Anglong	8.44	10.51	9.53
22	Karimganj	5.71	8.61	6.98
23	Hailakandi	5.99	7.26	5.81
24	Cachar	30.11	36.93	33.93
25	Boxirhat, M.V. Checkgate	1.45	0.00	0.00
26	Srirampur, M.V. Checkgate	1.14	0.00	0.00
27	Kokrajhar	1085	13.66	11.66
28	Bongaigaon	17.78	22.45	18.49
29	State Transport Authority	31.99	47.01	31.69
30	Digarkhal, M.V. Checkgate	0.82	0.00	0.00
31	Udalguri	4.82	6.11	5.66
32	Chirang	8.32	10.48	9.03
33	Baksa	5.01	5.36	5.43
Total		676.33	899.87	737.55

*R & L=Registered & License, RTA=Regional Transport Authority*  
*Source: Office of the Commissioner of Transport, Assam*

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## CHAPTER-XIV

## INSTITUTIONAL FINANCE

The financial institution plays a vital role in the economic development of a country. It encourages both savings and investment and also creates links between savers and investors and also facilitates the expansion of financial markets and aids in financial deepening and broadening. It accelerates the rate and volume of savings through provision of various financial instruments and efficient mobilization of savings. It aids in increasing the national output of the country by providing the funds to the corporate customers to expand their respective business. Well-developed financial institutions can generate growth by increasing the pool of funds and by reducing the risk and enhancing the productivity of fund transfers from savers to investment projects. By doing so, they promote various sectors of the economy such as agriculture, housing, infrastructure, industries, trade, real estate and others. The interest of the investors in financial instruments are secured by central bank of the country and various regulatory bodies like the RBI, SEBI etc.

**BANKING INSTITUTION:**

Commercial banks are the biggest financial intermediaries. They comprises of both scheduled and non-scheduled banks. The Scheduled Commercial Banks comprises of Public Sector Banks, Regional Rural Banks (RRB), Small Finance Banks, Private Banks, Cooperative Banks and Foreign Banks. There are 12 public sector banks, 22 private banks and 10 small finance banks in the country at present.

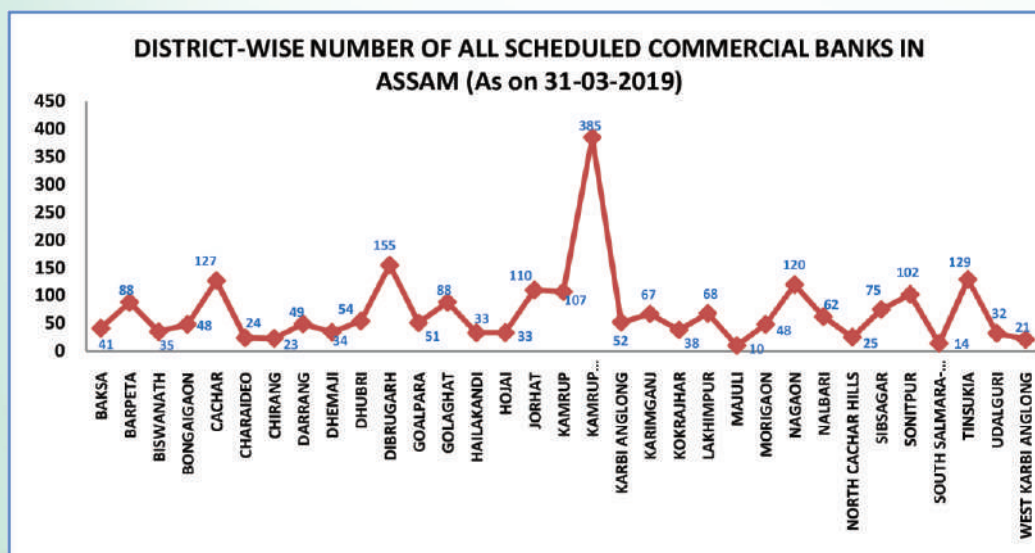
**TABLE - 14.1: GROWTH OF SCHEDULED COMMERCIAL BANKS IN ASSAM AND INDIA***(at the end of March)*

Year	Number of Offices*		Deposits (Rs. in Crore)		Credit (Rs. in Crore)	
	Assam	India	Assam	India	Assam	India
2010	1434	83997	49545	4601926	18311	3345619
2011	1504	89110	59101	5426510	21053	4076868
2012	1574	96059	67455	6174147	25171	4821527
2013	1682	104647	77730	7051332	28576	5506496
2014	1861	115822	85069	8028220	31713	6264290
2015	2047	125863	97378	8922111	35911	6878472
2016	2177	132587	103794	9659968	42671	7520929
2017	2276	137770	122307	10751439	48776	7927003
2018	2289	139240	134643	10750614	57307	7825359
2019	2348	140613	147203	11507027	65069	8697602

*\*Reporting Offices only.**Source: Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2010 to March 2019 of RBI.*

In Assam there were a total of 2348 Scheduled Commercial Bank (SCB) branches functioning in the State as on 31<sup>st</sup> March, 2019. The share of SCB branches in Assam is less than two percent of the total SCB branches at all India level and this indicates the low coverage of banking services. Over a period of ten years the the compound annual growth of bank branches in Assam have been 5.05 percent while the same at the all India level was 5.37 percent. Although compound annual growth of deposits in Assam (11.5 percent) had been higher than the all India level (9.60 percent), the share of the State in all-India total was barely 1.28 percent. Similarly for credit compound annual growth in Assam (13.5 percent) had been higher than the all India level (10.0 percent), but the share of the State in all India total was only 0.75 percent. This clearly indicates the low rate of deposit mobilization and credit absorption in the State compared to the all-India level.

The distribution of bank branches (as on 31.3.2019) across the districts shows that only eight districts in the State have more than 100 numbers of bank branches. In other words, there is urgent need for expansion of bank branches in Assam.



Kamrup (M) has the highest number (385) of bank branches among the districts and South Salmara district has the lowest number (14) of bank branches.

Out of the total 2348 SCB branches in the State, 1474 are Public Sector Banks, 375 are Private Sector Banks, 1 foreign bank, 481 Regional Rural banks and 17 Small Finance Banks. The number of SCB branches in rural areas of the State is 1066, and in semi-urban and urban areas the number of branches is 675 and 607 respectively. The low banking services in Assam is reflected by high population coverage per bank branch. Population served by per bank branch in the State as on 31<sup>st</sup> March, 2019 is 13290 against all-India average of 8542 persons per bank branch. The rural areas are more disadvantaged as population served per bank branch in rural areas of Assam is 25147. The population coverage in semi-urban and urban areas taken together is 3431 persons. Of the total districts in Assam, in 10 districts, population served per bank branch is less than the State average. In Kamrup (M), the banking coverage is best developed and population served per bank branch is 3257 persons while South Salmara with lowest number of bank branches has highest number of persons (39651) served per bank branch.

**CREDIT-DEPOSIT OF SCHEDULED COMMERCIAL BANKS:**

Of the total 2348 bank branches in Assam, 45 percent are in rural areas, 29 percent are in semi-urban areas and 26 percent are in urban areas of the State. The table-14.2 shows Deposit and Credit of SCBs in the State.

**TABLE-14.2  
DEPOSITS AND CREDIT OF SCHEDULED COMMERCIAL BANKS IN ASSAM**

Item	Rural		Semi-Urban		Urban	
	2018	2019	2018	2019	2018	2019
No. of reporting offices	1062	1066	665	675	599	607
Deposit (Rs. in crore)	26778	29707	36345	39854	71520	77642
Credit (Rs. in crore)	14313	16332	16883	19642	26111	29095
C-D Ratio (in %)	53.45	54.98	46.45	49.28	36.51	37.47

Source: Reserve Bank of India

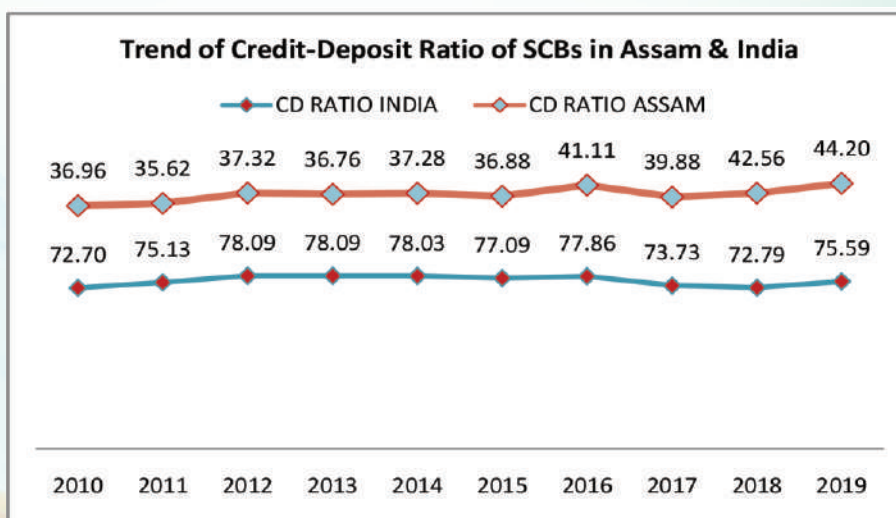
Although the rural areas have higher share of bank branches, the share of deposit and credit is high for the urban and semi urban bank branches. Of the total deposit mobilization by banks, 53 percent was from urban areas, 27 percent from semi urban areas and 21 percent from rural areas. In respect of credit disbursement, the share of rural branches was 25 percent, semi-urban and urban branches shared 30 percent and 45 percent respectively as on 31-03-2019. This is because, capacity to save and invest in rural areas in the State continues to be highly limited.

The trend of Credit-Deposit Ratio of Scheduled Commercial Banks in Assam has been less than the stipulated 40 percent as per the RBI guideline. It is only during last two years 2018 and 2019, the CD Ratio in the State increased beyond 40 percent.

**TABLE-14.3  
BANK GROUP-WISE DEPOSITS AND CREDIT OF SCHEDULED COMMERCIAL BANKS IN ASSAM (As on 31<sup>st</sup> March)**

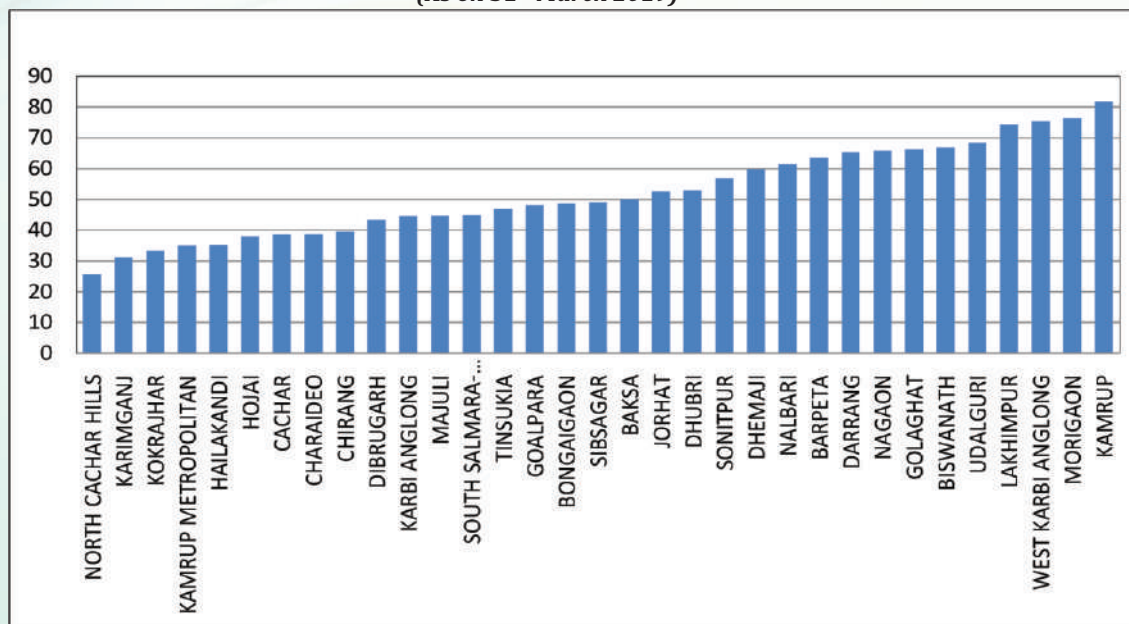
Bank Group	Reporting Offices (In no.)		Deposits (Rs. in crore)		Credits (Rs. in crore)		Credit Deposit Ratio (CDR) (in %)	
	2018	2019	2018	2019	2018	2019	2018	2019
Foreign Banks	1	1	146	146	181	139	123.97	95.21
Private Sector Banks	326	375	16749	21136	13401	18279	80.01	86.48
Public Sector Banks	1509	1474	108464	115715	39064	42105	36.02	36.39
Regional Rural Banks	480	481	9279	10148	4346	4135	46.84	40.75
Small Finance Banks	10	17	6	56	315	412	5250.00	735.71
All SCBs	2326	2348	134643	147203	57307	65070	42.56	44.20

Source: Reserve Bank of India



The trends in credit deposit ratio in Assam are far less than the national average which clearly reflects the poor credit absorption capacity of the economy. While the credit off take against deposit mobilization has been more than 75 percent at the all India level, the State economy is yet to absorb even half the deposits mobilized by the banking institutions within the State.

**CD RATIO OF SCB IN THE DISTRICTS OF ASSAM**  
(As on 31<sup>st</sup> March 2019)



Source: Reserve Bank of India

#### DEPOSITS OF COMMERCIAL BANKS

Even though private sector banks are functioning in Assam, the public sector banks remain the backbone of financial infrastructure in the State. The bulk of deposit mobilization is facilitated by the public sector banks rather than the private sector banks in the State. The share of aggregate deposits (as on 31-03-2019) of Private Sector Banks in Assam was 14.36 and of Public Sector Banks were 78.61.

The deposit accounts of banks shows that 49 percent of the accounts are savings deposit and 43 percent are term deposits. Only 8 percent deposits were current account type. In rural and semi urban areas of the Assam, 64 percent and 56 percent were savings deposit while 31 percent and 36 percent were term deposits respectively. In urban areas only 50 percent deposits of the banks were term deposits accounts. Lower proportion of term deposits also shows lower long term saving capacity of the people and also less disposable fund within banking system for long term investment through credit creation. The table below shows type wise deposits of SCB in Assam.

**TABLE-14.4**  
**DEPOSIT OF SCB IN THE STATE BY TYPE OF ACCOUNT**  
(As on 31<sup>st</sup> March 2019)

Type of Account	Deposits (Rs. in crore)								% change in total over 2018
	2018				2019				
	Rural	Semi-Urban	Urban	Total	Rural	Semi-Urban	Urban	Total	
Current	1355	2779	7430	11565	1649	3242	7710	12600	8.95
Savings	16715	20613	28589	65917	18853	22287	31205	72345	9.75
Term	8708	12952	35501	57162	9205	14325	38727	62258	8.92
Total	26778	36345	71520	134643	29707	39854	77642	147203	9.33

Source: Reserve Bank of India

#### CREDIT SUPPORT

The public sector banks are the major supplier of credit requirements in the State. The share of credit for Private Sector Banks in Assam has been varying between 25 to 28 percent while the same for Public Sector Banks was approximately 65 percent.

In order to ensure availability of credit to agriculture, weaker section of the population and other small scale sectors, the banks have to ensure at least 40 of the credit to these priority sectors of the economy. More than 50 percent of the loans from banks are made available to priority sectors in Assam. Although share of credit to weaker section is proportionately less in case of PSBs, it should be emphasized that PSB are engaged in financing of all income generating programmes of the government through SHG- Bank linkage programme, and thus the Public Sector banks provide an indirect coverage to weaker section of the population.

**TABLE-14.5**  
**PRIORITY AND NON-PRIORITY SECTOR ADVANCES IN ASSAM**  
(As on 31<sup>st</sup> March 2019)

TYPE OF ADVANCE	Public			Private			RRB			AACB		
	2019	2018	2017	2019	2018	2017	2019	2018	2017	2019	2018	2017
PSA/TOTAL ADV	59.2	57.2	55.0	65.7	61.1	63.3	87.1	86.3	87.3	8.0	21.0	10.0
WSA/PSA ADV	21.2	18.9	29.3	65.5	62.7	65.8	73.1	72.4	72.2	76.4	37.5	72.7
WSA/TOTAL ADV	12.6	10.8	16.1	43.0	38.3	41.7	63.7	62.5	63.0	6.1	7.9	7.3

The Annual Credit Plan of the Banks in Assam for the year 2018-19 shows that against a target of Rs. 13868 crore credit to Agriculture and allied sector, achievement was 52 percent. Of the target achieved, 25 percent was under Crop Loan. The achievement was less than the target achieved for the previous financial year (2017-18), where, achievement under Agriculture and Allied Sector was 59 percent and achievement under Crop Loan was 18 percent. The high target achievement under MSME is largely due to the programmes implemented under various government schemes. The table-14.6 shows Annual Credit Plan performance during 2017-18 and 2018-19.

**TABLE-14.6**  
**SECTOR-WISE SUMMARY UNDER ANNUAL CREDIT PLAN**

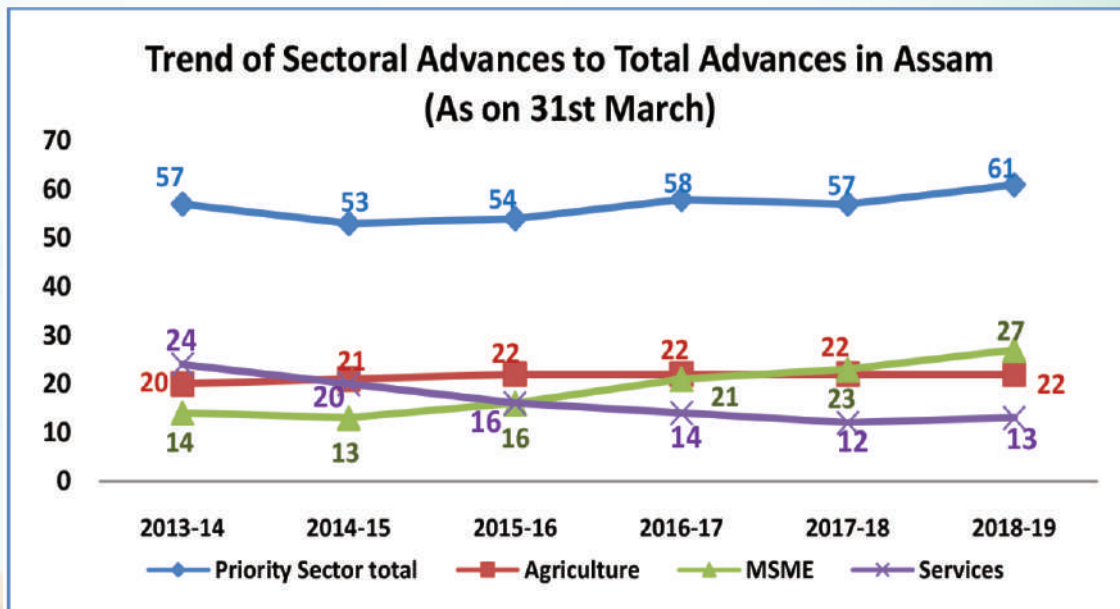
(Rs. in crore)

Sector	2017-18			2018-19		
	Target	Achieved	Achievement (In %)	Target	Achieved	Achievement (In %)
Agri Total	12847	7592	59	13868	7193	52
Of which Crop Loan	7931	1461	18	7878	1956	25
MSME	3818	10562	277	4622	11211	243
Other Priority Sector	2775	4310	155	3123	1929	62
<b>Total</b>	<b>19441</b>	<b>22464</b>	<b>116</b>	<b>21612</b>	<b>20332</b>	<b>94</b>

Source: State Level Bankers' Committee, Assam Report

While the share of agricultural credit has remained almost constant during the period 2013-14 to 2018-19, the share of MSME has increased while services has declined over the years. The interchange of the intensity of fund flow among the priority sectors has kept the total share of priority sector at almost 55-57 percent of the total credit flow in the economy of the State.

The figure below shows the trend of priority sector advances in total, Agriculture, MSME and Services sector to the total advances during the last six years i.e. from 2013-14 to 2018-19.



The tables 14.7 & 14.8 shows bank group-wise and occupation wise outstanding advances as on 31<sup>st</sup> March.

TABLE-14.7

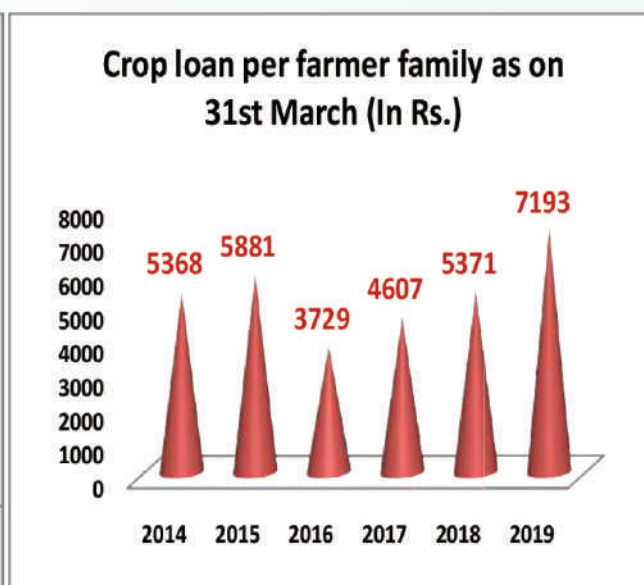
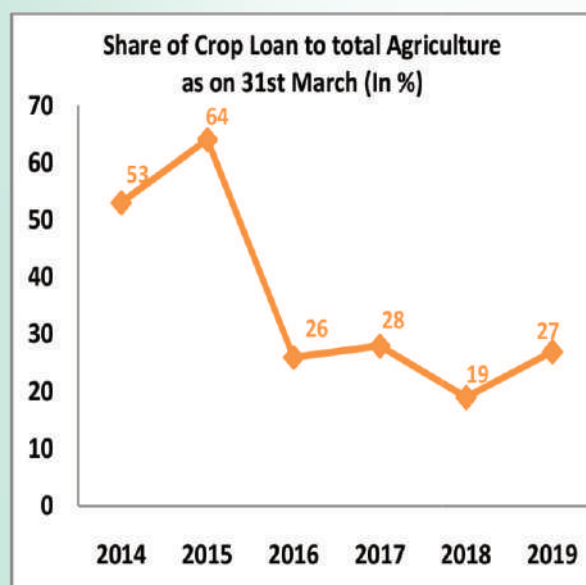
Bank Group-Wise Outstanding Advances (Rs. in crore)			
Bank Group	2018	2019	Percentage change
Public	22989	24952	8.5
Private	9045	12849	42.1
RRB	3751	3603	(-)3.9
AACB	186	96	(-)48.4
Bank Total	35971	41500	15.4
NEDFi	778	714	(-)8.2
RIDF	2206	2941	33.3
Grand Total	38955	45155	15.9

TABLE-14.8

Occupation wise Outstanding Advances in Assam (Rs. in crore)			
Occupation Group	2018	2019	Percentage change
Agriculture	14703	16329	11.1
MSME	15936	19553	22.7
Others	8317	9274	11.5
Total	38956	45156	15.9

Source: State Level Bankers' Committee, Assam Report

The Annual Credit Plan for the year 2018-19 shows that total agriculture credit disbursed in the State was Rs.7193 crore (51.9 percent) against commitment of Rs.13868 crore. In other words only half the target could be achieved which shows the low credit absorption in agricultural sector due to institutional and other sector specific issues. During the year achievement under crop loan was Rs.1956 crore against a commitment of Rs.7878 crore. In other words only 25 percent of the funds allocated for crop loan could be disbursed. The crop loan target achievements varied across bank groups- in respect of PSB it was 36 percent, in respect of private banks it was 14 percent and RRBs and AACB achieved a target of 7 percent and 9 percent only. Crop loan is one of the most important means of short term advance extended to the farmers and agriculturists by banks and co-operative societies. The loan amount can be used to purchase improved seeds, fertilizers, machinery etc. The crop loans are usually repaid in single instalment after the crop production. The graph below shows the share of crop loan to total agricultural advances and crop loan per family [Total farmer family 27.20 lakh as per Agri Census, 2010-11].



Source: State Level Bankers' Committee, Assam Report

Besides, crop loan there are also KCC holders in the State which provide credit support to needy farmers. Kisan Credit Card scheme has facilitated in augmenting credit flow for agricultural activities. The scope of the KCC has been broad-based to include term credit and consumption needs. A total number of 298629 KCC cards were issued in Assam for the year 2018-19 adding to the pool 1123661 number of total outstanding KCC cards made available earlier over the years. The sanction of new cards added credit limit to the tune of Rs. 141558.73 lakhs during the year 2018-19. The Scheme, thus, covered around 52 percent of the total farmer family (there are 27.20 lakh farmer families as per Agriculture Census 2010-11) of the State at the end of March 2019.

TABLE - 14.8: PROGRESS UNDER KISHAN CREDIT CARD SCHEME

(Rupees in lakh)

Year	Achievement		Outstanding position	
	Card issued (No.)	Amount	Card issued (No.)	Amount
2011-12	37174	1303	967220	3078
2012-13	265797	932	1329203	3935
2013-14	308306	1506	1586687	15511
2014-15	281889	1331	1809898	6299
2015-16	217460	1084	1706822	6913
2016-17	281773	1260	1786652	7573
2017-18	349362	1492	1950214	8212
2018-19	298629	1416	1123661	5271

Source: Reports of State Level Bankers Committee, Assam.

**REGIONAL RURAL BANKS:**

Regional Rural Banks [RRBs] were established under the Regional Rural Bank Act, 1976 with an objective to boost rural economy by providing credit to farmen's, agricultural labourers, artisans, small entrepreneurs, etc. At present, there are two RRBs in the State, Assam Gramin Vikash Bank [AGVB] and Langpi Dehangi Rural Bank [LDRB]. The AGVB is presently operating in the Brahmaputra Valley and Barak Valley with 311 branches in rural areas, 83 branches in semi urban areas and 20 branches in urban areas. The LDRB is confined within the hill districts of Assam with 59 bank branches of which 52 are in rural areas and 7 are operating in the semi-urban areas.

The aggregate deposit of RRBs was Rs.10148 crore at the end of March, 2019 compared to Rs.9279 crore on 31<sup>st</sup> March, 2018 registering an increase of about 9 percent in 2019 over the previous year. The downward trend of volume of credit of RRBs continued during 2018-19 also. As on 31<sup>st</sup> March, 2019, the aggregate volume of credit was Rs.4135 crore compared to Rs.4346 crore on 2018 showing a fall of 5 percent compared to a 4 percent fall in aggregate credit as on 31<sup>st</sup> March, 2018 over the previous year. The C-D Ratio of RRBs was 41 percent at the end of March, 2019 compared to 47 percent as of March, 2018. The performance of RRBs is presented in the table-14.9.

TABLE-14.9  
ACHIEVEMENTS OF REGIONAL RURAL BANKS IN ASSAM (PRIORITY SECTOR)  
AS ON 31<sup>ST</sup> MARCH

(Rupees in crore)

Year	Achievement under Annual Credit Plan			Ach of RRBs to all Banks (in %)
	Target all Banks	Ach All Banks	Ach of RRBs	
2011	3548	2895	703	24
2012	4510	4585	767	17
2013	6420	4638	618	13
2014	10671	6474	787	12
2015	10012	6128	861	14
2016	7793	8945	712	8
2017	11105	11244	777	7
2018	194407	22464	1023	5
2019	21612	20332	390	2

Source: State Level Bankers' Committee, Assam Report

**ASSAM STATE COOPERATIVE APEX BANK LIMITED:**

The Assam Co-operative Apex Bank Ltd. (ACAB) was established in 1948 and the Bank has developed and expanded its activities/ operations over the years. The Bank has a network of 67 branches and 6 Zonal Offices, spread throughout the state. At the end of March, 2019, deposit and credit of ACAB was Rs.3214 crore and Rs.1235 crore respectively. The C-D ratio of APEX Bank was estimated to be 38.42 in 2018-19 against a ratio of 25.97 at the end of March, 2018.

The membership of the bank has also increased over the years and stood at 102302 on March, 2019. The total priority sector advances as on 31<sup>st</sup> March, 2019 was Rs.96 crore of which agriculture comprised of Rs.76 crore (79 percent), MSME Rs.5 crore (5 percent) and others Rs.15 crore (16 percent). Out of the total advances under Agriculture during the year 2018-19, share of crop loan was Rs.37 crore (49 percent).

**MICRO-FINANCE:**

The Micro Finance Scheme is an effective instrument to meet the financial demands of small entrepreneurs. It is regarded as an effective programme for poverty alleviation and providing financial support for livelihood activities especially for women. The micro-finance programme of NABARD, started in the year 1992 with formation of 500 Self Help Groups (SHGs). The Self Help Groups Bank linkage (SHGBLP) programme was started as a bank outreach programme, which with the passage of time developed into a holistic programme for capacity development in livelihood with adequate social and financial support in rural areas.

In Assam, the programme has gathered momentum from the year 2001-02 onwards. Till the end of March, 2019 number of SHG linked with bank credit were 113662 with an outstanding credit amount of Rs.817 crore. During 2018-19, a total of 16971 number of SHGs were credit linked and the credit amount was Rs.208 crore.



**TABLE-14.10**  
**FINANCING OF SELF HELP GROUPS BY BANKS AS ON 31<sup>ST</sup> MARCH** (Rs. in crore)

Item	Current Year			Cumulative 2018-19
	2016-17	2017-18	2018-19	
Number of Deposit Account.	27702	19499	14704	390732
Deposit Amount	5.08	17.57	4.53	213.62
Number of Credit linked accounts under NRLM (Nos.)	10461	12718	10717	51411
Credit amount under Credit linkage under NRLM	100.00	122.54	126.16	404.76
No. of SHGs with direct Credit linkage	14365	15595	6254	62251
Credit amount under Direct Credit linkage to SHG	180.00	168.17	91.36	412.50
Total number of credit linked accounts	24826	28313	16971	113662
Total credit under Credit linkage	280.00	290.71	217.52	817.26

Source: State Level Bankers' Committee, Assam Report

#### SHG-BANK LINKAGE UNDER SGSY:

Swarnajayanti Gram Swarojgar Yojana is the mother programme of all poverty alleviation programmes. The objective of the programme is to uplift economic status of the rural people living below the poverty line by providing sustainable economic activities with bank loan and Government subsidy. Up to the end of March 2017, about 3.36 lakh SHGs have been covered under the ambit of bank credit in the State out of which 1.05 lakh SHGs have been covered under SGSY programme. Cumulative progress of SHG-Bank linkage programme under SGSY shown in the Table -14.11. The programme has been restructured as National Rural Livelihoods Mission (NRLM), now renamed as "Ajeevika" to implement it in a mission mode in a phased manner for targeted and time bound delivery of results.

**TABLE - 14.11**  
**: SHG-BANK LINKAGE UNDER SGSY** (Rs. in lakh)

Year	Total Credit Linked SHGs		Credit linked SHGs under SGSY	
	Number	Amount	Number	Amount
2007-08	115716	51372.98	54790	31006.57
2008-09	138392	69879.98	69144	45898.88
2009-10	163855	83601.33	84678	55161.36
2010-11	193922	106855.88	102166	74784.79
2011-12	226361	128813.00	123473	94423.5
2012-13	259548	151909.96	134107	106687.46
2013-14	269851	160593.78	139340	105503.75
2014-15	248802	143907.96	123055	92746.31
2015-16	224707	120747.70	112806	78666.13
2016-17	355648	219264.00	105143	73561.00

Source: Reports of State Level Bankers Committee, Assam

#### FINANCIAL INCLUSION:

The basic objective of financial inclusion is provision of banking services to under privileged section and to unbanked and underbanked regions in the country. The Government initiated the National Mission for Financial Inclusion (NMFI), namely, Pradhan Mantri Jan Dhan Yojana (PMJDY) in August, 2014 to provide universal banking services for every unbanked household, based on the guiding principles of banking the unbanked, securing the unsecured, funding the unfunded and serving unserved and underserved areas. PMJDY aimed at providing banking service points throughout rural India by mapping over 6 lakh villages into 1.6 lakh Sub Service Areas (SSAs). Each SSA typically comprise of 1,000-1,500 households. Out of 1.6 lakh SSAs, 1.3 lakh SSAs are covered through interoperable, online BCs and remaining 30,000 are covered through bank branches. BCs deployed in rural areas also provides interoperable Aadhaar Enabled Payment System (AePS) banking services. Approximately 5013404 households have been identified of which 99 percent households have been covered under PMJDY in Assam.

On April 5<sup>th</sup>, 2016, Government of India launched the Stand Up India scheme for promoting entrepreneurship amongst women, SC & ST category, who have been facing difficulties in accessing credit and also delay in getting access to any credit facility for income generating work. The scheme intends to leverage the institutional credit structure to reach out to these underserved sectors of the population in starting greenfield enterprise. It caters to both ready and trainee borrowers. The Scheme facilitates bank loans between Rs.10 lakh and Rs.1 crore to at least one Scheduled Caste/ Scheduled Tribe borrower and at least one Woman borrower per bank branch of Scheduled Commercial Banks for setting up greenfield enterprises in trading, manufacturing and services sector. To extend collateral free coverage, Government of India has set up the Credit Guarantee Fund for Stand Up India (CGFSI). The scheme is built on the concept of providing handholding support to those borrowers who might have a project in mind but lack the confidence and capability to start up.

An important aspect of financial inclusion is enabling the flow of credit to small businesses. In pursuance of the announcement in the Union Budget 2015-16, the Micro Units Development finance Agency (MUDRA) was set up and the Pradhan Mantri Mudra Yojana (PMMY) launched on 8th April, 2015. For achieving sustained expansion in the flow of credit to the non-corporate small

business sector, loans up to Rs. 10 lakh without collateral are extended to borrowers under PMMY. These loans are extended through partner Member Lending Institutions (MLIs)– such as Scheduled Commercial Banks, Non-Banking Financial Companies (NBFCs) and Micro-Finance Institutions (MFIs). In turn, MUDRA Ltd. offers refinance to MLIs for PMMY loans extended by them.

**TABLE-14.12  
PMMY IN ASSAM AS ON 31<sup>ST</sup> MARCH**

Category	Number		Amount (Rs. in crore)	
	2018	2019	2018	2019
Sishu	470566	469823	1659	1799
Kishore	127179	229248	1284	1886
Tarun	7966	6837	500	502
Total	605711	705908	3443	4187

*Source: State Level Bankers' Committee, Assam Report*

**COVERAGE OF TEA GARDENS BY BANKS:**

As on 31<sup>st</sup> March, 2019 number of tea gardens covered by banks was 821 during which 698007 out of total 711284 labourers opened accounts. A total of 368846 nos. of Rupay/ ATM cards were issued against the accounts opened. In 434 gardens POS/ ATM were installed.

**RURAL INFRASTRUCTURE DEVELOPMENT FUND (RIDF):**

To meet the infrastructure gaps "Rural Infrastructure Development Fund (RIDF)" was created in NABARD during the financial year 1995-96 with a corpus of Rs.2000 crore. RIDF, has over the years emerged as the largest on going programme for creation of rural infrastructure in the country and it has completed 23 years as on 31 March 2018. Assam is also taking financial assistance for development of rural infrastructure from NABARD under RIDF. As on 30<sup>th</sup> September 2018, NABARD has sanctioned 3281 projects under different tranches of RIDF since inception, involving cumulative loans of Rs.6254 crore. Out of which, Rs.4024 crore had been disbursed to the State Government up to 30 September 2018. Of the sanctioned projects, 1048 projects are under various stages of implementation.

**TABLE-14.13  
RIDF PROJECTS SANCTIONED TO GOVT. OF ASSAM** (Rs. in crore)

Sl. No.	Activity	Number of Projects sanctioned	Loan sanctioned	Loan disbursed (Cumulative) as on 30-09-2018
1	Rural Roads	654	1207.91	933.23
2	Rural Bridge	1436	1749.57	1451.70
3	Irrigation	159	238.11	209.55
4	Agriculture	40	914.25	310.90
5	Flood Control	192	887.24	743.46
6	Small Hydel Projects	2	46.14	46.14
7	Beel Fisheries Projects	136	147.53	49.62
8	Pay & Use Toilet Projects	21	8.30	2.49
9	AH & Vet. Projects and Modern Abattoirs	283	197.24	115.45
10	Marketing infrastructure	6	33.99	30.95
11	Revitalisation of Sericulture Farm	40	23.04	19.31
12	Cooperation	246	100.91	61.36
13	Soil Conservation Projects	33	51.33	38.41
14	Education	32	41.44	12.43
	<b>Total</b>	<b>3281</b>	<b>6090.31</b>	<b>4024.93</b>

*Source: State Focus Paper 2019-20 Assam, NABARD, Assam Regional Office*

**SWAMI VIVEKANANDA ASSAM YOUTH EMPOWERMENT (SVAYEM) YOJANA:**

Swami Vivekananda Assam Youth Empowerment (SVAYEM) Yojana is a flagship program to provide financial support to the youths of Assam to take up income generating activities in the manufacturing, trading and service sector. About One lakh youth of Assam covering all the districts will be provided suitable credit support for taking up income generating enterprises.

Financial assistance under the scheme will be provided by all Public Sector/Private Sector/Regional Rural Banks. The quantum of assistance would be up to Rupees One lakh for new entrepreneurs and up to Rupees two lakh for existing entrepreneurs. Beneficiary contribution will be maximum of 25 percent of the total project cost. The quantum of subsidy will be limited to 20 percent of sanctioned limit subject to Rs.20,000 for new entrepreneurs and 40 percent of sanctioned limit subject to Rs.40,000 for existing entrepreneur.

**TABLE-14.14  
SVAYEM: POSITION OF LOAN SANCTIONED AND SUBSIDY CLAIMED BY BANKS (as on 31<sup>st</sup> March 2019)** (Rs. in crore)

Target	Sanctioned	Claim Received		Claim Settled	
No.	No.	No.	Amount	No.	Amount
91446	13873	1340	4.39	1089	3.64

*Source: State Level Bankers' Committee, Assam Report*

**NORTH EASTERN DEVELOPMENT FINANCE CORPORATION LTD [NEDFi]:**

NEDFi, since its inception has been playing a crucial role in catalyzing the development of economy of the Northeast India. NEDFi has been instrumental for identifying, financing and nurturing eco friendly and commercially viable industries, infrastructure and agro-horticultural projects in the region. NEDFi is also giving special emphasis to cover small enterprises and micro finance to the needy at the grassroots in the region.

NEDFi till the end of March, 2019 has provided financial assistance to 1733 numbers of projects for an amount of Rs.3038.64 crore in Assam. The sectors assisted are agriculture and allied activities, agro food processing, bamboo & wood based construction, educational & training institutes, handloom & handicraft, hospitals & nursing homes, tourism & hospitality, etc.

Of the total projects sanctioned by NEDFi, share of Assam is approximately 17 percent. The State's share in the total sanctioned and disbursed amount for projects by NEDFi is 50 percent and 54 percent respectively.

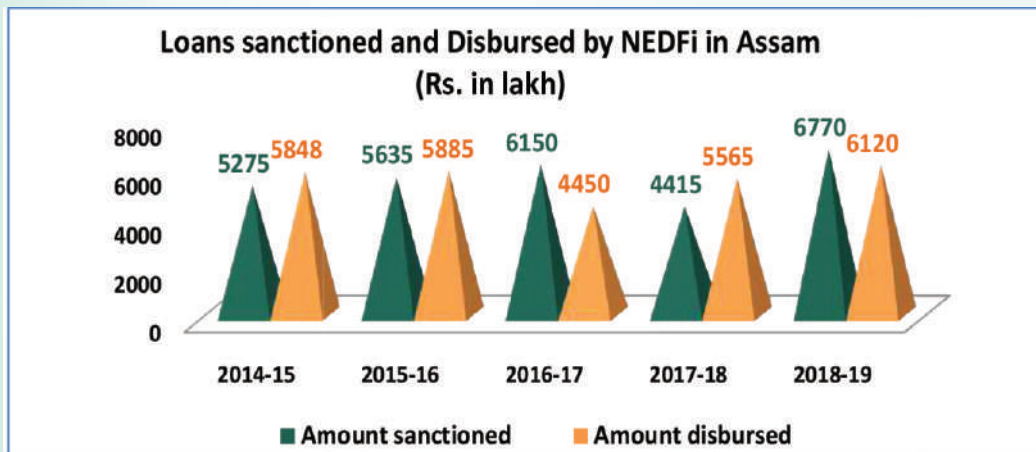
**TABLE-14.15  
LOAN SANCTION AND DISBURSEMENT BY NEDFi**

(Rs. in crore)

Year	No. of Projects		Amount Sanctioned		Amount Disbursed	
	Assam	NER	Assam	NER	Assam	NER
2014-15	69	428	150.70	312.03	207.26	387.20
2015-16	66	422	246.55	361.86	172.78	302.99
2016-17	77	472	210.91	394.88	185.27	349.09
2017-18	98	553	150.88	289.16	156.72	251.41
2018-19	123	693	188.82	359.55	155.18	286.77

Source: Annual Report of NEDFi

NEDFi's **Micro Finance Scheme** has proved to be an effective instrument for financial inclusion where credit is routed to SHGs/JLGs and individuals through established and good Non Government Organizations (NGO)/Micro Finance Institutions (MFIs) of the region. As on 31<sup>st</sup> March 2019, the Corporation sanctioned Rs.754.85 crore and disbursed Rs.739.57 crore, through which it has been able to cover more than 7 lakh beneficiaries. The graph below presents loans sanctioned and disbursed by NEDFi in Assam at the end of March under micro finance.



**DISBURSEMENT OF CENTRAL SUBSIDIES:**

The Corporation is a nodal agency for disbursement of Central Subsidies under NEIP 1997 & NEIIPP 2007, which is administered by the Department of Industrial Policy and Promotion, Ministry of Commerce, Govt. of India. The Corporation is thus facilitating disbursement of Central subsidies to various industrial units in the region. The details of disbursement under various schemes during the year may be evident from the table-14.15.

**TABLE-14.16  
SCHEME WISE DISBURSEMENT OF SUBSIDIES BY NEDFi**

(Rs. in Crore)

Scheme	2017-18	2018-19	Cumulative as on 31 <sup>st</sup> March, 2019
Transport Subsidy (TS)	281.27	961.62	3914.59
Central Capital Investment Subsidy (CCIS)	475.55	558.11	2011.15
Central Interest Subsidy	77.71	92.23	401.30
Central Comprehensive Insurance Subsidy	2.60	25.21	47.97
Freight Subsidy	0.01	126.45	145.33
<b>Total</b>	<b>837.14</b>	<b>1763.65</b>	<b>6520.34</b>

Source: Annual Report 2018-19, NEDFi

**ASSAM FINANCIAL CORPORATION (AFC):**

The Assam Financial Corporation was established as a Joint State Financial Corporation under Section 3(A) of the SFC's Act 1951, in the year 1954. The AFC covered the erstwhile-undivided Assam with two union territories of Manipur and Tripura. The Corporation has been persistently working for provision of working capital needs and term loans to entrepreneurs and other industrial and service promotion investments in Assam.

At present the Corporation has 2 numbers of DGM branches, 3 numbers of Senior Manager level branches, 6 numbers of Branch Manager level offices, 2 numbers of field offices and one Satellite Office to provide need based customer service. AFC lends out its fund through recovery as well as fund received from Govt. of Assam. During the-year 2018 19, Corporation received 42 no. of applications involving an amount of Rs.24.86 crore and sanctioned an amount of Rs.12.89 crore to 36 applicants as against Rs.11.43 crore to 62 applicants in the previous year. AFC sanctioned Rs.4.71 crore to 12 applicants for setting up of various processing and manufacturing projects in MSME sector. On the other hand the Corporation sanctioned Rs.8.18 crore to 24 applicants for setting up various service sector projects both in MSME and Commercial Real Estate (CRE) sector.

The Corporation's net effective sanction, disbursement and outstanding loans and advances since inception up to the end of March, 2019 are presented in the table 14.16.

**TABLE-14.17**  
**NET EFFECTIVE SANCTION, DISBURSEMENT AND OUTSTANDING OF LOANS & ADVANCES IN ASSAM**

(Rs. in crore)

Amount Sanctioned (effective)				Amount Disbursed		Loan Outstanding	
Small Scale		Others		Small Scale	Others	Small Scale	Others
Number	Amount	Number	Amount	Amount	Amount	Amount	Amount
5396	139.22	734	94.66	130.43	84.22	25.10	27.26

Source: Annual Report, 2018-19, Assam Financial Corporation

**MICRO FINANCE UNDER AFC:**

The AFC has also started assisting the weaker section through the micro finance scheme. Under the micro finance scheme, the total number of beneficiary assisted under Micro Finance during 2018-19 was 1600 out of which SHG beneficiary assisted was 600 and JLG beneficiary assisted was 1000. Under Kanaklata Micro Finance Scheme introduced by Govt. of Assam to encourage women entrepreneurs of the State to set up their own enterprises, 26 number of loan were sanctioned with a cumulative loan amount of Rs.27.24 crore up to the end of March, 2019. Number of loan sanctioned during 2018-19 was 6 with a total loan amount of Rs.7.95 crore. Under the Chief Minister's Micro Finance Scheme till the end of March 2019, number of loan sanctioned was 24 with a total loan amount of Rs.20.83 crore.

The table 14.16 shows year wise break up of Micro Finance beneficiaries assisted up to March 2019.

**TABLE-14.18**  
**MICRO FINANCE BENEFICIARIES ASSISTED SINCE INCEPTION**

No. assisted	2014-15	2015-16	216-17	2017-18	2018-19	Total since 2009-10
SHG	93	0	217	10	188	840
JLG	1117	0	648	2117	830	7266
SHG beneficiary	733	0	1221	100	600	6614
JLG beneficiary	5589	0	3363	10585	1000	33307
Total Beneficiary	6322	0	4584	10685	1600	39921

Source: Annual Report, 2018-19, Assam Financial Corporation

**ASPIRATIONAL DISTRICTS OF ASSAM:**

The 'Transformation of Aspirational Districts' Programme aims to expeditiously improve the socio economic status of 117 districts from across 28 states. The programme focuses on 5 main themes- Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Basic Infrastructure, which have direct bearing on the quality of life and economic productivity of citizens. The districts which are identified as backward and included under the programme are Dhubri, Goalpara, Barpeta, Darrang, Baksa, Hailakandi and Udalguri. The table-14.17 shows certain financial indicators of the districts in comparison to State as a whole.

**TABLE-14.19**  
**GLANCE AT BANKING IN THE ASPIRATIONAL DISTRICTS OF ASSAM AS ON MARCH, 2019**

District Name	Total Bank Branch	No. of persons per bank	C-D Ratio
Dhubri	82	17002	56.67
Goalpara	66	15276	48.78
Barpeta	117	14475	67.56
Darrang	71	13077	64.18
Baksa	43	22095	49.03
Hailakandi	43	15332	37.74
Udalguri	36	23102	68.52
Assam	2531	12329	47.27

Source: State Level Bankers' Committee, Assam Report

ANNEXURE14.01					
BANK GROUPWISE DISTRIBUTION OF DEPOSIT AND CREDIT OF ALL SCHEDULED COMMERCIAL BANKS IN ASSAM (As on March 2019)					
Bank Group		No. of Reporting Offices	Amount in Rs. Crore		Credit Deposit Ratio (in %)
			Deposit	Credit	
1		2	3	4	5
1)	Public Sector Banks	1474	115715.5	42101.5	36.4
2)	Private Sector Banks	375	21136.4	18278.9	86.5
3)	Foreign Banks	1	146	139.4	95.5
4)	Regional Rural Banks	481	10148.5	4135.2	40.7
.5)	Small Finance Banks	17	56.4	412	730.2
All Scheduled Commercial Banks		2348	147202.8	65070	44.2
Note: Since June 2017 onwards, SBI and its Associates and Nationalised Banks has been grouped under Public sector Banks					
Source: Quarterly Statistics on Deposit and Credit of Scheduled Commercial Bank in India, RBI, Guwahati					

**ANNEXURE14.02**  
**DISTRICTWISE DISTRIBUTION OF AGGREGATE DEPOSIT AND GROSS BANK CREDIT OF SCHEDULEDCOMMERCIAL BANKS IN ASSAM (As in March 2019)**

District	No. of Reporting Offices	Amount in Rs. Crore		Credit deposit Ratio (%)
		Deposit	Credit	
1	2	3	4	5
Kokrajhar	38	1978.2	647.4	32.7
Dhubri	54	2493.2	1404.2	56.3
Goalpara	51	1818.6	827.1	45.5
Barpeta	88	3418.2	2296.9	67.2
Morigaon	48	1400.5	1098.2	78.4
Nagaon	120	5004.7	3122.3	62.4
Sonitpur	102	4806.7	2692.8	56.0
Lakhimpur	68	2244.3	1665.7	74.2
Dhemaji	34	1147.7	703.2	61.3
Tinsukia	129	6365.4	3053.1	48.0
Dibrugarh	155	9268.3	3958.6	42.7
Sivasagar	75	4349.2	2095.9	48.2
Jorhat	110	6323.8	3248.7	51.4
Golaghat	88	3055.6	2122.7	69.5
Karbi-Anglong	52	2168.8	826.0	38.1
Dima Hasao	25	944.9	224.5	23.8
Cachar	127	8053.0	3084.0	38.3
Karimganj	67	3384.6	1087.9	32.1
Hailakandi	33	1381.9	490.3	35.5
Bongaigaon	48	2502.0	1287.1	51.4
Chirang	23	1269.4	506.1	39.9
Kamrup	107	3593.9	2935.9	81.7
Kamrup Metro	385	59737.0	19991.3	33.5
Nalbari	62	2166.3	1262.6	58.3
Baksa	41	1024.1	466.6	45.6
Darrang	49	1716.0	1106.6	64.5
Udalguri	32	1079.9	729.1	67.5
South Salmara	14	218.2	100.6	46.1
West Karbi Anglong	21	264.1	184.3	69.8
Biswanath	35	1009.2	712.1	70.6
Charaideu	24	854.3	287.4	33.6
Hojai	33	1969.8	766.7	38.9
Majuli	10	190.8	84.0	44.0
Assam	2348	147202.8	65070.0	44.2

Source: Quarterly Statistics on Deposit and Credit of Scheduled Commercial Banks in India, RBI, Guwahati.

**ANNEXURE 14.03**  
**DISTRICTWISE DISTRIBUTION OF AGGREGATE DEPOSIT AND GROSS BANK CREDIT OF ALL**  
**REGIONAL RURAL BANK IN ASSAM, 2018**  
**(As on March, 2019)**

District	No. of Reporting Offices	Amount in Rs. Crore		Credit Deposit Ratio (%)
		Deposit	Credit	
1	2	3	4	5
Kokrajhar	11	277.0	98.5	35.6
Dhubri	12	296.3	118.8	37.7
Goalpara	12	277.0	129.9	46.9
Barpeta	19	488.9	238.6	48.8
Morigaon	12	183.8	123.1	66.9
Nagaon	36	644.4	241.4	36.3
Sonitpur	25	432.6	193.4	44.7
Lakhimpur	20	310.9	170.5	54.8
Dhemaji	9	255.4	86.9	34.0
Tinsukia	14	184.7	79.7	43.2
Dibrugarh	17	248.7	114.7	46.1
Sivasagar	13	299.9	105.3	35.1
Jorhat	15	277.2	121.5	43.8
Golaghat	26	438.8	156.9	35.8
Karbi-Anglong	31	594.0	291.5	49.1
Dima Hasao	10	153.8	75.5	49.1
Cachar	23	545.6	130.7	24.0
Karimganj	17	338.3	70.6	20.9
Hailakandi	9	210.3	52.6	25.0
Bongaigaon	9	215.1	81.8	38.0
Chirang	7	155.7	68.4	43.9
Kamrup	19	471.5	248.6	52.7
Kamrup Metro	17	1170.7	214.3	18.3
Nalbari	17	389.8	204.5	52.5
Baksa	13	232.0	148.7	64.1
Darrang	15	274.6	169.9	61.9
Udalguri	12	186.0	123.6	66.4
South Salmara*				
West Karbi Anglong	16	127.6	107.9	84.6
Biswanath	8	158.1	47.9	30.3
Charaideu	10	194.2	80.3	41.3
Hojai	3	45.4	10.7	23.6
Majuli*				
Assam	477	10098.5	4099.6	40.6

Note: \* Indicate the Districts having no data for RRB s

Source: Quarterly Statistics on Deposit and Credit of Scheduled Commercial Bank in India (RBI, Guwahati)

**ANNEXURE 14.4**  
**DISTRICTWISE PRIORITY SECTOR ADVANCES, 2018-19**  
**(Rs. in Lakh)**

**Total Outstanding as on 31.03.2019**

District	Agriculture	MSME	Other Priority	Crop Loan
Baksa	14697.22	9797.61	6231.78	9566.66
Barpeta	65441.44	62461.59	28941.68	29306.54
Biswanath	15908.9	11701.14	10673.42	10433.77
Bongaigaon	22992.68	38013.09	18752.32	10062.79
Cachar	63571.78	112139.8	35103.85	30972.71
Charaideo	11838.05	9441.19	3834.44	5272.47
Chirang	11073.69	12892.67	4876.58	6636.76
Darrang	33944.78	31497.85	14153.18	18127.82
Dhemaji	22573.67	19941.66	14519.02	14258.13
Dhubari	52720	46186.44	16429.18	21907.13
Dibrugarh	83506	123015.9	54937.66	39038.18
Dima Hasao	1711.21	2511.71	6493.44	778.29
Goalpara	20770.92	20543.02	10426.34	10828.3
Golaghat	78307.09	51079.11	27554.29	36555.87
Hailakandi	14267.31	15799.69	8159.41	9098.69
Hojai	19015.53	15944.72	11687.74	13709.31
Jorhat	79456.22	91692.75	48238.6	25877.68
Kamrup	93068.72	136550.2	42231.54	45874.9
Kamrup Metro	107889.2	574993.1	309445.74	14891.68
Karbi Anglong	14759.74	6585.09	21009.66	11018.29
Karimganj	27943.99	41133.22	13149.21	13986.88
Kokrajhar	12037.31	10666.15	7647.39	9049.91
Lakhimpur	52021.93	40294.83	21823.95	31514.79
Majuli	3695.72	3635.51	1778.49	1673.9
Morigoan	57922.01	27491.14	9926.02	20643.68
Nagaon	103658.6	86569.79	38834.64	43640.81
Nalbari	30650.49	28536.52	20313.39	13509.16
Sivasagar	47004.76	61554.4	27678.45	17713.93
Sonitpur	69564.55	84025.73	33864.85	24778.41
South Solmara	727.62	1704.86	1458.06	354.68
Tinsukia	68477.84	96220.33	37371.59	32696.9
Udalguri	30747.24	8348.81	13892.3	23560.89
West Karbi Anglong	6785.08	932.85	5945.08	5703.93
Grand Total	1338751.29	1883902.5	927383.29	603043.84

Source: Report of the State Level Banker's Committee, Assam,  
Quarterly Meeting For March, 2019

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**CHAPTER-XV****CO-OPERATION**

Cooperative movement in Assam made its first formal appearance in an organised manner and under the patronage of the Government with a legal backing only in the year, 1904 under the cooperative credit societies Act 1904. The 1904 Act classified societies as (a) urban and (b) rural. Urban societies had share capital with limited liabilities but the rural societies had no share capital and the liabilities were unlimited. The Shillong Co-operative Town Bank Ltd. was the first cooperative credit society organised and registered in Assam on 3rd September, 1904. In total 10 cooperative credit societies were registered out of which 4 were urban and 6 rural.

The co-operation movement in Assam has completed more than 100 years, geographically covering almost all the villages in the State and functionally covering almost all the economic activities. But despite this impressive and noticeable growth, the co-operative movement could not gather inherent strength to grow and survive in the present day free market economy. The co-operative sector, which legitimately belongs to the voluntary sector, was increasingly being absorbed in the vortex of the state sector. As a result, the co-operatives, which truly belong to the members, were wrongly being perceived as state owned enterprises.

Since the Assam economy is predominantly rural in character, an extensive network of sound and viable co-operatives can help tremendously in giving right shape to the socio-economic structure of Rural Assam in particular and for achieving the much needed overall economic growth and social transformation of the State. But, the co-operative sector failed to achieve its desired objective due to existence of good number of uneconomic and dormant cooperatives. Therefore, to strengthen the role of existing Cooperative Societies towards socio-economic development as well as their impact on poverty reduction, employment generation and social integration the Assam Cooperative Act, 2007 has been enacted to give renewed fillip to the effort of the State Government to promote voluntary formation, autonomous functioning, democratic control and professionalism to the cooperative societies.

This act is amended by the Assam Legislative Assembly as "The Assam Co-operative Society (Amendment) Act 2012 with effect from 5th February 2013 with insertion of separate Chapter for Cooperative Credit Society" as per MOU signed by the State Government with Central Government and NABARD in the year 2012 for revival of Short Term Cooperative Credit Structure (STCCS). However, setting up of the Assam Rajiv Gandhi University of Cooperative Management under the academic guidance of Indian Institute of Management, Ahmedabad with the State Government initiative brings some hope to the cooperative sector to achieve professionalism and quality performance of various societies in the State as envisaged.

The Government of Assam proposed to strengthen the cooperative societies by giving logistic support in terms of better regulation, better facilitation and by closing the sick cooperatives and nurturing the good and economically viable cooperatives.

The main objectives of the Co-operative Department are

- Registration Supervision, assistance, Counseling and all round development of the Co-operative movement.
- To provide Co-operative Education
- Election and Audit of Co-operatives societies
- Implementation of various development schemes through co-operative societies in different sectors of the economy i.e. agriculture, farming, fisheries, diary industries, processing, marketing, housing etc.
- Promotion of autonomous functioning, democratic control and professional management of co-operative societies.
- Liquidation of societies.

**TABLE – 15.1: STATISTICS OF COOPERATIVE SOCIETIES IN ASSAM**

Year	Number of Societies	Membership (in '000 nos)	Share Capital (Rs. in Crore)	Working Capital (Rs. in Crore)
2011-12	8006	4600	98.35	2806.09
2012-13	8422	4592	102.07	2812.66
2013-14	8835	4513	103.23	3171.31
2014-15	9222	4416	84.37	3279.71
2015-16	10252	4291	90.27	3125.64
2016-17	10246	3035	25.32	1112.34

Source: Registrar of Co-operative Societies, Assam



At present there are 10246 nos. of different types of Cooperative Societies in the State including State Level Cooperative societies such as ASCARD Bank, APEX Bank, APOL, HOUSEFED, and FISHFED. Various types of Primary Cooperative Societies like Gaon Panchayat level Cooperatives (GPSS), women Cooperatives, Housing Cooperatives, Fishery & Pisciculture cooperatives, Farming Cooperatives, Consumer Cooperatives, Tourism Cooperatives, handloom Cooperatives, Dairy Cooperatives etc are also organized for specific purposes and performing various economic activities.

#### **THE COOPERATIVE STRUCTURE IN ASSAM :**

There are four major types of cooperatives in rural areas of Assam:

- The Primary agricultural credit or service societies
- Agricultural non-credit societies
- Co-operative farming societies
- Other agro-based cooperative societies- Dairy, Fishery, Horticulture, Handloom, Sericulture and ones promoting local handicrafts and artisans. For instance, Assam Coop. Bell Metal Utensil & Manufacturing Society Ltd in Sarthebari, Barpeta which is one of the oldest registered Society of the State, provides a platform as well as means of marketing to the local artisans engaged in that craft.

Assam, has two tiers of Cooperative Credit Structure. The Assam Cooperative Apex Bank Ltd. is in the upper tier and the GPSS/LAMPS (PACS) are at the bottom of the structure. The Assam Cooperative Apex Bank Ltd. offers services mainly in agricultural credit.

The Cooperation Department has emphasized for creation of awareness about the Cooperative Movement among the rural people through information and publicity by the way of Sammanita Samabay Sajagata Achoni. Towards this end an amount of Rs.3.29 lakhs has been provided, besides Government of Assam t has also provided an amount of Rs.7.50 lakhs to popularise the movement among rural people by the way of entertainment through documentary feature film etc.

#### **MULTIPURPOSE SOCIETIES:**

The cooperative societies were initially divided into credit and non credit societies. However, keeping with changing circumstances, there has been reorganization and today there are multipurpose cooperative societies which address both credit and non credit requirements of the rural poor.

The Gaon Panchayat Samabai Samity (GPSS) / Large Area Multipurpose Cooperative Societies (LAMPS) are the grass root level of two tire short term cooperative credit structure. The Gaon panchayat Samabai Samiti (GPSS) were organised in 1973 to function in the plain districts of the state. The GPSS were organised mainly for issue of Agriculture credit and distribution of essential commodities. On the other-hand, Agricultural credit in the two hill districts of the state are routed through Large Area Multipurpose Cooperative Societies (LAMPS). The Primary Agriculture Credit societies (PACS) are the backbone of the cooperative movement which measures the development of Rural India.

There are a total of 2202 numbers of GPSS in the State that deals in procurement and distribution of essential commodities. The GPSS have remained pre occupied with PDS and are functioning as PDS outlets in most of the cases in the State. The GPSS need to be re-oriented for dealing fertiliser, pesticides, farm mechanism, agriculture credit through KCC, supply of quality seeds and to provide forward backward linkage for micro finance.

#### **WOMEN COOPERATIVE SOCIETIES:**

With a view to improving the socio-economic status of women almost 2014 numbers of Gaon Panchayat level multipurpose women cooperative societies were formed in the year 1992 in Assam. But due to lack of training, motivation and required financial support only a few women cooperative societies are functioning well and doing traditional works like handloom, knitting, embroidery, pickle making etc. for economic benefit. Most of the women cooperatives are currently engaged in PDS business as an agent of GPSS. At present there are 2416 nos. of women multipurpose co-operative Societies in Assam.

#### **PROCESSING COOPERATIVES:**

A large number of Processing Units have been setup in the state under co-operative sector comprising of rice and oil mill e.g., Spinning Mill, Mustard Oil Mill, Jute Mill, etc. The Eastern Agro processing and Tea Warehousing Cooperative Society Ltd, The Assam Polyester Cooperative Society Ltd. (APOL) are organisations under the cooperative sector in the state.

APOL was started by the State Government in the year 1986. It was , a composite mill of spinning, dyeing, sizing, weaving and manufacturing of textile materials and supply of yarn to weavers. Although APOL products became a household name, it failed to sustain due to liberalisation post 1995. Also, APOL's installed capacity remained under utilised due to shortage of working capital. The Mill suspended its production on December 25, 2003. Although APOL was revived on June 1, 2006 with limited manpower and funds from the State Government, operations had to be suspended since December 31, 2016.

The Eastern Agro Processing and Tea Warehousing Cooperative Society (EAPT WCS) have been functioning without any financial assistance from the Government and is performing well and has been

earning profit. The society's Value of Sale was Rs.13.21 crores in the FY2017-18, in the FY 2018-19 it was Rs. 12.10 Crores, a dip of approximately 8% compared to than the previous FY.

**CO-OPERATIVE BANKS:**

There are three (3) types of Co-operative Bank in the State, viz., (1) ASCARD Bank, (2) Assam Co-operative Apex Bank Ltd. and (3) Urban Co-operative Bank with their branches spread all over the State. These societies are providing credit to local entrepreneurs for undertaking various types of business activities which provides employment to the unemployed youths. The State Government has taken several steps to implement the scheme of revival package of short term Co-operative Credit Structure (STCCS) through Apex Bank and Long Term Co-operative Credit Structure (LTCCS) through ASCARD Bank.

**HOUSING CO-OPERATIVES:**

There are more than 417 numbers of primary housing cooperatives at present with one apex level Society, HOUSEFED, Assam, rendering service to its members. This federation has provided housing facilities to the Central and State Government employees and extended loan for dwelling houses to the low and middle income group of people in the urban / rural areas of the State.

**CONSUMER CO-OPERATIVE:**

Consumer Co-operative are enterprises owned by consumers and managed democratically, which objects are to fulfil the needs and aspirations of their members. They co-operate within the market system. Independently of the state, as a form of mutual aid, oriented towards service rather than pecuniary profit. There are 38 urban consumer store with more than 250 affiliated primary consumer store and 640 Tea Garden Consumer store in the state. These Co-operative societies extends yeoman service to the urban people and in maintaining the price line. The Wholesale Consumer Co-operative Societies (WCCS) are involved in procuring and selling of essential commodities and other products at subsidized rates. These procured essential item required scientific storage for their proper preservation for long periods.

Some of the cooperative societies have also been recognized for their performances and rewarded. These include Karimganj Wholesale Consumer Co-operative Society Ltd. (KWCCS), Mahabhairav Consumer Co-operative Store Ltd. of Golaghat District begged the "Best Performing Consumer Cooperative Societies Award" during the year 2016-17.

**DAIRY CO-OPERATIVES:**

The most important step in developing dairy enterprises through co-operatives in Assam was the establishment of Milk Unions in line with the Anand Milk Union Limited. The first of such Milk Union in Assam is the Fast Assam Milk Producers' Cooperative Union. It was established in the year 1968, with its headquarter at Jorhat. Its operating area comprised of Sibsagar, Tinsukia, Dibrugarh, Jorhat and Golaghat districts. The West Assam Milk Producers' Co-operative Union Limited (WAMUL) came into existence in 1976 covering the erstwhile three undivided districts viz. Goalpara, Kamrup and Nagaon. The objectives were to enhance milk production in the state to make it self-sufficient for milk requirement, to create infrastructural facilities like that for milk procurement, milk distribution, etc. and to ensure supply of inputs to the farmers at their door steps at a reasonable price. The products of WAMUL are given the brand name of Purabi. WAMUL is managed by the National Dairy Development Board (NDDB), and markets a daily average quantity of over 50,000 litres of liquid milk and 7000 litres worth of milk products in Guwahati and towns of Upper and Lower Assam.

Besides there are 571 numbers of primary dairy cooperatives societies and two more regional level milk union namely East Assam Milk producers Cooperative Union Ltd. (EAMUL) and Cachar and Karimganj District Milk producer Cooperative Union Ltd. (CAMUL). Though there is vast potential in the dairy sector, the growth of the dairy cooperative societies are not satisfactory. A number of primary cooperative societies not covered by government department viz., Sitajakhala Dugdha Utpadak Samabai Samity Ltd. (SJDUSS), Kamdhenu Dairy Cooperative Society Ltd., Sundapukhuri Dairy Cooperative Society Ltd. etc. are performing well.

However financial assistance to the tune of Rs.15.86 lakhs has been provided to Sundarphkhuri Milk Cooperative Societies and Rs.14.14 lakhs to Tezpur Grazier Dugdha Samabai Samity in the year 2017-18.

**FISHERY SECTOR:**

Fishery sector has a higher growth rate than other agricultural and allied sectors and could play a pivotal role in the socio-economic development and employment generation in the state. These societies are rendering various services to the economically poor and backward schedule castes people in the state. At present there are 527 number of primary fishery co-operatives in the state.

It is necessary for creation of infrastructure and application of modern technologies in the fishery sector for boosting this sector. To popularise the Blue Revolution through fishery cooperative Societies, awareness camps and skill development programmes to fishermen are being organized at regular intervals across the State.

For development of Fishery Cooperatives, the State government has also provides financial assistance during the FY 2017-18 Tarajan Fishery Cooperative Society and Gamiri Koibarta Fishery Cooperative Society were provided an amount of Rs.15.00 lakhs.

The Apex body, FISHFED is a federation of primary fishery cooperative societies. At the close of 2018-19 FY, there were 284 nos. of member cooperatives having 41,871 members. FISHFED runs business of fresh fish marketing. For the purpose, FISHFED has acquired four vehicles with the financial assistance from NFDB. FISHFED has also air conditioned fish marketing retail outlet at Rupnagar, Guwahati. FISHFED has already constructed two cold rooms of 5000 cft. and 6000 cft. capacity. It is in the process of implementing an online application for sale of fish and fish products. During the year 2017-18, it's authorised share capital was Rs.400.00 lakhs and paid share capital is Rs.343.07 lakhs. Government sanctioned an amount of Rs.15.00 lakhs to FISHFED as financial assistance to take up the business smoothly during the year 2017-18.

It is to be noted that in the pursuance of the decision taken in the State Cabinet held on 17.10.2018, the administrative control of FISHFED has been handed over to the Fishery Department to the Government of Assam for an effective development of fishery cooperative in Assam.

**OTHER CO-OPERATIVES:**

In addition to the above mentioned Co-operative Societies, there is a large number of cooperatives like, poultry, piggery, duckery, goatery, pisciculture, cane & bamboo, brick manufacturing, transport & communication, rickshaw puller, bee keeping, blacksmith, bell metal utensils manufacturing, tourism etc. in the State. which are involved in various livelihood promotion activities.

**PERFORMANCE OF STATE LEVEL COOPERATIVE SOCIETIES:**

The performance of some of the state level credit and non-credit Co-operative institutions is elaborated below:

**ASSAM STATE COOPERATIVE APEX BANK LIMITED:**

The Assam State Co-operative Apex bank Ltd which was registered in the year 1948 is a pioneer institution in channelizing credit for agricultural operation to boost up the development process of the rural economy as well as financing other urban business and industrial activities through cooperative channel in the state. The Assam State Cooperative Bank Ltd. is rendering services mainly in Agricultural credit. Gaon Panchayat Samabai Samity (GPSS) are also adopted by this bank. Presently the bank is implementing the package of Short Term Cooperative Credit Structure (STCCS) on receiving revival assistance from Govt. of India and State Govt. The bank has played a very important role in the socio- economic development of Assam by advancing credit to agricultural allied sector, tea sector etc. The bank is managed by elected Board of Directors and a professional Chief Executive.

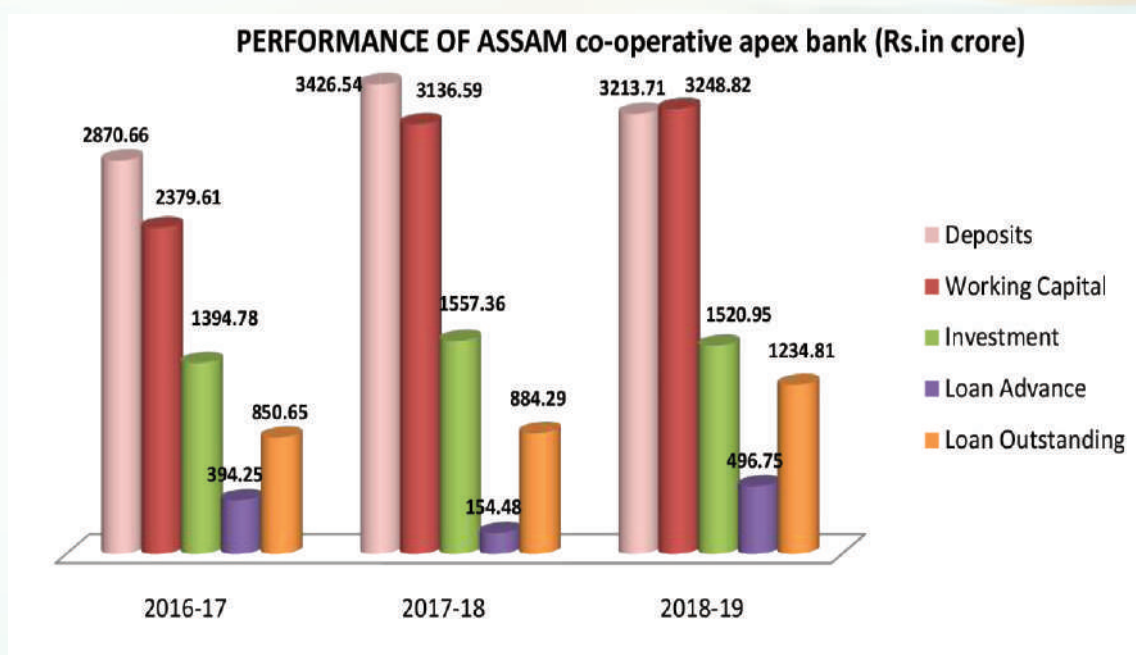
The bank's net profit was Rs.1817.33 lakhs during the FY 2016-17. The Apex Bank has 68 branches including the Head Office. All the branches have been computerized and implementing core banking solution like other Nationalised and Commercial Banks. The Capital to risk weighted assets ratio of the bank has achieved 10.65% which is a good indicator of assets to be compared with other state cooperative Banks in the country. The bank provides ATM facility to its customers like other commercial banks for smooth running the banking business. The Apex Bank also offers RTGS/NEFT facilities for its customers.

The membership of the bank has increased from 93000 in 2013-14 to 1,02,302 in 2018-19. The share capital has increased to Rs.15.27 crore in 2018-19 from Rs.9.74 crore in 2013-14. The working capital increased from Rs.2032.21 crore in 2013-14 to Rs.3248.82 crore in 2018-19.

The performance of the Assam State Cooperative Apex Bank during the last six years is shown in the table below:

**TABLE – 15.2 PERFORMANCE OF APEX BANK, ASSAM**

Particulars	Unit	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Bank Branches	No	68	67	68	68	68	68
Membership	Unit"000"	93	94	92	94	94	102
Paid of share Capital	Rs in Crore	9.74	10.84	11.75	13.44	14.86	15.27
Reserved	-- Do --	30.08	43.03	51.76	65.03	84.10	85.64
Deposits	-- Do --	1950.92	1888.50	2039.81	2870.66	3426.54	3213.71
Working Capital	-- Do --	2032.21	2079.81	1921.94	2379.61	3136.59	3248.82
Borrowing Outstanding	-- Do --	7.37	4.87	7.46	25.49	28.89	21.88
Investment	-- Do --	1268.28	1028.60	1079.15	1394.78	1557.36	1520.95
Loan Advance	-- Do --	358.77	287.95	278.57	394.25	154.48	496.75
Loan Outstanding	-- Do --	686.36	787.33	879.27	850.65	884.29	1234.81
Loan Overdue	-- Do --	135.31	88.06	95.83	91.16	71.90	88.73



**ASSAM STATE COOPERATIVE AGRICULTURE AND RURAL DEVELOPMENT BANK LTD. (ASCARD):**

The Assam State cooperative Agriculture Rural Development Bank Ltd. (ASCARD) was registered during the year 1955-56. It is a land mortgage Bank. This Bank is not a Bank under the Banking Regulation Act but the Bank is regulated under the Assam Cooperative Land Mortgage Bank Act, 1960 and the Assam Cooperative Land Mortgage Bank Rules, 1961. The ASCARD bank provides medium and long term agricultural credit. It has 28 Nos. of Branches throughout the state with more than 48 thousand members. Formerly, the primary Land Mortgage Bank (PLMB) in the District level and later on the PLMB's were reformed as primary Agriculture Co-operative Bank which were finally merged with ASCARD Bank Ltd. At present these primary Agriculture Co-operative Banks are functioning as Branches of the ASCARD Bank Ltd. Present financial position of the ASCARD Bank is precarious. The Government is yet to take steps for revival of Long Term Cooperative Credit Structure (LTCCS) as recommended by Vaidyanathan Committee Report – II (VCR-II). There has been marginal increase in share capital from Rs.6.33 crore in 2012-13 to Rs. 6.74 crore in 2018-19. Working capital has increased to 14.28 crore in 2018-19 from Rs.13.22 crores in 2012-13.

The deposits of the Bank has also increased to Rs.3.59 crore in 2018-19 from Rs.0.18 crore in 2012-13. The loans and advances issued by bank have shown improvement in the year 2017-18 compared to previous years. The loan outstanding has increased to Rs.9.94 crores in 2017-18 from Rs.8.42 crores in 2012-13.

The data containing important indicators of bank performance are presented in the table below:

**TABLE – 15.3: PERFORMANCE OF ASCARD BANK ASSAM**

Particulars	Unit	2012-13	2013-14	2014-15	2015-16	2016-17 (Prov.)	2017-18	2018-2019(P)
Bank Branches	No	28	28	28	28	28	28	28
Membership	No	44332	45886	46771	47610	54076	48208	48208
Paid up Share Capital	Rs. in Crores	6.33	6.36	6.36	6.37	6.48	6.58	6.74
Working Capital	Do	13.22	13.07	12.41	13.31	13.96	14.79	14.28
Deposits	Do	0.18	0.73	0.95	1.05	1.50	2.62	3.59
Loans and Advances	Do	0.18	0.82	0.36	0.43	1.42	1.81	2.26
Loan Outstanding	Do	8.42	8.65	8.46	8.42	9.02	9.94	10.99
Loan overdue	Do	-	-	-	-	-	-	4.54

**URBAN COOPERATIVE BANK:**

Assam at present has 8 numbers of urban co-operative banks (UCBS) with 26 branches. Till recent past, multiplicity of command, absence of clear-cut demarcation between the functions of the State Government and RBI in respect of the Banks, led to operational difficulties in implementing regulatory and supervisory measures pertaining to UCBS. To sort out the difficulty, a Memorandum of Understanding (MOU) between RBI and Government of Assam was signed in with respect to regulatory control of RBI over UCBS during the year 2008 such that functioning of such banks can be improved and confidence of depositors can be restored.

As per latest data available total membership of the UCBS functioning in Assam was 92 thousands in 2018-19 against 29 thousands in 2012-13. Similarly paid up share capital has increased to Rs.20.23 crore in 2018-19 from Rs.6.53 crore in 2012-13. A Significant increase has been observed in working capital as well (Rs.842.92 crore). Loan advances has increased to Rs.322.00 crore in 2018-19 from Rs.199.59 crore in 2012-13. Loan outstanding has increased to Rs.363.57 crore in 2018-19 from Rs. 239.45 crores in 2012-13.

**TABLE - 15.4**  
**PERFORMANCE OF URBAN COOPERATIVE BANK, ASSAM**

Particulars	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Bank Branches	NO	23	24	25	25	25	25	26
Membership	'000'NO	29	31	30	32	40	42	92.22
Paid up Capital	Rs in Crores	6.53	6.89	7.36	13.18	15.93	17.74	20.23
Working Capital	DO	595.15	616.00	687.97	723.69	773.10	600.27	842.92
Deposits	DO	522.49	602.92	604.89	479.48	690.29	724.22	767.91
Loans Advances	DO	199.59	233.04	217.71	259.87	207.85	264.00	322.00
Loan Outstanding	DO	239.45	239.10	236.24	257.24	194.82	272.07	363.57
Loan overdue	DO	13.89	18.07	21.00	26.76	23.06	30.65	35.36

**TABLE - 15.5**  
**BANK-WISE PERFORMANCE OF URBAN CO-OPERATIVE BANKS, ASSAM 2018 -19**  
*Rs. In crore*

Sl. No.	Name of the bank	Nos.of Branch	No. of Members	Paid up capital	Working Capital	Deposit	Loan/ Adv.	Loan outstanding	Loan Over due
1	The Gauhati co-operative Urban Bank Ltd.	3	4252	0.85	73.62	65.96	14.4	41.18	2.03
2	The Industrial co-operative Bank Ltd.	4	58982	12.45	248.76	233.24	161	160.64	13.96
3	Nagarik Samabay Bank Ltd.	5	2800	3.11	187.93	174.39	90.2	90.24	1.41
4	The Co-operative city Bank Ltd.	6	2802	1.45	187.43	164.32	31.10	20.94	15.06
5	Kanaklata Mahila Urban Co-operative Bank Ltd.	4	12555	0.66	13.93	8.24	2.98	7.05	0.40
6	Mahabhoirab co-operative Bank Ltd.	1	1634	0.19	14.66	16.90	10.4	10.39	0.11
7	Nalbari Urban co-operative Bank Ltd.	2	4945	1.07	77.10	68.86	NIL	20.38	0.70
8	Mangaldoi Nagar Samabai Bank Ltd.	1	4257	0.45	39.49	36	12.8	12.75	1.69
<b>TOTAL:</b>		<b>26</b>	<b>92227</b>	<b>20.23</b>	<b>842.92</b>	<b>767.91</b>	<b>322</b>	<b>363.57</b>	<b>35.36</b>

**STATE LEVEL NONCREDIT COOPERATIVE SOCIETIES:**

There are a few state level non-credit cooperative societies functioning in the Assam. The performances of these societies are presented in the Table below:

**TABLE – 15.6**  
**STATISTICS RELATED TO STATE LEVEL NON-CREDIT COOPERATIVE SOCIETIES IN ASSAM.**

Name of Societies	Year	No. of Societies	No. of Memberships	Rupees in Lakh		
				Paid up share Capital	Paid up working Capital	Value of sales
Assam Cooperative Jute Mill Ltd.	2016-17	6	569	323.93	926.65	5244.66
	2017-18	6	652	323.93	957.82	4438.40
	2018-19	6	651	323.86	352.33	5178.91
FISHFED	2016-17	285		343.10	115.66	57.50
	2017-18	277	41423	343.18	115.60	45.47
	2018-19	284	41871	NA	NA	38.47
HOUSEFED	2016-17			1636.60	15744.76	NA
	2017-18	412	21785	1626.34	14023.12	NA
	2018-19	412	21785	1620.31	15926.45	NA
Eastern Agro Processing & Tea Warehousing Cooperative Society Ltd.	2016-17	3	504	-	-	-
	2017-18	3	503	98.15	2459.65	1314.03
	2018-19	3	505	97.90	1972.55	1321.21
Assam Polyester Cooperative Society Ltd	2016-17	37	4590	1648.12	NA	NA
	2017-18	37	4590	NA	NA	NA
	2018-19	NA	NA	NA	NA	NA
The West Assam Milk Producer's Co-operative Union Ltd	2016-17	-	-	-	-	-
	2017-18	196	9480	92.40	-	9406.42
	2018-19	224	12365	92.40	-	10218.05

**ASSAM STATE COOPERATIVE UNION (ASCU):**

The Assam State Cooperative Union (ASCU) is an apex level cooperative organization for promotion of cooperative education, training, publicity and propaganda activities in the State of Assam. It was registered on 12<sup>th</sup> September 1955.

**THE AIMS AND OBJECTIVES OF ASCU:**

- To promote and develop cooperative movement in Assam.
- To educate, train and guide people and to assist them in their efforts to build and expand the Cooperative sector
- To serve as an exponent of cooperative union.
- To propagate and publicize the cooperative principles and ideas in order to create public opinion in favour of the movement by holding seminars, conferences etc.
- To arrange for inter-state study visit in other cooperatively developed States of India.

**ASSAM POLYESTER COOPERATIVE SOCIETY LTD. (APOL):**

The Assam Polyester Cooperative Society Ltd. is the only surviving cooperative spinning mill in Assam. It was registered on 14<sup>th</sup> September 1981 under the Assam Cooperative Societies Act 1949. Initially, the Mill was set up as a spinning unit with 19,200 Spindles by purchasing 86 bigha of land at Tulshibari, Rangia, with financial involvement of Rs.12 crore in June, 1988.

The main objective of the society is to promote the economic interest of the members by under-taking activities like spinning, dyeing, weaving and manufacturing of textile (polyester) materials of all kinds and supply of yarn of all types to weavers and others. Due to lack of working capital, the mill stopped its production in December, 2003 and after persistent efforts the mill re-started its production from the year 2006. More than 600 employees were engaged in production of yarn in different counts and these were supplied to the local markets as well as markets of Kolkata.

The Govt. of Assam has taken steps to revive the mill through up-gradation and replacement of the obsolete machineries under the sponsorship from North Eastern Council (NEC). The NEC has sanctioned a project of Rs 457.34 lakhs for Up-gradation / Replacement of Machineries. As per the NEC scheme 90% of the total cost of Rs 457.34 lakhs was to be borne by the NEC amounting to Rs 411.60 lakhs and balance 10% amounting to Rs 45.74 lakhs was State Share to be borne by the Govt. of Assam. Its authorized share capital is Rs. 2000.00 lakhs, paid up share capital is Rs.1648.05 lakhs and upto 2015-16

its accumulated loss is Rs.2804.35 lakhs. The Government of Assam provided an amount Rs.100.00 lakhs as revival assistance to APOL during the year 2017-18. However, to cut down its operational cost, the Government of Assam had sanctioned an amount of Rs.1243.55 lakhs for implementing Voluntary Retirement Scheme for 380 numbers of employees. For last few years the Mill has stopped its function.

**Infrastructure support under Rural Infrastructure Development Fund (RIDF):**

The State Cooperative Department has initiated steps for boosting rural storage infrastructure by construction of rural Godowns in various Gaon Panchayat Samabay Samity (GPSS), Large Area Multipurpose Cooperative Societies (LAMPS) and other cooperative societies with the help of the National Bank for Agriculture and Rural Development (NABARD) sponsored RIDF XVIII scheme. The Government has released a mobilization advance of Rs.24.08 lakhs for construction of 105 numbers of rural Godowns under RIDF in the year 2017-18. NABARD has sanctioned a sum of Rs.2343.08 lakhs and released an amount of Rs.1954.64 lakhs to the Government during the year 2017-18. Moreover, the Government has released an amount of Rs.122.87 lakhs as state share for construction of 244 numbers of rural Godowns during the year 2017-18. As on 1<sup>st</sup> December 2018, out of 244 Godowns, construction of 222 Godowns has been completed and the remaining were in progress. As per NABARD's State Focus Paper, 2019-20 an amount of Rs.100.91 crores has been sanctioned to the State Govt. of Assam against 246 nos. of projects under co operative sector under RIDF scheme.

**TABLE – 15.7  
NO. OF CO-OPERATIVE SOCIETIES BY TYPES OF CO - OPERATIVE IN ASSAM**

SL. NO.	TYPES OF CO.OPERATIVE SOCIETY	NO. OF SOCIETIES
1.	State Level Co-operative societies	38
2.	Gaon Panchyat Smabay Samity/Primary Agriculture Credit Societies (714-old+1488-New)	2,202
3.	Large Area Multipurpose Co-operative Societies (60-old+26 New)	86
4.	Village Council Multipurpose Co-operative Societies (BTC)	114
5.	Wholesale and Consumer Society	315
6.	Women Multipurpose	2,416
7.	Primary Dairy	571
8.	Thrift and Credit	905
9.	Poultry and Duckery	251
10.	Agriculture/Krishipam/Farming	480
11.	Primary Fishery	527
12.	Primary Housing	199
13.	Industrial	531
14.	Marketing and Processing	115
15.	Labour and Contract	124
16.	Other Co-operative	549
17.	Co-operative bank	9
18.	Livestock	1,182
19.	SHG Federation	107
20.	Trading	382
21.	Village Organisation	324
22.	Agro Producer Co-operative	222
	<b>TOTAL:</b>	<b>11,649</b>

**ADMINISTRATIVE REFORMS:**

In order to strengthen the cooperative movement in the State, there is need to create an environment for functioning of the Cooperative Societies. Bureaucratization of cooperative system has sapped its voluntary mode of functioning. There is need to provide a more democratic space in the light of Vaidanathan Committee's recommendation. Participation of women in cooperative sector also needs to be encouraged in the State and a sound management practice should be developed which can go a long way in creating rural employment and livelihood security among the rural households in the State.

**State Level Cooperative Societies with status: 2019-20**  
**Annexure -15.1**

Sl. No.	Name of the Society	Status
1	Assam Coop: Apex Bank Ltd.	Functional
2	Assam State Agriculture & Rural Development Bank Ltd.	Functional
3	West Assam Milk Producers Coop: Union Ltd.	Functional
4	Assam Coop: Housing Federation Ltd.	Functional
5	Assam Apex Fish Marketing & Processing Federation Ltd.	Functional
6	Eastern Agro Processing & Tea Warehousing Coop: Society Ltd.	Functional
7	Assam State Coop: Union Ltd.	Functional
8	Assam Polyester Coop: Society Ltd.	Functional
9	Assam Coop: Jute Mills Ltd.	Functional
10	Union Coop: Bank Ltd.	Functional
11	Kamrup Telecom Dist. BSNL Staff Coop: Society Ltd.	Functional
12	Assam State SC Thrift & Credit Coop: Society Ltd.	Functional
13	Setu Thrift & Credit Coop: Society Ltd.	Functional
14	Asomi Thrift & Credit Coop: Society Ltd.	Functional
15	Procesta Thrift & Credit Coop: Society Ltd.	Functional
16	Assam State Coop: Federation Ltd.	Functional
17	Assam Diploma Engineers Welfare Coop: Society Ltd.	Functional
18	Assam Bahumukhi Samabai Samiti Ltd.	Functional
19	Assam Weavers Coop: Society Ltd.	Non Functional
20	Assam Tea Planters Coop: Society Ltd.	NonFunctional
21	Assam Cadre Management Coop: Society Ltd.	Non Functional
22	Assam State Educational Development Coop: Society Ltd.	Non Functional
23	Assam Nava Nirman Bahumukhi Samabai Samiti Ltd.	Functional
24	Navika Multipurpose Coop: Society Ltd.	Functional
25	Kaziranga Jatia Orchid Aru Jaivik Baichitra Udyan S.S. Ltd.	Functional
26	Shrimanta Shankardev Sangha Thrift & Credit CS Ltd.	Functional
27	Assam vegetable Growers CS Ltd.	Functional
28	Sarat Chandra Singha Coop: Sugar Mill Ltd.	Functional
29	The Cooperative City Bank Ltd.	Functional
30	Nagarik Samabai Bank Ltd.	Functional
31	Industrial Coop: Bank Ltd.	Functional
32	Guwahati Urban Coop: bank Ltd.	Functional
33	SBI office thrift & Credit CS Ltd.	Functional
34	Assam Rural Development Union Thrift & Credit CS Ltd.	Functional
35	Brahmaputra Besa Kina Marketing CS Ltd.	Functional
36	Assam Circle BSNL thrift & Credit CS Ltd.	Functional
37	Inland waterways ( Assam Sector) Thrift & Credit CS Ltd.	Functional

**Annexure -15.2**

Details of Primary/District Level Cooperative Societies, 2019-20		
Sl. No.	Type of Cooperative Societies	Nos. of Societies
1	<b>GPSS</b>	<b>2202</b>
2	<b>LAMPS</b>	<b>86</b>
3	<b>Village Council Multipurpose Coop: Societies (BTC)</b>	<b>114</b>
4	<b>Wholesale Consumers</b>	<b>315</b>
5	<b>Women Multipurpose</b>	<b>2416</b>
6	<b>Primary Dairy</b>	<b>571</b>
7	<b>Thrift and Credit</b>	<b>905</b>
8	<b>Poultry &amp; Duckery</b>	<b>251</b>
9	<b>Agri/Krishipam/Farming</b>	<b>480</b>
10	<b>Primary Fishery</b>	<b>527</b>
11	<b>Primary Housing</b>	<b>199</b>
12	<b>Industrial</b>	<b>531</b>
13	<b>Marketing &amp; Processing Coop:</b>	<b>115</b>
14	<b>Labour and Contract Coop:</b>	<b>124</b>
15	<b>Other Coops:</b>	<b>549</b>
16	<b>State Level Coop:</b>	<b>38</b>
17	<b>Bank and Branches</b>	<b>9</b>
18	<b>Livestock</b>	<b>1182</b>
19	<b>SHG Federation</b>	<b>107</b>
20	<b>Trading</b>	<b>382</b>
21	<b>Village Organization</b>	<b>324</b>
22	<b>Agro Producers' Coop:</b>	<b>222</b>
	<b>Total:-</b>	<b>11649</b>



**CHAPTER-XVI****PRICES AND PUBLIC DISTRIBUTION SYSTEM**

Economic activities as well as the purchasing power of the people of a country are greatly influenced by the changes in commodity prices. Rising prices leads to increase in income inequality and affects the income groups at lower end. It is critical to have a continuous watch on the price behavior and adopt appropriate regulatory measures. The measure of Price Index helps to read the relative change in price level with reference to time, geographical location and other characteristics.

**PRICE SITUATION IN ASSAM:**

An increase of retail prices of commodities affects the purchasing power of people, which in turn affects the living condition of the people. Retail Price is defined as the price paid by the consumer which includes all the taxes and excludes the discounts. To monitor the variations of price level, the Directorate of Economics and Statistics, Assam on every week collects retail prices of 28 essential commodities from 27 urban and 26 rural centres of Assam.

**PRICE INDICES:**

Inflation in the economy is measured by taking into account of the Wholesale Price Index (WPI) based on the prices of the wholesale markets and the Consumer Price Index (CPI), which is calculated based on the prices of the retail market.

**WPI OF AGRICULTURAL COMMODITIES IN ASSAM:**

The Directorate of Economics and Statistics measures the WPI of agricultural commodities. Table 16.1 shows WPI of agricultural commodities in Assam with 1993-94 as the base of 100 for last ten years.

**TABLE-16.1**  
**INDEX NUMBER OF WHOLESALE PRICES OF AGRICULTURAL COMMODITIES IN ASSAM FOR LAST TEN YEARS**

Year	Index	Percentage Variation
2009-10	249	12.67
2010-11	272	9.24
2011-12	287	5.51
2012-13	296	3.14
2013-14	336	13.51
2014-15	391	16.37
2015-16	373	(-) 4.60
2016-17	369	(-) 1.07
2017-18	389	5.42
2018-19	406	4.48

In the past ten years WPI of agriculture commodities showed highest increase of 16.37% during 2013-14 to 2014-15, the index showing a rise from 336 to 391. The index during, 2015-16, however, showed significant decline from the previous year. The trend of monthly variations of WPI of agricultural commodities in Assam is presented in Table 16.2 and graph below.

**TABLE NO-16.2**  
**MONTHLY VARIATIONS OF WPI OF AGRICULTURAL COMMODITIES IN ASSAM**

Year 2017-18, Base 1993-94=100		Year 2018-19, Base 1993-94=100	
Month	Index	Month	Index
April' 2017	380	April' 2018	396
May' 2017	385	May' 2018	398
June' 2017	386	June' 2018	400
July' 2017	387	July' 2018	404
Aug.' 2017	389	Aug.' 2018	406
Sept.' 2017	390	Sept.' 2018	407
Oct.' 2017	391	Oct.' 2018	408
Nov.' 2017	390	Nov.' 2018	409
Dec.' 2017	391	Dec.' 2018	410
Jan.' 2018	392	Jan.' 2019	412
Feb.' 2018	394	Feb.' 2019	413
March' 2018	395	March' 2019	414

**CONSUMER PRICE INDEX OF THE STATE: :**

The Consumer Price Index represents the average changes over the time in the prices paid by the ultimate consumers for a fixed basket of goods and services.

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation, Government of India has introduced a new series of Price Indices with base year 2012 for the county as a whole and

states/UTs separately for rural and urban areas as well as of combination of rural and urban areas. The annual average consumer price Index (with base 2012=100) in Assam for rural, urban and rural and urban combined for the year 2018 is measured at **140.0**, **135.9** and **137.7** against the All India annual average indices of 140.7, 136.5 and 138.7 respectively. The increase in general indices for rural, urban and rural and urban combined for Assam during 2018 over the year 2017 were 6.9%, 5.2% and 5.0% respectively. Table 16.3 shows monthwise Consumer Price Index (General) for rural, urban and rural and urban combined for Assam and India as a whole for the year 2018 and 2019 with the year 2012 as base of 100.

**TABLE-16.3**  
**CONSUMER PRICE INDEX NUMBER (GENERAL) FOR RURAL, URBAN AND COMBINED FOR 2018 AND 2019, (Base 2012=100)**

Month	ASSAM			ALL INDIA		
	Rural	Urban	Combined	Rural	Urban	Combined
January'18	137.8	130.7	136.3	139.3	134.1	136.9
February'18	136.3	136.3	131.0	138.5	134.0	136.4
March'18	135.6	137.1	131.2	138.7	134.0	136.3
April'18	135.9	137.9	132.3	139.1	134.8	137.1
May'18	137.5	138.6	132.8	139.8	135.4	137.8
June'18	139.6	131.9	138.0	140.5	136.2	138.5
July'18	140.9	132.9	139.8	141.8	137.5	139.8
August'18	141.4	134.6	140.0	142.5	138.0	140.4
September'18	141.5	138.4	140.9	142.1	138.1	140.2
October'18	143.5	137.7	142.3	142.2	138.9	140.7
November'18	145.3	137.1	144.0	142.4	139.0	140.8
December'18	145.0	137.1	143.4	141.9	138.0	139.7
<b>Annual average'18</b>	<b>140.0</b>	<b>135.9</b>	<b>137.7</b>	<b>140.7</b>	<b>136.5</b>	<b>138.7</b>
January'19	144.2	137.1	142.7	141.0	138.0	139.6
February'19	144.1	137.7	142.8	141.0	138.6	139.9
March'19	144.0	138.8	142.9	141.2	139.5	140.4
April'19	143.9	140.0	143.1	141.7	140.6	141.2
May'19	145.0	141.4	144.3	142.4	141.5	142.0
June'19	145.9	142.7	145.2	143.6	142.1	142.9
July'19	147.4	144.6	146.8	145.6	143.3	144.2

**CONSUMER PRICE INDEX NUMBER FOR INDUSTRIAL WORKERS (CPI-IW):**

Consumer Price Index for the industrial workers, disseminated in 1946, is the oldest among the CPIs measured in India. This index takes into account of prices of a fixed basket of goods and services consumed by industrial workers.

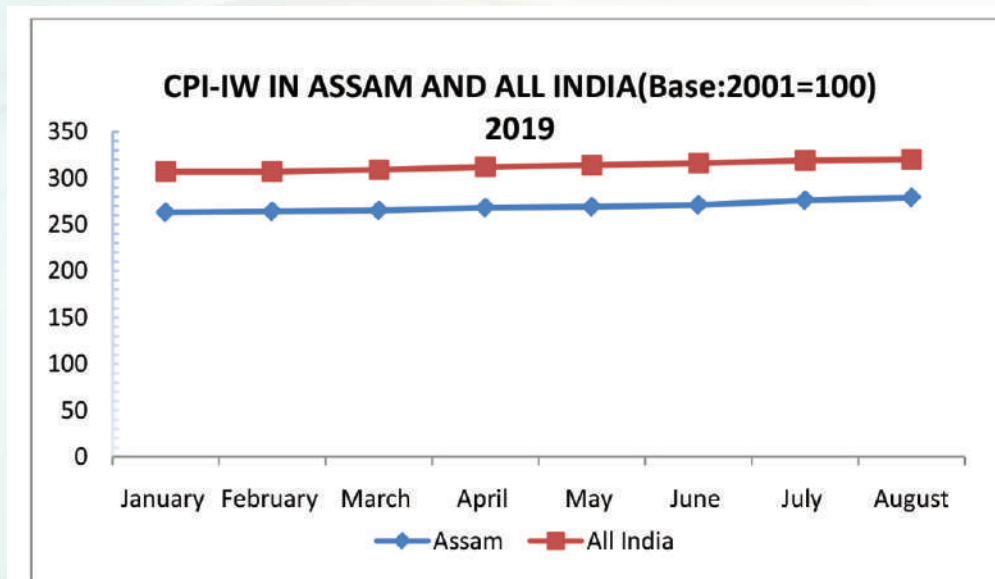
CPI-IW is primarily used for the determination of Dearness Allowance (DA) and Variable Dearness Allowance (VDA) being paid to the public sector employees in India besides fixation and revision of minimum wages in scheduled private sector employees. CPI IW is also used to formulate economic and social policies in India. Since its inception in 1946, The Labour Bureau of Ministry of Labour, Government of India has been compiling and maintaining CPI for Industrial Workers. The CPI IW of 2001 is considered all encompassing as prices altogether 392 consumption items from 289 markets of 78 centres of the country were taken into account to prepare the index. In Assam, the CPI for Industrial workers with new base of the year 2001=100 as well as of the old base year 1982=100 are constructed and compiled by taking weighted average of the indices for the five centres namely, Guwahati, Doomdooma (Tinsukia), Labac (Silchar), Morioni (Jorhat) and Rangapara (Tezpur).

**TABLE-16.4**  
**CONSUMER PRICE INDEX NUMBER FOR INDUSTRIAL WORKERS OF FIVE CENTRES OF ASSAM (Base 2001 = 100)**

Sl. No.	Period	Guwahati	Morioni (Jorhat)	Doomdooma (Tinsukia)	Labac (Silchar)	Rangapara (Tezpur)
1	2	3	4	5	4	5
1	January '2018	250	241	258	262	241
2	February 2018	249	241	258	259	241
3	March '2018	249	241	260	257	240
4	April '2018	249	244	260	258	244
5	May '2018	250	244	261	259	244
6	June '2018	251	249	264	261	246
7	July '2018	259	252	270	264	249
8	August '2018	260	253	271	263	252
9	September '2018	261	253	271	264	251
10	October '2018	263	257	272	266	252
11	November '2018	260	254	275	268	252
12	December '2018	261	253	269	268	249
	<b>Annual Average</b>	<b>255</b>	<b>249</b>	<b>266</b>	<b>262</b>	<b>247</b>

Source: Directorate of Economics and Statistics, Assam.

The point to point rate of inflation in the five centres of Assam during the year 2018 depicted in the following graph-



**ANNUAL AVERAGE TREND IN CPI-IW:**

The annual average CPI of five centres of Assam and all India average are presented in table 16.5.

**TABLE-16.5  
CONSUMER PRICE INDEX NUMBER FOR INDUSTRIAL WORKERS (GENERAL)  
CPI-IW (General), Base 2001=100 for year 2019.**

Sl. No.	Period	Base 2001 = 100						
		Guwahati	Morioni	Doom-Dooma	Labac	Ranga-para	Assam	All India
<b>1</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>9</b>
1.	2011	168	171	170	186	163	174	192
2.	2012	184	185	182	197	171	184	209
3.	2013	198	195	196	216	186	198	232
4.	2014	214	217	213	243	213	220	247
5.	2015	239	238	241	253	231	244	268
6.	2016	243	241	246	257	237	245	274
7.	2017	247	243	259	258	241	249	281
7.	2018	252	246	263	260	245	253	292
8.	2019*	277	261	278	277	254	269	313

\*(Average of eight months from Jan'2019 to Aug'2019)

During the year 2018, the CPI (IW) in Assam had increased to 253 from 249 in 2017. By percentage point this was an increase of 1.61 percent against 3.91 percent increase in all India CPI- IW during the same period.

The rate of increase of CPI IW in 2018 over the previous year was highest in Guwahati ( 2.02%), and lowest in Labac (0.78%). Table 16.6 shows that all India average of CPI IW is higher than the state of Assam. It is however seen that the rate of growth of the indices during the eight months (January to August, 2019) is higher for Assam (6.0%), than the average of the country (4.2%).

**TABLE-16.6  
CPI-IW IN ASSAM AND ALL INDIA (BASE 2001=100)**

Months	Assam	All India
January '2019	263	307
February '2019	264	307
March '2019	265	309
April '2019	268	312
May '2019	269	314
June '2019	271	316
July '2019	276	319
Aug '2019	279	320

**CONSUMER PRICE INDEX NUMBER FOR WORKING CLASS POPULATION IN ASSAM WITH BASE 2001=100 AND IN OLD BASE 1982=100:**

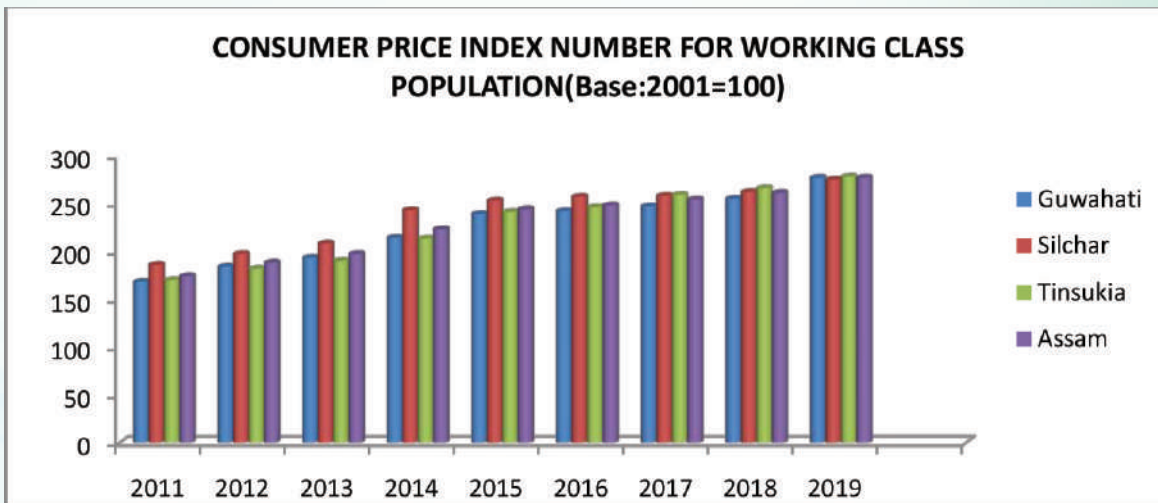
The CPI for working class population for the state is compiled by Directorate of Economics and Statistics, Assam taking into account the weighted average of the indices of the three centres viz. Guwahati, Silchar and Tinsukia.

The index at old base 1982=100 is obtained by multiplying the index of the new base 2001=100 to the linking factors provided by the Labour Bureau. Table 16.7 presents the CPI for working class population with base 2001=100 from the year 2011 to 2019.

**TABLE-16.7  
CONSUMER PRICEINDEX NUMBER FOR WORKING CLASS POPULATION IN ASSAM (Base 2001 = 100)**

Sl. No.	Period	Guwahati	Silchar	Tinsukia	Assam
(1)	(2)	(3)	(4)	(5)	(6)
1	2011	168 (7.69)	186 (4.49)	170 (6.25)	174 (6.10)
2	2012	184 (9.52)	197 (5.91)	182 (7.06)	188 (8.05)
3	2013	193 (4.89)	208 (5.58)	190 (4.40)	197 (4.79)
4	2014	214 (10.88)	243 (16.83)	213 (12.11)	223 (13.20)
5	2015	239 (11.68)	253 (4.12)	241 (13.15)	244 (9.42)
6	2016	242 (1.26)	257 (1.58)	246 (2.07)	248 (1.64)
7	2017	247 (2.07)	258 (0.39)	259 (5.28)	254 (2.42)
8	2018	255 (3.24)	262 (1.55)	266 (2.70)	261 (2.76)
9	2019 (Average of 8 months from Jan'2019 to Aug.'2019)	277 (8.63)	275 (4.96)	278 (4.51)	277 (6.13)

Source : Directorate of Economics and Statistics, Assam.



The annual average CPI for the working class population with base 2001=100 in Assam was increased by 59.2 % during 2011 to 2019. During the period of eight years highest increase was recorded during 2013-14 with an increase of 13.20% and lowest increase was recorded during 2015-16. Among 3 centres Guwahati recorded highest increase by 22 points during 2018-19 with an increase of 8.63 percent.

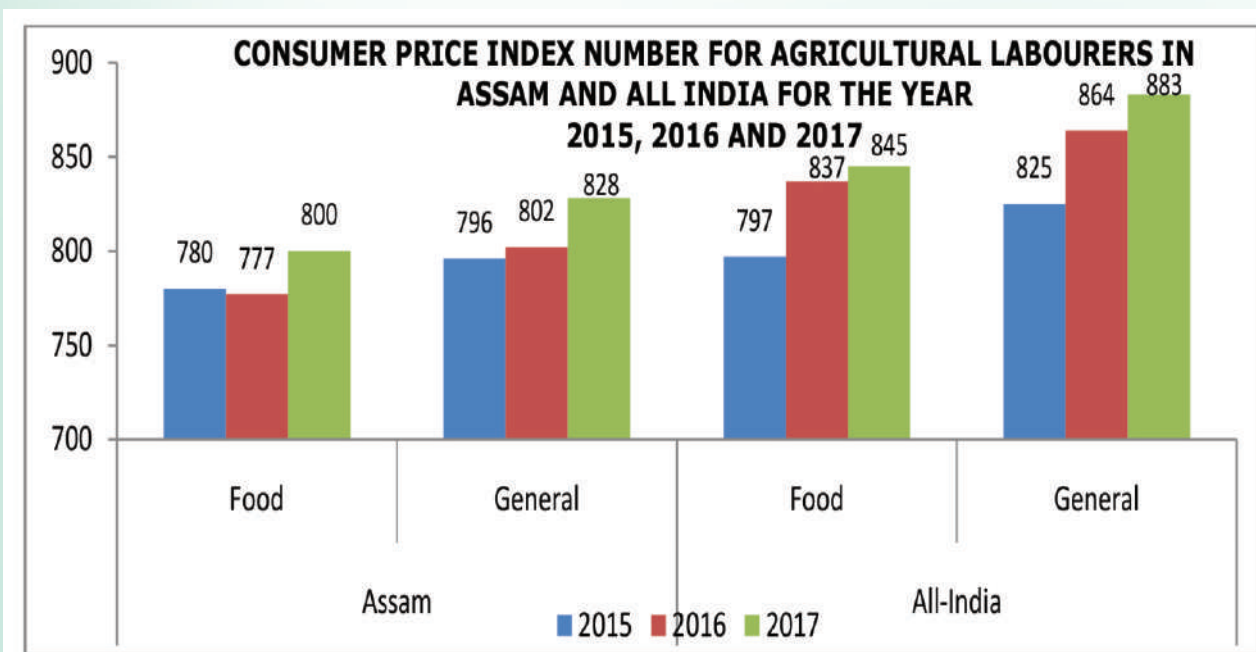
**CONSUMER PRICE INDEX NUMBER FOR AGRICULTURAL LABOURERS (CPI-AL):**

The Labour Bureau, Shimla has been compiling CPI numbers for Agricultural Labourers for 20 states including Assam with the base year 1986-87. CPI-AL is being utilized for fixation and revision of wages engaged in agricultural occupation under Minimum Wages Act, 1948. At all India level from 20 states

600 villages have been selected for the purpose of collecting the retail prices and this data is being utilized for computation of index numbers. The collection of retail prices in the selected villages have been entrusted to Field Operations Division (FOD) of NSSO, Government of India. The CPI for Agricultural Labourers for the state of Assam and All India average with Food and General Index for the years 2013 to 2017 are presented in Table 16.8

**TABLE-16.8**  
**CONSUMER PRICE INDEX NUMBERS FOR AGRICULTURAL LABOURERS IN ASSAM AND ALL INDIA FOR THE YEAR 2013 TO 2017**

Sl. No	Year	Assam		All-India	
		Food	General	Food	General
1	2013	706 (10.65)	708 (8.58)	724 (13.48)	735 (12.73)
2	2014	770 (9.06)	776 (9.60)	769 (6.22)	788 (7.21)
3	2015	780 (1.29)	796 (2.57)	797 (3.64)	825 (4.69)
4	2016	777 (-0.38)	802 (0.75)	837 (5.01)	864 (4.73)
5	2017	800 (2.96)	828 (3.24)	845 (0.96)	883 (2.20)



It can be observed from the above table that during the five years period highest. The CPI for agriculture labourers showed highest increase for the state during 2013-14 by 9.1 & for food items and 9.6% for general items. This period also show highest increase in Food Index at All India level during the reference period of 2013-17. The following sections of this chapter present the scenario of public distribution system and implementation of schemes to ensure food, nutrition and energy security in the state.

**PUBLIC DISTRIBUTION SYSTEM:**

Public Distribution System is a major instrument of the Government's economic policy for ensuring availability of food grains at affordable prices as well as to provide food security to the poor. It is an important component for poverty eradication and is intended to serve the poor who are nutritionally at risk. Public Distribution System in India is perhaps the largest distribution system of its type in the world. Public Distribution System is operated under the joint responsibility of the central and the state governments in India. The central government has taken the responsibility for procurement, storage, transportation and bulk allocation of food grains; while the responsibility of distribution food articles to the consumers through the network of fair price shop entrusted with the state governments. In Assam, the Food and Civil Supplies Department looks after the allocation and distribution of food grains, identification of families below poverty line, issue of ration cards and supervision and monitoring of

stock position and distribution of food articles. The department is also entrusted with the responsibility of procurement of paddy and rice under 'Minimum Support Price' scheme of the 'Food Management Policy' of the Ministry of Food and Public Distribution, government of India to ensure remunerative price to the producers for their agricultural produce and to provide the procured food grains to the consumers at fairly reasonable and affordable price. The following sections presents a note on various schemes adopted at central sector and implemented by the state of Assam towards ensuring food and nutritional security and the targets achieved.

**NATIONAL FOOD SECURITY ACT 2013 (NFSA,13):**

The National Food Security Act, 2013 was launched in December, 2015 throughout the state of Assam. The targeted population under NFSA, 2013 in the state is 2,52,18,001. Under the Antodaya Anna Yojana (AAY) the target is to cover 7,04,000 families. The government targets to cover 84.2 % population of rural areas and 60.4% population of urban areas under the NFSA, 2013. Till November 5, 2019 the scheme has selected, 5095466 numbers of priority households families covering a population of 22049994, and 691764 AAY families covering a population of 2844304 (grand total of PH and AAY families are 5787230 and total population is 24894298 as per ERCMS as on 05/11/2019. Allocation of fund for transportation and commissioned cost of Rice under the NFSA for last three years are as follows (both the central and state share).

YEAR	TRANSPORTATION COST	COMMISSION
2016-17	183,83,67,273	196,80,72,250
2017-18	182,97,53,520	183,92,55,657
2018-19	279,45,40,903	237,03,73,225

**Affordable nutrition and nourishment assistance scheme:**

The scheme was launched in March 2019. The NFSA card holder beneficiaries of tea garden areas of the state receive Rice free of cost and the other NFSA card holder beneficiaries get Rice at Rs.1/- per Kg.

**Pradhan Mantrir Ujjwala Yojana:**

Under the PMUY free LPG connections are provided to the BPL households. The selection of the households is based on the Socio Economic Caste Census (SECC data base exercise initiated in the year of 2011). The Oil and Petroleum Marketing Companies are the Nodal Agencies for implementation of the scheme throughout the state of Assam. The Government of Assam is implementing the PMUY since May, 2017. The following table present the targets, achievement and fund released to the nodal agencies for implementation of the scheme.

Financial Year	Target	Target achieved	Fund released to OMCs
2017-18	10,65,603	11,28,137	100,59,46,920/-
2018-19	152525	1425537(upto Nov/2018)	141,12,81,630/-

Government of Assam vide letter no.FSA.80/2016/Pt-II/3 dated 16/06/2017, has paid the Oil Marketing Companies at the rate of Rs. 990.00 per beneficiary against their bills. In addition, Government of India and the Government of Assam have provisioned subsidy for each of the connection, which are as follows -

1. Government of India :
  - i) Security Deposit for per cylinder : Rs. 1250.00
  - ii) Security of Pressure Regulator : Rs. 150.00
  - iii) Suraksha Hose 1.2 M : Rs. 100.00
  - iv) DGCC : Rs. 25.00
  - v) Inspection/Installation/Demonstration : Rs. 75.00
  - Total : Rs. 1600.00**
2. Government of Assam :
  - i) Per beneficiary : Rs. 990.00

**AAMAR DUKAN:**

"Amar Dukan" scheme is an initiative of government of Assam to provide relief to the citizens from the burden caused by excessive price rise of essential commodities. The licensees of fair price shops are given responsibility to run the shops "Amar Dukan" and sale essential commodities at a reasonable price or a price lesser than the open market price. The Deputy Commissioners of the districts and Heads of Autonomous Councils of the state are the authorities to select the licensees for operation of the scheme. A total of 5623 Fair Price Shop Licensees at present are functioning in Assam. "Amar Dukan" at presents deal with 23 selected essential commodities. These commodities cover 22 non-PDS commodities and one PDS commodity, iodised salt.

The following table shows the number of "Amar Dukan" targeted and functional in the state and resources released for the scheme during 2016-17 to 2018-19.

## Economic Survey, Assam, 2019-20

Financial Year	Target	Target achieved	Fund released
2016-17	588	588	3,89,40,300/-
2017-18	588	588	3,89,40,300/-
2018-19	830	768	5,08,60,800/-

The items distributed through the "Aamar Dukan" are -

(i) Rice, (ii) Branded / premium rice, (iii) Sugar, (iv) Gur, (v) Pulses (Masur Dal) (vi) Pulses (Moong Dal), (vii) Packaged iodised Salt (Tata, Nirma, Captain Cook etc.), (viii) Biscuit and Confectionary, (ix) Packaged Atta, (x) Packaged Maida, (xi) Packaged Suji, (xii) Tooth Paste, (xiii) Soaps (bathing and washing), (xiv) Packaged tea (Tata, Golaghat, Nameri etc.), (xv) Spices (MDH, Sona, etc. age marked / FPO Products) (xvi) Packaged Ghee, (xvii) Packaged Butter, (xviii) Chana (Gota), (xix) Moong (Gota), (xx) Potato, (xxi) Onion, (xxii) Edible Oils (Mustered, Soya, Dalda, Vegetable, Refined etc.), (xxiii) PDS iodised Salt.

### AAMAR DUKAN ON WHEELS:

In addition to the "Aamar Dukan" government of Assam has taken up another scheme called "Aamar Dukan on Wheels" in the year of 2017-18. In addition to the objectives of "Aamar Dukan" this scheme has an additional focus of supporting the educated unemployed. The government of Assam had provisioned 200 "Aamar Dukan on Wheels" in the financial year of 2017-18 and 220 in the year 2018-19. The scheme accommodated 36 essential commodities and make available for the consumers at reasonable price.

The following table indicated the target achieved by the state to operationalise the "Aamar Dukan on Wheels" scheme and fund released for the purpose.

Financial Year	Target	Target achieved	Fund released
2017-18	200	145	72,50,000/-
2018-19	220	192	96,00,000/-

### CONSTRUCTION OF GODOWN:

Government of India had sanctioned Rs.957.00 lakhs to the government of Assam during 2017 -18 for construction of Food Storage Godowns under central sector scheme. The construction works of five godowns are under progress. One of the godowns is located in Majuli District. Utilisation of the financial provisions and physical achievement of the scheme during the last three years are presented:

Name of the Scheme	Financial year	Financial achievement		Physical achievement	
		Budget provision (Rs.in lakhs)	Expenditure (Rs.in lakhs)	Target	Achievement
Construction of Godown	2016-17	0.00	0.00	0.00	0.00
	2017-18	0.00	0.00	0.00	0.00
	2018-19	957.00	29.72	6 Godowns	Construction of 5 under progress

The state at present has 66 godowns under possession of Assam State Agriculture Marketing Board and 43 godowns under Assam State Warehousing Corporation with storage capacity 4775 MT and 116662 MT respectively. There are 38 godowns under operation of Food Corporation of India.

### GRIEVANCES AND REDRESSAL OF THE CONSUMERS

#### CONSUMER COURTS:

The state has one State level Consumer Redressal Forum at Guwahati and 23 District level Consumer Redressal Forums, under the provisions of Consumer Protection Act, 1986. The Food and Civil Supplies Department is the state nodal centre of redressal forums. To create consumer awareness among the masses, the department has undertaken various activities such as advertisements through the print and electronic media, distribution of pamphlets, leaflets, organizing painting and essay competition among children and observance of National Consumers Day on 24<sup>th</sup> December and World Consumer Day on 15<sup>th</sup> March every year.

Under the scheme "Confonet" , internet connectivity to the 23 District Consumer Forums and State Level Consumer Forum are provided to expedite redressal of grievances of the consumers. The online grievance redressal system is headed by an Additional Deputy Commissioner in each district of the state.

#### TPDS COMPUTERIZATION:

Data of all the selected beneficiaries and GPSS/ Fair Price Shop have been digitized as a part of end to end computerization of supply chain management under NFSA, 2013. Internet connectivity is being provided up to GPSS level as part of component 1 of the end to end computerization of TPDS. A state transparency portal [www.fcs.assam.gov.in](http://www.fcs.assam.gov.in) has been developed for the purpose.

#### MEASURES TAKEN UP TO CHECK PRICE RISE OF ESSENTIAL COMMODITIES:

The State Administration along with District and Sub-Division holds regular meetings with the trading communities and also holds monthly coordination meetings with the FCI, Railways, IOC, trade and public bodies to have information on availability of stock and price. The price of essential commodities is monitored on daily basis by reviewing the daily price bulletins. Steps are also taken to ensure home

delivery of LPG cylinders and to reduce the margin of wholesale and the retail prices of commodities by monitoring the prices of essential commodities collected from the major Indian cities. To check price rise Vigilance and Monitoring Committees has been constituted at the District, Sub-Divisions and District Council level.

**ANNEXURE- 16.01**  
**MONTHLY ALLOCATION OF PDS ITEMS IN ASSAM**  
**(DURING THE PERIOD January 2018 onwards to latest Month available)**

Month	NFSA Rice (in MT)		Wheat	SK Oil
	AAY Rice	PH Rice	(in MT)	(in KL)
1	2	3	4	5
January/2019	24235.680	110124.090	5781.00	20460
February/2019	24236.310	110148.575	5781.00	20484
March/2019	24236.555	110168.970	5781.00	20520
April/2019	24234.420	110214.145	5781.00	20388
May/2019	24233.545	110263.380	5781.00	20508
June/2019	24232.285	110288.960	5781.00	20568
July/2019	24225.635	110234.560	5781.00	13392
August/2019	24216.395	110219.750	5781.00	13368
September/2019	24221.785	110215.395	5781.00	13392
October/2019	24214.855	110229.635	5781.00	13368
November/2019	24213.105	110243.120	5781.00	13368
December/2019	24211.110	110259.460	5781.00	13416
Assam	290711.68	1322610.04	69372.00	203232

AAY= Antrodoya Anna Yojona; PH= Priority House; NFSA= National Food Security Act.

**ANNEXURE-16.02**  
**DISTRICT WISE FAIR PRICE SHOP HOLDER OF "AAMAR DUKAN" IN ASSAM, 2018-19**

District	Nos. of "Aamar Dukan"
1	2
Kokrajhar	64
Dhubri	254
Goalpara	137
Barpeta	195
Morigaon	120
Nagaon (including Hojai)	303
Sonitpur (including Biswanath)	370
Lakhimpur	432
Dhemaji	171
Tinsukia	244
Dibrugarh	401
Sivasagar	442
Jorhat	295
Golaghat	383
Karbi Anglong	100
Dima Hasao	20
Cachar	253
Karimganj	61
Hailakandi	130
Bongaigaon	272
Chirang	72
Kamrup	136
Kamrup Metro	284
Nalbari	198
Baksa	85
Darrang	70
Udalguri	66
South Salmara	65
<b>Assam</b>	<b>5623</b>



## ANNEXURE-16.03

## DISTRICT WISE AAY,PHHAND TOTAL NUMBER OF RATION CARD AND MEMBERS DETAILS AS PER ERCMS AS ON NOVEMBER, 2019

District	AAY Rice(In Qtls)	PHH Rice(In Qtls)	Total Cards	AAY Members (Nos.)	PHH Members (Nos.)	Total Members (Nos.)
1	2	3	4	5	6	7
Kokrajhar	8054.25	34590.65	186952	94992	691813	786805
Dhubri	13224.4	69119.35	345166	168434	1382387	1550821
Goalpara	6846.35	35801.3	178622	87096	716026	803122
Barpeta	13183.8	60202.5	306927	157149	1204050	1361199
Morigaon	7173.6	35609.2	187133	81867	712184	794051
Nagaon	20211.8	100678.75	444106	267582	2013575	2281157
Sonitpur	14175.35	70102.1	383679	161924	1402042	1563966
Lakhimpur	8544.55	37331.5	198094	104276	746630	850906
Dhemaji	6018.25	24892.35	136021	69163	497847	567010
Tinsukia	11128.95	46895.1	254743	114621	937902	1052523
Dibrugarh	10655.75	49418.15	257776	114996	988363	1103359
Sivasagar	10926.65	40843.2	235223	119364	816864	936228
Jorhat	10771.25	37863.75	229145	122339	757275	879614
Golaghat	10271.8	37984.5	219876	110900	759690	870590
Karbi Anglong	4701.9	32186.9	142880	58834	643738	702572
Dima Hasao	2054.5	7266.95	34382	30423	145339	175762
Cachar	12981.15	61481.45	321036	155225	1229629	1384854
Karimganj	7752.15	45559.85	234332	90284	911197	1001481
Hailakandi	5252.1	25902.6	128822	57682	518052	575734
Bongaigaon	5689.95	25859.75	135551	73077	517195	590272
Chirang	4918.9	16618	95261	55709	332360	388069
Kamrup	14400.4	52484.7	295841	171093	1049694	1220787
Kamrup (M)	2786.35	32093.5	161753	33775	641870	675645
Nalbari	7752.15	26371.3	150762	93932	527426	621358
Baksa	8027.25	31992.9	194623	87428	639858	727286
Darrang	6263.95	33507.7	161197	73712	670154	743866
Udalguri	8363.6	29773.2	167181	89365	595464	684829
<b>Assam</b>	<b>242131.05</b>	<b>1102431.2</b>	<b>5787084</b>	<b>2845242</b>	<b>22048624</b>	<b>24893866</b>

**ANNEXURE-16.04**  
**DISTRICT WISE NUMBER OF FAIR PRICE SHOPS (FPS) AS PER SIMS AS ON 05-11-2019**

District	No. of Fair price Shop
1	2
Kokrajhar	1241
Dhubri	1983
Goalpara	1028
Barpeta	2107
Morigaon	1171
Nagaon	3058
Sonitpur	2077
Lakhimpur	1893
Dhemaji	1567
Tinsukia	1684
Dibrugarh	1716
Sivasagar	1970
Jorhat	1617
Golaghat	2043
Karbi Anglong	822
Dima Hasao	371
Cachar	2048
Karimganj	1155
Hailakandi	918
Bongaigaon	710
Chirang	569
Kamrup	1755
Kamrup (M)	785
Nalbari	785
Baksa	871
Darrang	1072
Udalguri	1220
<b>Assam</b>	<b>38236</b>

**ANNEXURE\_ 16.05**  
**ALLOTMENT, OFFTAKE AND DISTRIBUTION OF FOODGRAINS TO FPS UNDER NFSA**

Year	RICE ( in MT)			WHEAT ( in MT)		
	Allotment by GoI	Off-take by GOA	Distribution to FPS	GOA	Off-take by GOA	Distribution to FPS
1	2	3	4	5	6	7
2016	1604767.44	1609803.94	1537192.91	69379.32	69379.32	46392.89
2017	1625751.96	1600147.007	1561633.22	69379.32	69379.32	67138.38
2019	1625751.96	1613321.72	1478742.21	69372	69372	63591

Source: (Table 29.04 to 29.08), Directorate of Food and Civil Supplies and Consumer Affairs, Assam

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## CHAPTER-XVII

### LABOUR, EMPLOYMENT AND WAGES

Survival of all the civilisations depends on certain basic activities, and activities those help to raise efficiency of the basic activities. Activity or work thus is part of everyone's life, and occupation in certain form ensures identity and dignity of a person, well-being and development as a human being. Economic development in addition to creation of opportunities for employment needs to ensure decent working conditions and earning with freedom, safety and dignity at work. Ministry of Labour & Employment, one of the important Ministries of the Government of India, tries to ensure living conditions and dignity of work force of the country by protecting and safeguarding interest of the workers and providing social security net to the labour force in both organized and unorganized sectors by enactment and implementation of various Acts and labour laws. The state governments are enacting legislations to address wellbeing of the working class, labour being a subject under Concurrent List of the Constitution of India.

The state government besides implementing various national employment programmes has initiated programmes to lessen the burden of unemployment by creating and utilizing the potential employment avenues to possible extent. The population censuses, different quinquennial rounds of National Sample Survey on employment and unemployment and Economic Census provide detailed structure of the workforce and labour force of the country and states as well. Data derived from these sources help to read the trend of employment and unemployment and the aspects on wellbeing of the workforce.

#### EMPLOYMENT AS PER POPULATION CENSUS 2011:

The Census of India defines 'work' as participation of a person in any economically productive activity with or without compensation, wages or profits. The year preceding the date of enumeration is taken as the reference period for determining a person as worker or non-worker. The Census of India collects information on economic activity of an individual and classifies the worker into two groups namely, main workers who had worked for the major part of the reference period i.e. 6 months or more and marginal workers who had worked less than six months during the reference period of one year. Table 17.1 shows the trend of main workers, marginal workers and non workers in Assam to the past three censuses.

**TABLE-17.1**  
**DISTRIBUTION OF TOTAL WORKERS, MAIN WORKERS, MARGINAL WORKERS AND NON-WORKERS IN ASSAM**

Year	Population	Total Workers	Main Workers				Marginal Workers	Non-Workers	
			Total	Cultivators	Agricultural Labours	Household Industry Workers			Other Workers
1991	22414322	8088935	6992056	3559117	844964	61455	2526520	1096879	14325387
2001	26655528	9538591	7114097	2680092	636351	178082	3619572	2424494	17116937
2011	31205576	11969690	8687123	3138554	903294	242071	4403204	3282567	19235886

Figure I below shows that proportion of main workers to total population in Assam has decreased from 31 percent in 1991 to 28 percent in 2011, though the main workers in absolute number has increased by 24 percent during the period 1991 to 2011. On the other hand, the proportion of marginal workers shows an increasing trend both in percentage share and absolute number during 1991 to 2011. The proportion of non-workers to total population though remained same (about 64 percent) in 1991 and 2001, it showed marginal decline in 2011.

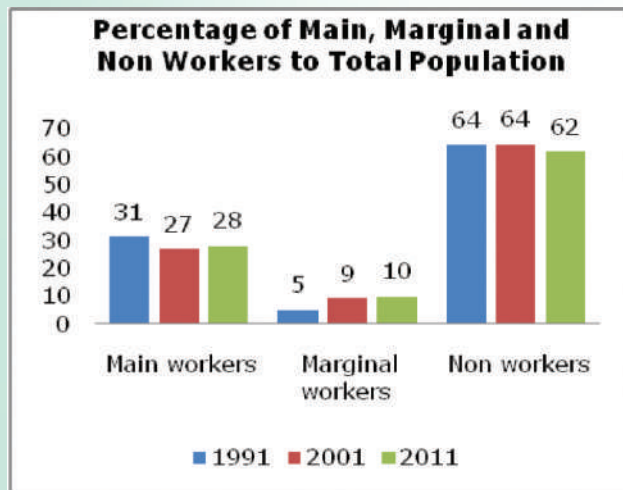


Fig.-I

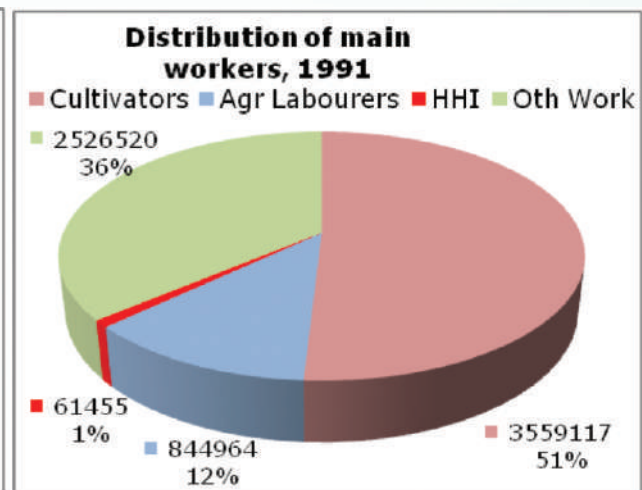


Fig-II

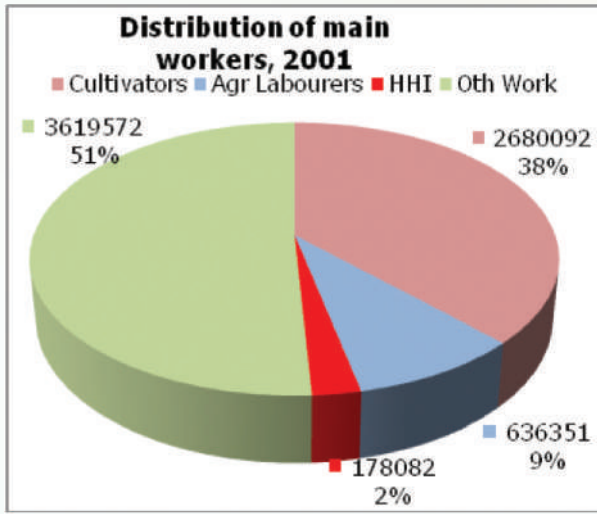


Fig-III

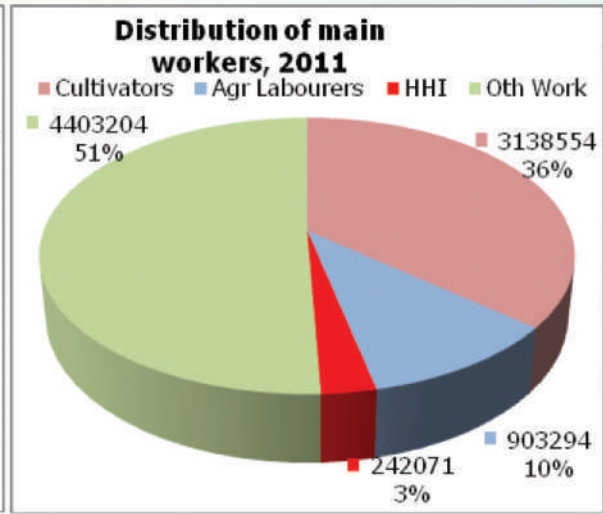


Fig-IV

Figures II, III, IV show that there is shift in the structure of main workers, with movement of the workforce from agricultural sector to non-agricultural sector. In 1991 the proportion of main workers in agriculture sector (cultivator and agriculture labourers) was 63 percent; the figure declined to 46 percent in 2011. Data, thus show significant increase in workers in non-agriculture sector of the state. During the period 1991 to 2011 proportion of workforce engaged in household industry sector of the state has shown increase from 1 percent in 1991 to 3 percent in 2011. Male-female distribution of main workers, marginal workers and non workers in the state is presented in the following bar diagram.

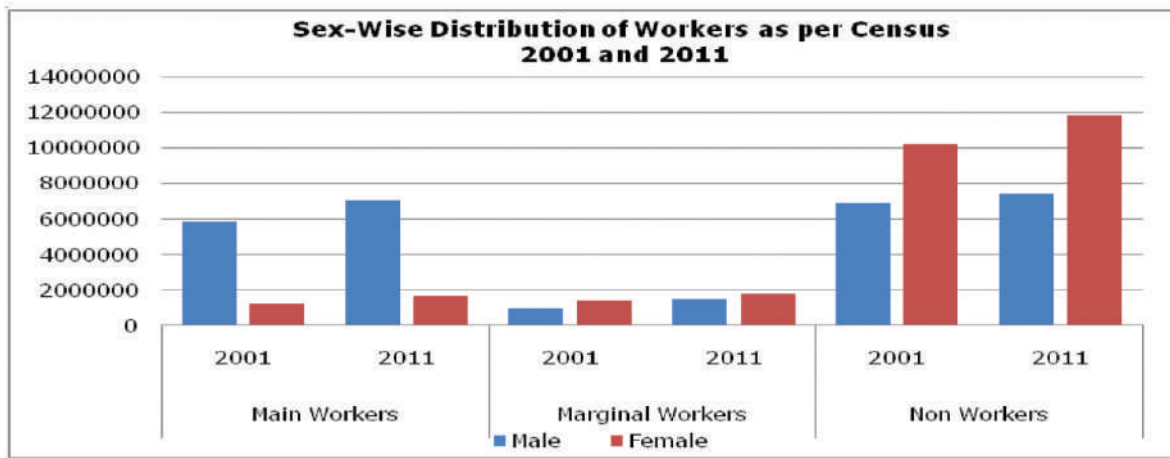


Fig-V

Data show that during 2001 to 2011 work participation rate (by main workers) of male and female workers in the state has shown increases from 42 percent to 44 percent for male and 10 percent to 11 percent for female.

**EMPLOYMENT IN SHOPS AND COMMERCIAL ESTABLISHMENTS**

The Labour Bureau of Ministry of Labour and Employment, Government of India publishes report on employment in shops and commercial establishments covered by the various Central and State Acts on the basis of returns or reports submitted by the States and Union Territories. The report on shops and establishment in Assam is prepared on the areas covered under the Assam Shops and Establishment Act, 1971. The report shows that the total number of establishments in Assam covered under the Act and persons employed therein during 2014 were 91 thousands and 1.35 lakh respectively. Out of these 91 thousand establishment, 70 thousands (77 percent) were shops, 15 thousands (16 percent) were commercial establishments and 6 thousands (7 percent) were cinemas, theatres, hotels and restaurants; and employed 65 thousands (48 percent), 50 thousands (37 percent) and 20 thousands (15 percent) persons respectively. A comparison of number of shops and establishment in Assam during the period 2008 to 2014 is shown in Table 17.2.

**TABLE-17.2**  
**EMPLOYMENT IN SHOPS AND COMMERCIAL ESTABLISHMENTS IN ASSAM**  
(\*000 number)

Year	Shops		Commercial Establishment		Restaurants, Theatres etc.		All Establishment	
	Number	Workers	Number	Workers	Number	Workers	Number	Workers
2008	61	55	10	29	5	14	76	98
2009	57	53	10	30	4	13	71	96
2010	61	57	10	32	4	14	75	102
2011	56	57	11	33	4	14	71	104
2012	70	65	13	39	5	17	88	120
2013	68	56	12	43	4	16	84	116
2014	70	65	15	50	6	20	91	135

Source: Statistical Year Book, 2018, MOSPI, Govt. of India

**EMPLOYMENT MARKET IN FORMATION (EMI) PROGRAMME**

EMI programme provides information about the level of employment in the organised sector of the economy, which covers all establishments in the public sector and non-agricultural establishments employing 10 or more persons in the private sector. Collection of data under the EMI programme is reported through an 'Establishment Reporting System'. The trend of employment in public and private sector from 2010 to 2018 as per data collected through Employment Market Information Programme for Assam is shown below.

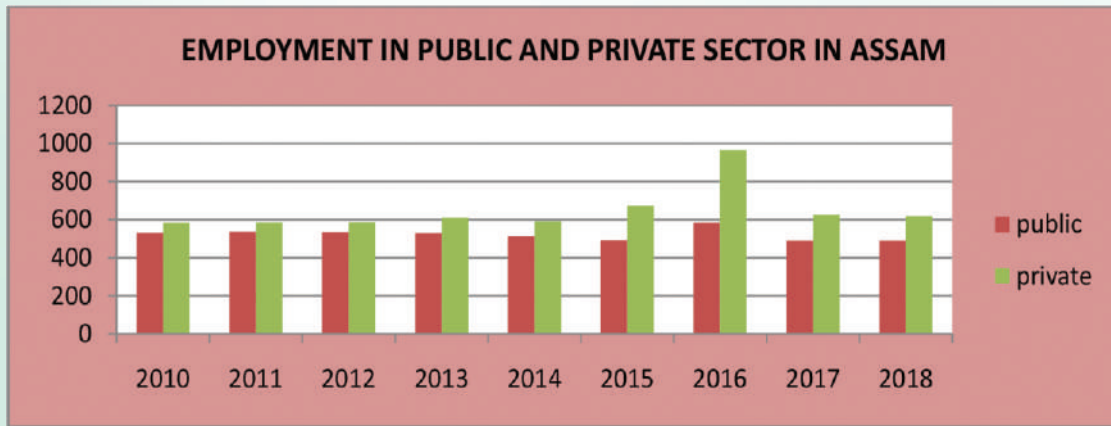
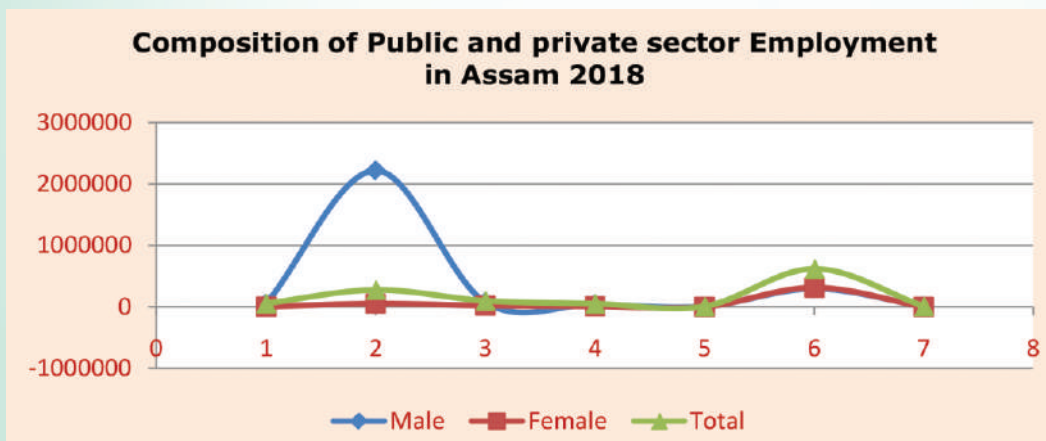


Fig-VI

The total employment in the public and private sector establishments under EMI programme in 2018 was 11.08 lakh (in public sector 4.89 lakh and in private sector 6.19 lakh) compared to 11.15 lakh (in public sector 4.90 lakh and in private sector 6.25 lakh) in 2017. During 2018, female employment was 36.6 percent of the total employment as compared to 37 percent in 2017. Out of the total 4.89 lakh employment in public sector, share of local bodies was 1.62 percent and share of state quasi government was 10.56 percent in the year 2017. The figure VII shows the composition of public and private sector employment in Assam during 2018.



**FIG-VII**  
234

**WOMEN EMPLOYMENT IN ORGANIZED SECTOR -**

Employment of women in organized sector of the state was 406 thousand in 2018, declined from 411 thousand in 2017. In 2018 women accounted for 36.6 percent of the total employment in organized sector (public sector accounting for 22.5% and private sector share being 77.5%) of the state (Table 17.3). Time series data show rising share of women in organized sector work during the period 2004 to 2018, though there were variations in share contributed by both the public and private sectors. Overall, women's engagement shows growth in the organized components of both public and private sectors.

**TABLE-17.3**  
**EMPLOYMENT OF WOMEN IN ORGANIZED SECTOR**  
(In thousand nos.)

Year	Public Sector		Private Sector		Public and Private Sector		Percentage Share of Women in Organised sector
	Women	Total	Women	Total	Women	Total	
2004	77.3	525.1	255.6	572.0	332.9	1097.2	30.0
2005	81.5	524.5	268.4	605.2	350.0	1140.0	30.7
2006	81.8	519.7	299.0	599.7	380.7	1119.4	34.0
2007	84.9	527.0	310.8	640.5	395.7	1167.5	33.9
2008	85.6	527.3	266.5	554.6	352.1	1081.9	32.5
2009	87.3	531.7	273.0	571.7	360.3	1103.4	32.7
2010	87.0	531.1	279.7	583.0	366.7	1114.1	32.9
2011	89.0	537.0	279.9	583.5	369.0	1120.6	32.9
2012	90.1	535.7	280.5	584.8	371.0	1120.5	33.1
2013	90.5	529.3	294.9	609.5	385.4	1138.8	33.8
2014	94.4	515.2	288.8	590.8	383.2	1106.0	34.6
2015	89.7	492.4	304.1	673.7	393.8	1166.2	33.8
2016	91.0	583.0	319.0	966.4	410.0	1549.4	26.5
2017	91.1	490.1	320.2	625.3	411.4	1115.5	36.9
2018	91.4	489.9	314.7	619.7	406.2	1109.7	36.6

Source: Directorate of Employment and Craftsmen Training, Assam

The Figure VIII shows the trend of engagement of women in public and private sectors of the state during 2011-2018.

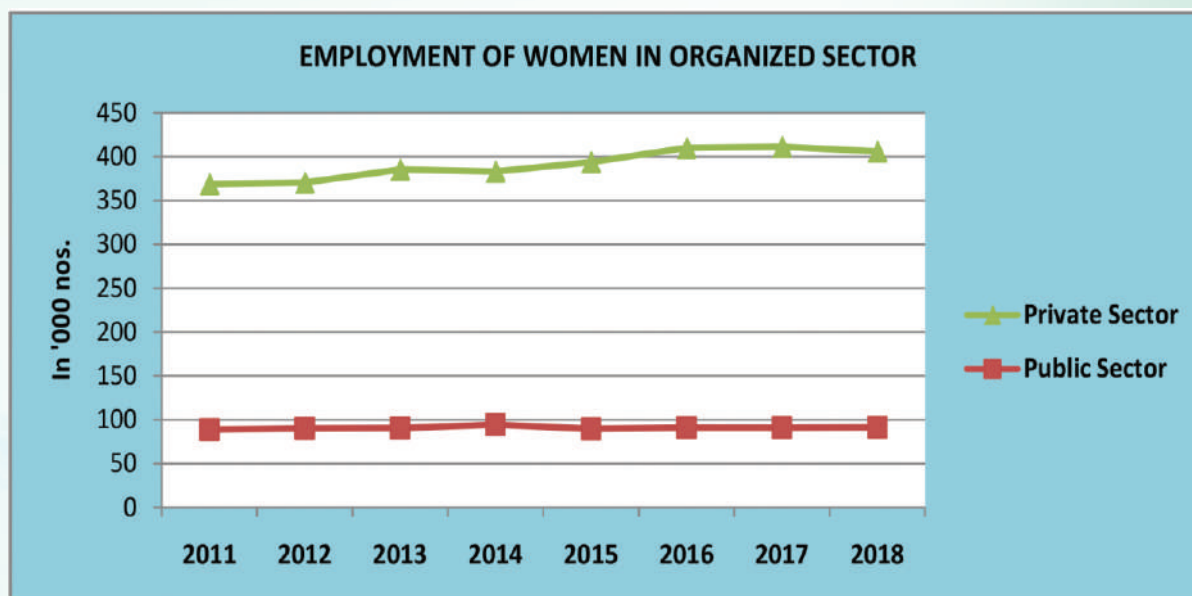


FIGURE-VIII

**UN-EMPLOYMENT SCENARIO IN THE STATE:**

The state has 52 employment exchanges comprising of 47 general, 2(two) nos. of special employment exchanges and 3 (three) Employment Information and Guidance Bureau. Moreover, there are 29 Employment Information and Assistance Bureau to guide the unemployed youths for employment. Two Districts of BTAD, Baksa and Chirang have no employment exchanges. Table 17.4 shows the number of unemployed as per live register in the state.

**TABLE-17.4  
EMPLOYMENT THROUGH EMPLOYMENT EXCHANGES**

YEAR	No. in Live Register	Percentage increase/decrease in Live register	No. of Vacancies Notified	No. of Placement Against Vacancies
2010	1911431	(-)0.08	2606	455
2011	1729029	(-)9.54	1401	436
2012	1622729	(-)6.15	2632	394
2013	1677192	3.36	4204	745
2014	1746520	4.13	2829	1099
2015	1915886	9.70	2672	1028
2016	2010603	4.94	2147	582
2017	1963376	(-) 2.35	2395	1023
2018	2024446	(-)3.11	833	985

Source: Directorate of Employment and Craftsmen training, Assam

The size of the educated job seekers is considerably high in the state. From the records of the live register of employment exchanges, the registered educated job seekers stood at 1699977 during 2018, as rise by 2.1 percent from 1665866 recorded during 2017. The percentage of educated job seekers constitutes 84 percent of the total job-seekers. In the year 2018 a noticeable rise is observed in registration of job seekers across all levels of educations. The year 2018 shows an increase in registration of Engineering Graduates, Medical Graduates, Agriculture Graduates, Veterinary Graduates, ITI passed, Post Graduates, Diploma holders and Others respectively. The detail distributions of the educated job seekers are presented in Table 17.5.

**TABLE-17.5  
DISTRIBUTION OF EDUCATED JOB-SEEKERS**

Level of Education	Registration		Placement		Numbers in live register	
	2017	2018	2017	2018	2017	2018
Engineering Graduate	1589	1638	49	44	7804	7966
Medical Graduate	91	94	16	15	942	962
Agriculture Graduate	28	29	1	2	832	292
Veterinary Graduate	41	42	2	2	327	334
Passed out Trainees (ITI)	16450	16962	51	51	16121	16456
Post Graduates	2864	2953	127	115	16576	16921
Graduates	31183	32153	192	174	317824	324438
H.S.S.L.C.	78068	80496	163	148	682796	697006
H.S.L.C.	57511	59300	269	244	567340	579147
Diploma Holders(Eng.)	4241	4373	28	25	9167	9368
Others	5690	5867	125	125	46137	47097
Total	197756	203907	1023	928	1665866	1699977

Source: Directorate of Employment and Craftsmen Training, Assam

Registration of educated job seekers as per record of employment exchanges has increased by 3.1 percent during 2017-2018. The figure IX shows the share of registered educated job seekers by categories of education in 2018.

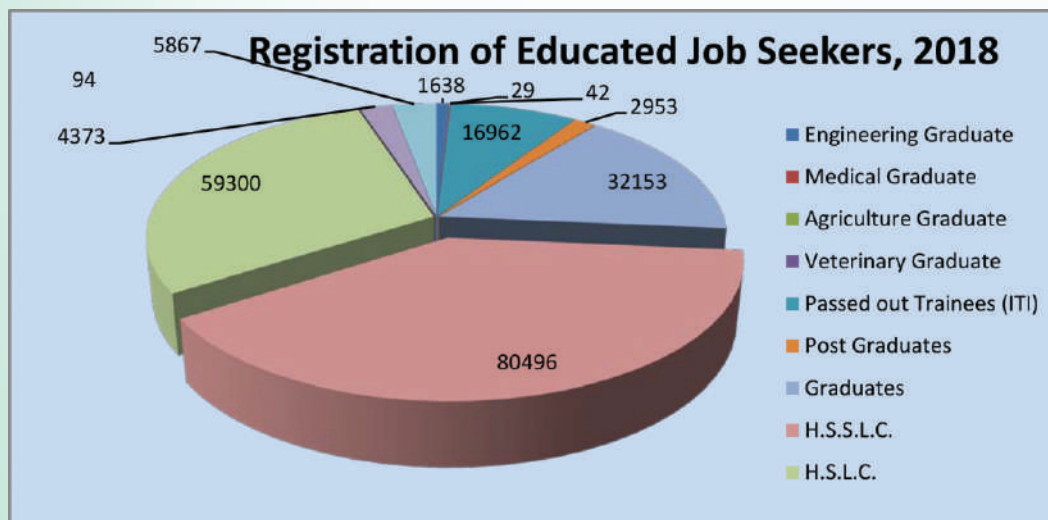


FIGURE-IX

**AVERAGE DAILY WAGE IN RURAL AREAS:**

Data on wages collected by the Directorate of Economics and Statistics, Assam, show that average daily wage of skilled, unskilled and other agricultural labours shows an upward trend. The wage rate in rural areas shows that in unskilled categories, wage rate of male ploughman has increased by 2 percent and male reaper and harvester has increased by 9 percent. During 2017-18, the female wage rate for reaper and harvester has increased by 12 percent over the previous year. The wage rate (other agricultural labour) for male and female has increased by 14 percent and 14 percent respectively during 2017-18 over the previous year 2016-17.

**TABLE-17.6**  
**AVERAGE DAILY WAGE IN RURAL AREAS IN ASSAM (in Rs.)**

Year	Skilled Labour Wage		Un-skilled Labour Wage				Other Agricultural Labour	
	Carpenter	Black-smith	Ploughman	Herdsman	Reaper and Harvester		Man	Women
	Man	Man	Man	Man	Man	Women		
2010-11	150	131	120	117	112	87	137	92
2011-12	155	133	125	120	119	93	137	98
2012-13	196	189	18	164	164	135	169	126
2013-14	220	217	220	172	204	173	206	174
2014-15	305	249	244	196	225	189	234	188
2015-16	325	283	260	203	241	198	239	196
2016-17	349	289	278	220	261	214	256	210
2017-18	369	313	284	267	285	239	293	239

Source: Directorate of Economics and Statistics, Assam.

**EMPLOYMENT GENERATION PROGRAMME:**

Our economy is developing at a fast pace but still a major part of the population who are poverty ridden, illiterate and lack of skill needs support to earn. Keeping this in mind the Central Government and the State Government has initiated and implemented many programmes for self and wage employment generation as well as for creation of production of assets through various organisations like, the Panchayat and Rural Development Department, Directorate of Industries and Commerce, Agriculture Department, etc. The achievements of some of these programmes are briefly discussed as follows:

**SAROTHI-THE START-UP ASSAM:**

The entrepreneurs of the State, more particularly the 1<sup>st</sup> generation entrepreneurs had to step back before converting their ideas into reality due to lack of adequate resources such as equity, loan, etc. Moreover, Banks in the State deter to provide assistance considering it to be risk for them. To remove this hurdle of equity/fund crunch, the State Government has come up with an innovative scheme Chief Minister's Start-up Fund-"Sarothi" with an initial amount of Rs.10 crore during 2016-17. The fund will be managed by the Industries and Commerce Department and will be for a period of five years. The basic objective of the scheme is to provide financial assistance in the form of loan with interest subvention through a designated Bank covering whole Assam. The loan so availed by the beneficiaries will be supported by the State Govt. through Interest Subvention at the rate of 5 percent per annum. The Physical target for the year 2017-18 is 1298 No. of entrepreneurs and the total sponsored is 253 Nos.(fund for the year 2016-17).

**BIPONI:**

"Biponi" is an innovative marketing scheme for Micro and small entrepreneurs of Assam. The basic objective of the scheme is to provide support to participate in different trade fairs and events within the state, in the country and abroad for marketing of their products. All registered Micro and small entrepreneurs are eligible for this scheme.

(a) Within the State: Maximum ceiling of Rs 5,000/ per entrepreneur towards stall rent and extra Rs 500.00 per day for the entrepreneur participating from another district to meet travelling, food and lodging expenditure.

(b) Outside the State: Selected participants will be reimbursed 50 % of the stall rent subject to a ceiling of Rs 10,000/ only and actual sleeper class to and fro railway fare for two (2) persons per unit along with Rs 300/ per person per day for the actual fair period towards food and lodging expenses.

(c) Outside the Country: Selected participants will be provided free stall on sharing basis and actual Economy Class airfare for one (1) person per unit along with Rs 1000/ per person per day for the actual fair period towards food and lodging expenses.

In this scheme an exhibition (Mela) for marketing promotion in four (4) numbers of districts was fixed and for this 515 number of units is sponsored for the year 2017-18.

**SVAYEM:**

Swami Vivekananda Assam Youth Empowerment (SVAYEM) yojana announced on February 2017 is a flagship programme to provide financial support to the youths of Assam to take up income generating



activities in the manufacturing ,trading and service sectors. About 1(one) lakh youths of Assam will be provided suitable credit support for taking up income generating enterprises. The main objectives of this scheme is to generate employment opportunities in rural as well as urban areas through setting up of a new venture as well as developing existing ones. This scheme will provide financial assistance to micro and small business entities engaged in the manufacturing, trading and service sectors and to provide financial assistance for enhancement of income level of traditional artisans ensuing sustainable growth. The government have allocated a sum of Rs.300 crore in 2018-19 for this scheme. The government will expand the program and provide necessary support to offer loans at subsidized rates to cover additional one lakh youths.

**NATIONAL RURAL LIVELIHOOD MISSION:**

In Assam, the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) is being implemented through Assam State Rural Livelihoods Mission. Assam State Rural Livelihoods Mission (ASRLM), is working with a mission to reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities. In the last three years ASRLM extended the programme to 156 blocks and 23 districts and reached all 219 blocks across 33 districts of the state. Under DAY- NRLM, a total of 2,37,306 SHGs have been formed covering 24,35,799 rural households. In order to ensure sustainability, the new SHGs are federated into village organizations (VOs) and cluster level federations (CLFs). In the past 3 years, 5098 VOs and 242 CLFs have been formed raising the total number to 9348 VOs and 250 CLFs in the state. Financial assistance in the form of Revolving Fund of Rs.15000 per SHG and Community Investment Fund of Rs 50000/- per SHG have been provided to 43834 SHGs during the last three years. Besides these grants, during past 3 years the ASRLM also facilitates bank credit (Loan) to SHGs; a total of 53480 SHGs have availed credit from various banks amounting to Rs 492.6 Crore. With the objective of enhancing the income of the SHG members' household, ASRLM in the last three years have implemented a number of livelihoods projects based on the interest and ability of the SHG members and resource availability in their localities. namely Million Soul Project (Solar lamp assembling and distribution) (471 members) Layered Poultry Project (227 members) Water Hyacinth Craft Project (600 members), Sanitary Napkin Project (81 members), Mushroom Development Project (200 members) Handloom Value chain Project (1000 members), Hillbroom & Maize (2000 members), Ajeevika Grameen Express Yojana (470 members), Biodegradable solid waste Management (250 members), Fishery project (1387 members), Value Chain development of Piggery Project (4500 members), Bee Keeping and Honey Processing Project table – 17.7).

**TABLE-17.7**

<b>Summary of Livelihood Special Initiatives during 2018-19</b>			
Sl. No.	Project Name	Total Beneficiary	Total Income
1	Million Soul Project	470	1,80,92,746
2	Fishery Project	1201	2,75,64,232
3	Incense Stick Making	243	10,65,415
4	Backyard Poultry Project	227	5,79,192.00
5	Ajeevika Grameen Expand Yojana	50	22,90,725
6	Water Hyacinth Craft Project	289	44,52,585
7	Sanitary Napkin Project	74	3,34,250
8	Mushroom Development Project	200	19,17,015
9	Handloom Value Chain Project	787	79,93,157

**KANAKLATA MAHILA SABOLIKARAN YOJANA (KAMS):**

Govt, of Assam with the noble aim of Empowering Women by forming Self Help Groups and capacitating them on the path of sustainable livelihood launched Kanaklata Mahila Sabolikaran Yojana (KAMS) on first day of

April 2018. The scheme aspires to boost the confidence of rural women to take up measures for their economic development and reduce the poverty and unemployment problems they face in their daily lives. In the Financial Year 2018-19 itself, a total of 1,09,857 SHGs received Rs. 10,000 each under KAMS and 43,974 SHGS received Rs. 25000/- each, taking the total to 1,53,831 SHGs and a total amount of Rs.219.79 Cr.

**Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY):**

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), the Skill Training and placement program of the Ministry of Rural Development Govt. of India focuses on the rural poor youth and give emphasis on sustainable employment. DDU-GKY aims to skill rural youth who are poor and provide them with jobs having regular monthly wages. It is a part of the National Rural livelihood Mission (NRLM-The mission for poverty reduction and promoting rural livelihoods). In the past three years a

total of 35,138 rural poor youth have been trained under various skill courses and out of them 29,327 youths have been offered jobs and 15,546 have been placed.

**MAHATMA GANDHI NATIONAL EMPLOYMENT GUARANTEE ACT (MGNREGA):**

The Mahatma Gandhi National Employment Guarantee Programme was introduced during the 11<sup>th</sup> five year Plan for giving wage employment opportunities to the rural poor during the lean agricultural season when they require wage employment for boosting their purchasing power to supplement their income requirement for livelihood. The other objective of the Act is to create durable community assets for development of rural infrastructure for upliftment of quality of the rural people.

During the year 2018-19 a total of 533.72 lakh mandays were generated against, a total of 481.26 lakh mandays generated in 2017-18 and 408.00 lakh mandays in 2016-17. Since inception up to 2018-19, more than 45.68 lakh numbers of rural households have been provided with job card. Out of the total employment generated, 41.02 percent of jobs were provided to women in 2018-19 against 38.51 percent of jobs during 2017-18 and 36.45 percent in 2016-17.

**PRIME MINISTER EMPLOYMENT GENERATION PROGRAMME (PMEGP):**

The Prime Minister Employment Generation Program (PMEGP) has been introduced by merging the PMRY and REGP with the objective of providing employment to the educated unemployed youth. The scheme facilitates self-employment through setting up of industries/service and business ventures with a limited amount of Bank loan with subsidy on the recommendation of Task Force Committees constituted for the purpose. The KVIC is the nodal agency for implementing the PMEGP scheme at the national level and at the State level the scheme is implemented by the state KVIC Directorate, State KVIB and the District Industries and Commerce Centers and Banks. The Government subsidy under the scheme is being routed through the KVIC to the identified Banks. The target and achievement under PMEGP from 2009-10 to 2017-18 is reflected in the table below.

**TABLE-17.8  
TARGET AND ACHIEVEMENT OF PMEGP DURING THE YEAR 2008-09 TO 2017-18**

Year	Physical target (In nos.)	Financial Target (margin Money) (Rs. in Lakh)	Total Cases sanctioned (In nos.)	Physical achievement (In no.)	Financial achievement (In Rs Lacs)
2009-10	1292	1550.00	2440	2440	1899.71
2010-11	3193	4469.66	4756	4756	4801.10
2011-12	5047	7065.80	5280	5280	5544.99
2012-13	4644	6500.20	7336	7336	5801.15
2013-14	4588	6210.97	8049	8049	7219.90
2014-15	5101	7238.82	5584	5584	5042.41
2015-16	1913	-	3382	3382	2793.39
2016-17	3776	7552.08	3773	3773	3499.4
2017-18	6386	12772	3267	2166	2269.60

Source: Directorate of Industries and Commerce, Assam

**SMALL SCALE INDUSTRIES/MICRO, SMALL AND MEDIUM ENTERPRISE (MSME):**

The Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. It contributes significantly in the economic and social development of the country by fostering entrepreneurship and generating largest employment opportunities at comparatively lower capital cost. A number of statutory and non-statutory bodies

TABLE-17.9 NO. OF SSI & MSME UNIT AND EMPLOYMENT		
Year	No. of SSI/MSME Unit	Employment
2010-11	1214	9002
2011-12	1287	13886
2012-13	1451	11671
2013-14	1860	12971
2014-15	2629	20496
2015-16	1898	13848
2016-17	2177	19355
2017-18	1539	14442
2018-19	1123	8543

Source: Directorate of Industries and Commerce, Assam

work under the aegis of the Ministry of MSME which include the Khadi Village Industries Commission (KVIC) and the Coir Board besides National Small Industries Corporation (NSIC), National Institute for Micro, Small and Medium Enterprises (NIMSME) and Mahatma Gandhi Institute for Rural Industrialisation (MGIRI).

The small scale industries sectors have a major contribution towards creating employment in the state. Presently the small-scale industries have been sub-divided into Micro, Small and Medium Enterprise under the Micro, Small and Medium Enterprises Development (MSMED) Act 2006. Government of India Scheme envisages financial assistance to state Governments for setting up new and modernizes existing Mini Technology Centres. Till 31st, December 2017, under the scheme, Rs. 1.45 crore has been sanctioned to government of Assam for technology centre at Tinsukia.

The graph below (Figure X) shows the average number of employment per SSI/MSME unit. The figures show a declining trend since the year 2015-16. Table 17.9 also shows a downward trend in SSI and MSME units in Assam and generation of employment since 2015-16.

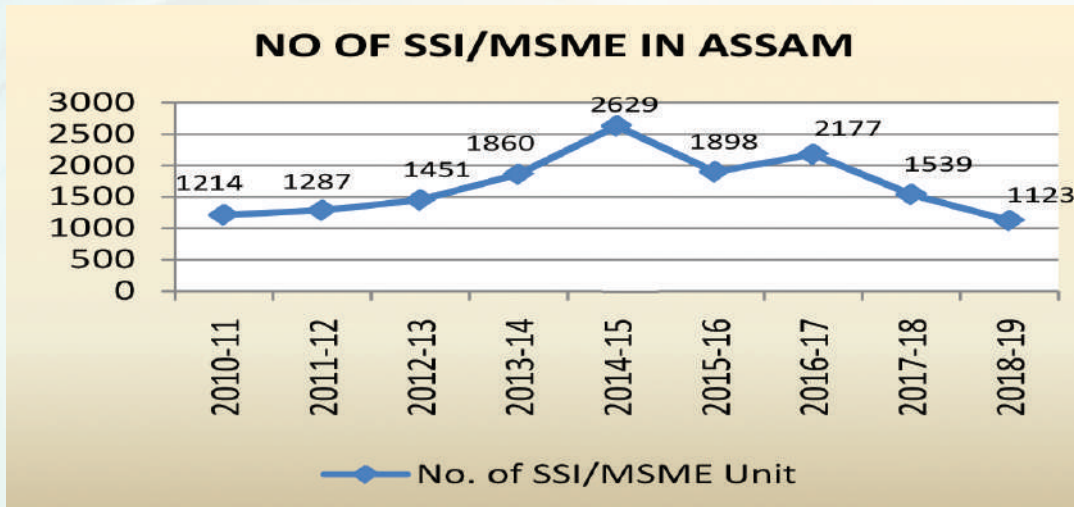


FIGURE-X

**KHADI & VILLAGE INDUSTRIES COMMISSION:**

Khadi & Village Industries Commission (KVIC) established under the Khadi and Village Industries Commission Act, 1956 (61 of 1956), is a statutory organization under the aegis of the Ministry of MSME. The main objectives of KVIC include:-

1. The social objective providing employment in rural areas;
2. The economic objective of producing saleable articles; and
3. The wider objective of creating self-reliance amongst people and building up a strong rural community spirit

Production of Khadi and polyvastra is by far the largest rural productivity programme in the world. It provides the rural communities a high value for their effort while providing the consumers value for money. KVIC is a statutory organization tasked with the role of promoting the production and sale of Khadi.

**TABLE - 17.10  
ACHIEVEMENT OF KHADI AND VILLAGE INDUSTRIES IN ASSAM DURING 2018-19**

Sl. No.	Industry	Value of production (in lakh)	Sales (in lakh)	Employment (in numbers)	Wages (Rs in lakh)
1	2	3	4	5	6
1	Khadi & Polyvastra	119.56	168.03	186	15.53
2	Silk	1096.88	824.08	5635	251.65
3	Polyvastra	23.11	11.78	64	7.67
	Total	1239.55	1003.89	5785	274.85

Source: Khadi and village industries commission.

**FACTORY EMPLOYMENT:**

In 2018, there were 6945 registered factories employing 279246 numbers of persons in Assam. The figures were an increase from 6729 number of registered factories and employment of 269276 numbers of persons in 2017. The figures show an increase by 9 percent in the number of factories and employment by 10 percent. The sectors accounting larger share of employment are manufacturing of other non-metallic mineral products (36%) followed by manufacturing of food products (30%) and manufacturing of chemical and chemical products (5%).

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## CHAPTER-XVIII

### PANCHAYAT & RURAL DEVELOPMENT

The Panchayat and Rural Development Department is responsible for alleviation of rural poverty, enhancement of rural livelihoods by generating self employment opportunities for the people living below the poverty line. Towards this the Department from time to time implements various programmes and strengthening the Panchayati Raj Institutions (PRIs) of the state. The Department is concerned to empower PRIs, so that the institutions plan and take initiatives to raise capabilities of the poor people to get engaged in different forms of self employed activities. The PRIs to support self-employment initiatives focus on development of critical infrastructures in the rural areas. The Panchayat and Rural Development Department has been implementing various schemes for development of rural infrastructure and uplift quality of life of rural people in the state.

The schemes implemented by the Department are broadly classified into three categories -

- i) Self employment;
- ii) Wage employment;
- iii) Welfare scheme for the disabled, widows & other down trodden people living below the poverty line.

#### SCHEMES IMPLEMENTED BY THE PANCHAYAT & RURAL DEVELOPMENT DEPARTMENT:

The Department is presently implementing the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pradhan Mantri Awas Yojana-Gramin (PMAY-G) and National Social Assistance Programme (NSAP).

#### MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT (MGNREGA)

Implementation of MGNREGA has helped in providing wage employment opportunities to the rural poor during the lean agricultural season. MGNREGA has guaranteed 100 days of employment in a fiscal year for the unskilled labourers of rural area who are willing to work and are given job cards. Government of India bears 100% burden of wage expenditure for the job card holders. The wage material ratio for the MGNREGA is 60:40; government of India bears the responsibility to pay 75 % expenditure of the material part and the rest 25% is borne by the state government. The state had generated 466.09 lakh mandays of work against the approved budget of Rs. 408.9 lakh during 2016-17. The work generated increased during the next financial year 2017-18, to 481.26 lakhs mandays with an approved labour budget of Rs. 500.00 lakh. During the year 2018 -19 533.36 lakhs mandays of work was generated in the state with the budget of 500.00 lakh. Rise in demand for work compelled the state to generate additional mandays of work during 2018-19. Total number of works completed during 2016-17 was 22124. The number of works completed during 2017-18 and 2018-19 were increased to 55903 and 141720 respectively. Under MGNREGA, it is mandatory to provide 33% of the job to the women workers. The proportion of women received jobs under MGNREGA in Assam was 36.48% in 2016-17, 38.51% in 2017-18 and 41.09% in 2018-19. In 2016-17, altogether 11411 households received 100 days work. This figure for the next two financial years was 10938 and 18416. During the financial year 2016-17, the state received Rs.168885.44 lakh and utilized Rs.149989.63 lakh (utilised 88.8%). During the financial year 2017-18, the state utilized Rs.153058.36 lakh (98.6%) against the receipt of Rs.155186.00 lakh. In the financial year 2018-19, state received Rs.134353.86 lakh and the entire amount was utilized.

As per direction of the Ministry of Rural Development, Government of India, all the assets created under MGNREGA are now being geo-tagged with the help of Indian Space Research Organisation (ISRO). Till date, 245391 assets have been geo-tagged with National Remote Sensing Centre against 248509 assets created (98.75%). Table 18.1 presents year-wise physical target and achievement, and financial utilisation under MGNREGA in the state.

**TABLE-18.1**

Programme	Year	Physical (person days in lakh)		Financial (Rs. in lakh)	
		Target	Achievement	Fund Received	Utilised
MGNREGA	2014-15	401.01	314.24	60326.84	49748.4
	2015-16	432.74	486.33	103393.12	62065.44
	2016-17	408.00	467.52	168885.44	149989.63
	2017-18	500.00	481.26	155186.00	153058.36
	2018-19	500.00	533.36	134353.86	134353.86

The graphs below show year-wise trend of accomplishments of physical targets under MGNREGA and utilisation of funds for the years 2016-17, 2017-18 and 2018-19. The trend on financial aspect reveals decline in allocation of fund under MGNREGA in 2018-19 compared to 2016-17 and 2017-18.

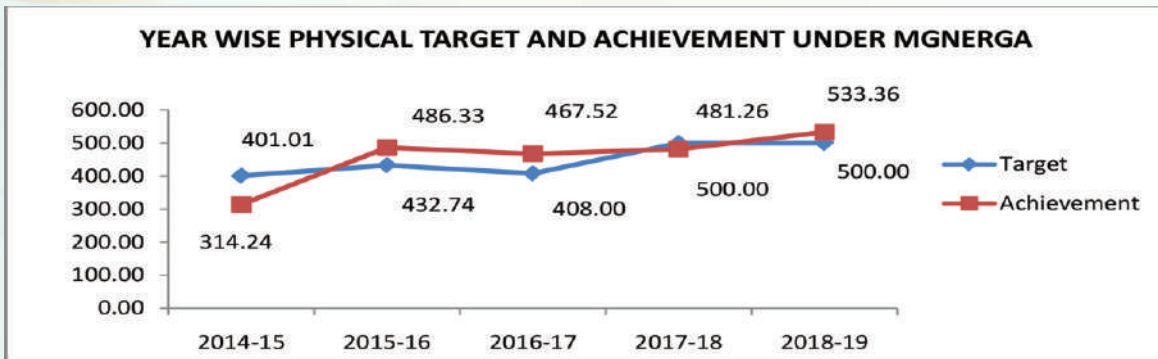


Fig-1

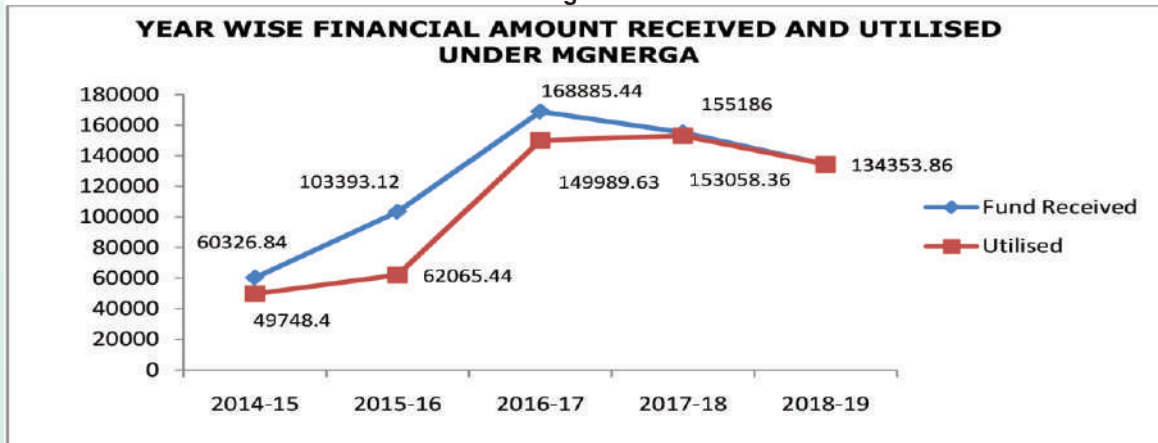


Fig-2

**PRADHAN MANTRI AWASS YOJANA GRAMIN (PMAY-G):**

The PMAY-G provides dwelling units to the BPL people without a house or with dilapidated house in rural areas. The erstwhile IAY programme has been restructured as PMAY-G and was launched in 2016-17 as Pradhan Mantri Awas Yojana – Gramin. The unit cost of each PMAY – G house is @Rs.1.30 lakh with some other mandatory provisions such as toilet facilities @ Rs.12,000/- in convergence with State Public Health Engineering Department and benefit of Rs.17,385/- for providing with 95 days of work to the beneficiary in convergence with MGNREGA. For the financial year 2016-17 and 2017-18, targets were to construct 219695 and 40119 houses respectively. The number of houses sanctioned during 2016-17 was 196826 and during 2017-18 it was 34224. Thus during the financial year 2016-17 and 2017-18 altogether 190942 of PMAY G houses were completed. Out of the total fund of Rs. 1298.83/ crores received under PMAY-G during 2016-17, the amount utilised was of Rs.113.83 crores. During the year 2017-18 Rs.1458.48 crores was utilized against the receipt of Rs.1582.55 crores. The state did not receive any financial and physical allocation during 2018-19 from the government of India.

**NATIONAL SOCIAL ASSISTANCE PROGRAMME (NSAP)**

NSAP is a central sector programme to promote social security through financial support to the rural BPL families. The entire fund for NSAP is borne by government of India. The state government is however to pay the minimum mandatory provision (MMP) under IGNOAPS at the rate of Rs.50/ per month against the government of India's share of Rs.200/- per month for the 60 to 79 years age group category) and Rs.500/- per month for 80 years and above age category. In respect of other sub-schemes under the NSAP, there is no provision of MMP. Presently there are four sub schemes (components) are running under NSAP. The schemes are Indira Gandhi National Old Age Pension Scheme (IGNOAPS), Indira Gandhi National Widow Pension Scheme (IGNWPS), Indira Gandhi National Disability Pension Scheme (IGNDPS) and National Family Benefit Scheme (NFBS).

**INDIRA GANDHINATIONAL OLD AGE PENSION SCHEME (IGNOAPS):**

The objective of this scheme is to provide financial support to the rural people living below the poverty line who have attained the age of 60 and above. During the financial year, 2016-17 altogether 736102 beneficiaries have been assisted with an amount of Rs.17434.32 lakh. In the financial year 2017-18, altogether 694441 beneficiaries were assisted, and for this an amount of Rs.15898.84 lakh was utilised. In the year 2018-19 altogether 704879 beneficiaries were given pension and for this the government utilised an amount of Rs.34602.61 lakh. The monthly pension norm (for 60-79 years.) is Rs.250/- (including of Rs.50/- as minimum mandatory provision) while for the 80 years and above, it is Rs. 550/ per month -(including of Rs. 50/- as minimum mandatory provision).

**INDIRA GANDHI NATIONAL WIDOW PENSION SCHEME (IGNWPS)**

IGNWPS aims to provide monthly financial assistance at the rate of Rs.300/ to all the identified pensioners who are widowed and in the age of 40-79 years. The assistance is Rs.500/- per month who are 80 years of age and above. During 2016-17, altogether 138385 beneficiaries were assisted utilizing an amount of Rs.4262.23 lakh. In 2017-18, the numbers of beneficiaries assisted were 107794, and for this Rs.2526.96 lakh was utilised. Altogether 109412 beneficiaries were given pension during 2018-19 utilizing an amount of Rs.4786.87 lakh.

**INDIRA GANDHI NATIONAL DISABLED PENSION SCHEME (IGNDPS)**

IGNDPS is implemented to provide financial support at the rate of Rs.300/- per month to the people in the age group of 18 – 79 years. The beneficiaries above age of 80 years get assistance of Rs. 500/- per month. During 2016-17 in Assam, altogether 35866 beneficiaries got assistance under IGNDPS and for this scheme an amount of Rs.996.01 lakh was utilised. Total persons got assistance during the year 2017-18 was 34326 and total amount utilised during the year was Rs.893.61 lakh. Total beneficiary assisted during 2018-19 was 34537 and for this an amount of Rs.1570.35 lakh was utilised.

**NATIONAL FAMILY BENEFIT SCHEME (NFBS):**

The NFBS is implemented with the objective of providing one time financial assistance of Rs.20,000/ at the death of the prime earner of a BPL family. During 2016-17 and 2017-18 total numbers of families assisted under this scheme were 4113 and 1556. An amount of Rs.1864.50 lakh was utilised during 2016-17 and Rs.349.56 lakh during 2017-18 for NFBS.

**Grants for the Panchayats provisioned under 14<sup>TH</sup> Finance Commission:**

Two components of grants – basic grants and performance grants are considered for the duly constituted gram panchayats of the state under the provision of the 14<sup>th</sup> Finance Commission for the period 2015-16 to 2019-20. Under this provision basic grants constitute 90 percent and rest 10 percent is released as performance grant. The grant funds are utilised for core basic services delivery such as primary health care, primary education, safe drinking water, street lightning, rural sanitation, drainage and sanitary, maintenance of burial and cremation ground, creation of community assets like market shed, community hall etc. Under 14<sup>th</sup> Finance Commission Grant, fund released for the year 2016-17 and 2017-18 was Rs.91598 lakh and Rs.1055.80 lakh respectively and disbursed to the districts of the state for implementation of various permissible works.

**Grants for the Panchayats provisioned under 5<sup>TH</sup> State Finance Commission:**

The 5<sup>th</sup> Finance Commission of the state provisioned grants for the panchayats for creation of assets and community services for the period 2015-16 to 2019-20. Good numbers of rural assets including roads, culverts, community halls, market shed and passenger waiting sheds have been constructed under the 5<sup>th</sup> SFC grant. Funds received under the 5<sup>th</sup> SFC for the year 2016-17 and 2018-19 were Rs.59715 lakh and Rs.13227 lakh respectively. A part of the grant released to the districts was also used to pay remuneration of elected PRIs members.

**NEW POLICY DECISIONS TAKEN BY THE DEPARTMENT DURING YEAR 2019- 20:**

- **Universal coverage of old age pension scheme :**  
The Panchayat and Rural Development Department has launched a new scheme named “Kushal Konwar Sarbojanin Bridha Pension Achoni” to cover all the eligible elderly people the left out from the Pension Scheme under National Social Assistance Programme in the state. This scheme is to provide a monthly pension of Rs.250/-. The scheme was formally launched on October 2, 2018. Altogether 12 lakhs beneficiaries are under this scheme.
- **Indira Miri Universal Widow Pension Achoni :**  
The “Indira Miri Universal Widow Pension Achoni” is to provide a monthly pension of Rs.300/- to all the left out widows of the state from the Indira Gandhi National Widow Pension Scheme. The coverage of the scheme shall cover all BPL as well as APL families.
- **One-Time Financial Assistance to the Widow :**  
This scheme provisions one-time financial assistance of Rs. 25,000/-, to women who have lost their husbands, and sole earning member of the family.
- **Financial assistance to the Landless PMAY – G beneficiaries :**  
This scheme provides financial assistance to landless PMAY – G beneficiaries for procurement of a plot of land. The sanctioned financial assistance is Rs.50,000/- per beneficiary.

**Assam State Rural Livelihoods Mission - Promoting Rural Livelihoods:**

In Assam, the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) is being implemented through Assam State Rural Livelihood Mission (ASRLM). The mission since 2012 is working with an objective to reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities. The mission has resulted appreciable

improvement in the rural households. Till March 31, 2019, ASRLM has promoted 2,31,306 women self-help groups across 33 districts of the state covering 24,35,199 women. ASRLM has also promoted higher level of federations of SHG like village organizations and cluster level federations. Although the SHGs are engaged in various livelihood and social development programmes, there is scope to strengthen or consolidate their initiatives through better support and technical guidance from agriculture and allied departments. The scope is also there to explore sustainable nutrition linked livelihoods.

The SHGs and their partnering federations undergo a series of capacity building programmes on management of the groups, book keeping, organisational management, financial literacy, basic livelihood, food and nutrition, health, sanitation and women and gender sensitivity. The training programmes are conducted at various levels with the aid of modules and video shows in the mode of participatory learning.

In order to strengthen the self-help groups and community based organizations financially, the state is now providing grants in the form of revolving fund of Rs.15000/- for each SHG and a community investment fund of Rs. 50,000/- for each SHG in order to facilitate them to initiate sustainable livelihood practices. ASRLM also facilitate credits linkage to the needy SHGs. In order to empower women SHGs, government of Assam has launched Kanaklata Mahila Sabalakaran Asoni (KMSA) on April 1, 2018 for promotion of 1 lakh women SHG in the state. Towards this the state has provisioned subsidy linked loan to the amount of Rs.5 lakhs. Government of Assam has already released Rs. 250 Crores for the KMSA. This scheme has provisioned a revolving fund of Rs.25000/- for the newly formed SHGs under NRLM and an additional provisioning of Rs. 10000/-for the SHGs formed under NRLM and who earlier had received Rs.15000/-. In the year 2018 -19 a total of 1,09,857 SHGs received Rs.10000.00 each under KMSA and 43,974 SHGs received Rs.25,000.00 each. The scheme thus till date covers a total of 1,53,831 SHGs and Rs.219.79 crores was disbursed among the SHGs.

ASRLM extends its initiatives by providing handholding supports which include capacity building and technical supports to SHG members in various livelihood practices like water hyacinth craft, handloom and handicraft products etc. Product diversification and value chain developments are the areas in which ASRLM is concentrating to facilitate the SHG members. Value chain development projects in hill broom and maize cultivation, handloom weaving, mushroom cultivation are some of such areas ASRLM has intervened. Development of integrated farming model for homestead gardens, development of composite nursery, scientific management of paddy cultivation under the 'Mahila Kisan Sashaktikaran Pariyojana' (MKSP) are some other areas in which the SHG members are engaged. Some other livelihood activities initiated for SHGs under ASRLM are solar urja lamp, where SHG members are trained to assemble solar lamps and distribute amongst the school going children, sanitary napkin manufacturing and marketing unit, bee keeping and development of organic clusters. More than 5 lakh SHG members have been enlisted in the livelihood tracking system; which reflects engagement of members in multiple livelihood activities with an average income of more than Rs.40000 per member per year.

ASRLM bagged the national award as best performing state for 'Institution Building and Capacity Building' for the year 2017-18. Under the DDU-GKY, ASRLM has also bagged 1<sup>st</sup> prize in the category (North East states and hilly region states) at National Level. ASRLM takes pride in mentioning that in the last two years Ministry of Rural Development, government of India conferred National Award to three SHGs under ASRLM. The award worth a prize money of Rs.1,00,000/- for each of the SHG.

Two new Projects KAMS and SVEP have been launched in March, 2019 and September, 2019 respectively. The financial utilisation under KAMS (SOPD) till August, 2019 was Rs.33.21 crores against the target of Rs.91.28 crores; the SVEP did not utilise any amount till August, 2019 though it had a sanction of Rs. 3.00 crores.

The table 18.2 and graph below shows the year-wise target and utilisation under NRLM and the table 18.3 with the pie diagram depicts the target and achievement under NRLP, the World Bank aided project.

**TABLE-18.2**  
**NATIONAL RURAL LIVELIHOODS MISSION (NRLM)**

Year	Financial	
	Target (Rs)	Utilisation (Rs)
<b>2015-16</b>	1,23,42,75,692.00	81,39,60,716.00
<b>2016-17</b>	88,88,78,093.00	76,77,10,078.00
<b>2017-18</b>	1,56,31,24,865.92	1,42,37,02,226.02
<b>2018-19</b>	211,74,88,000.00	198,48,02,000.00

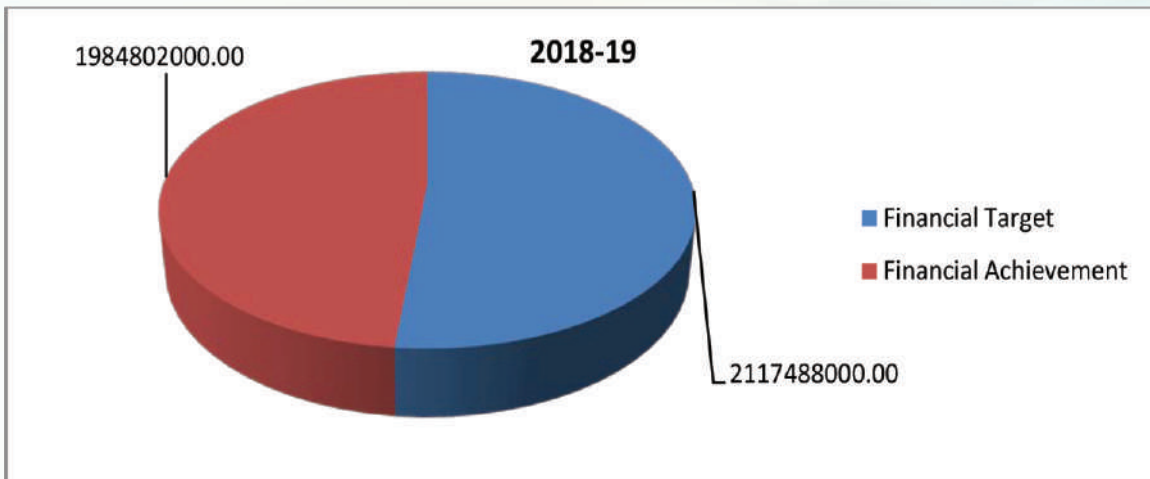


Fig-3

**TABLE-18.3  
NATIONAL RURAL LIVELIHOODS PROJECT (NRLP)**

Year	Financial	
	Target (Rs)	Utilisation (Rs)
2015-16	28,19,70,499.00	26,98,95,140.00
2016-17	49,98,63,335.00	43,83,73,716.00
2017-18	27,83,92,066.10	20,91,69,063.47
2018-19	3,92,37000.00	3,64,67000.00

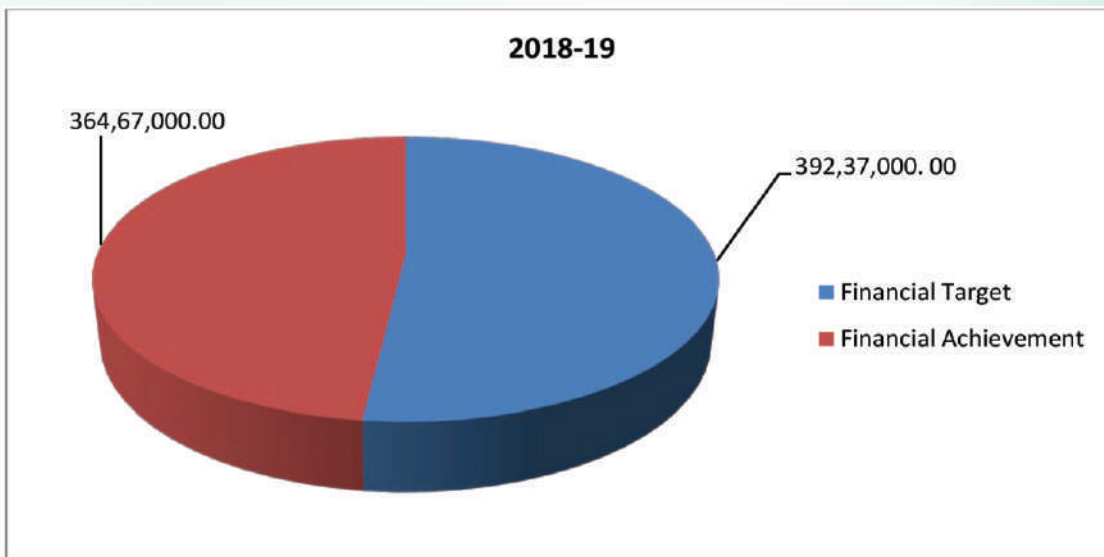


Fig-4

**RURAL SELF EMPLOYMENT TRAINING INSTITUTES (RSETIS):**

In order to ensure institutional arrangement for skill development for self employment and wage employment, dedicated training institute for rural BPL youth i.e Rural Self Employment Training Institutes (RSETIs) are being set up with the aim of having at least one in each district. Initiated in 2009, at present (as on October 2018) there are 26 RSETIs in Assam including one RUDSETI, that are sponsored by various banks like UBI, UCO, AGVB, SBI, Canara Bank, Central Bank of India. The training institutes have trained 82997 youths and have ensured opportunities of livelihood of 50507 youths. During 2017-18, altogether 14262 candidates received training at RSETIs and 10,018 got opportunities to settle in certain livelihood avenues. The year 2018-19 had target to train 12,880 youths and accomplishment was 13087 youths.

In the last three years, altogether 5098 VOs and 242 CLFs have been formed, raising the total number to 9348 VOs and 250 CLFs in the state. Financial assistance in the form of revolving fund of Rs.15000/ per SHG have been provided to 1,14,221 SHGs and community investment fund of Rs.50000/ per SHGs have been provided to 43,834 SHGs during last three years. Besides these grants, ASRLM facilitates bank credit (Loan) to SHGs and during last three years. A total of 53,480 SHGs availed credit from various banks amounting to Rs.492.60 crores.



Under the NRLP, a World Bank aided project, the number of Self-Help groups formed during 2017-18 was 4127 against the target of 3787. During 2016 -17 the target was to form 7017 SHGs under NRLP, but the accomplishment was 5193. Altogether 6327 SHGs were provided revolving fund during 2017-18 against the target of 5700; the figures of achievement being 8667 during 2016 -17 against the target to cover 7000 SHGs. The number of Village Organisations (VO) formed during 2017-18 was 329 against the target of 516 and the number of VOs provided with Community Investment Fund (CIF) is 4740 against the target of 5200. During 2016-17 the number of VOs formed was 968 against the target of 360 and the number of VOs provided CIF was 3248 against the target of 2500. The NRLP was closed with effect from June 30, 2018.

**TABLE-18.4**  
**RURAL SELF EMPLOYMENT TRAINING INSTITUTE (RSETI)**

Year	Financial	
	Target (Rs)	Achievement (Rs)
<b>2015-16</b>	84,14,117.00	68,31,041.00
<b>2016-17</b>	2,09,43,076.00	2,04,05,842.00
<b>2017-18</b>	1,01,76,158.00	1,00,28,418.00
<b>2018-19</b>	3,61,27,000 .00	1,59,47,000.00

**RURAL SELF EMPLOYMENT TRAINING, 2018-19**

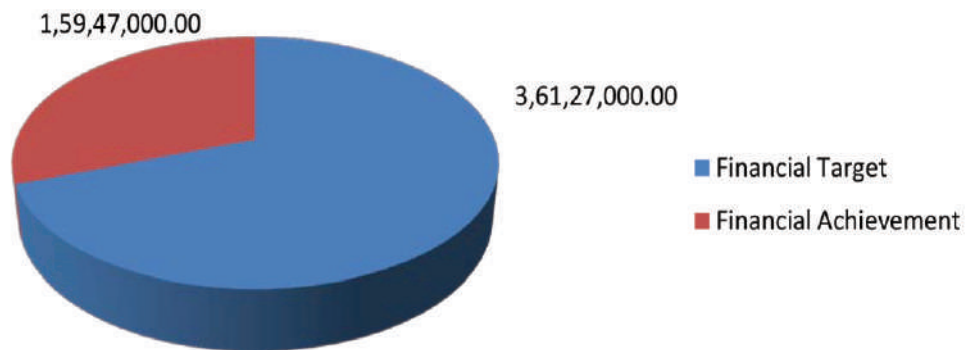


Fig-5

**DEENDAYALUPADHAYA GRAMEEN KAUSHALAYA YOJANA (DDU -GKY):**

Deen Dayal Upadhaya Grameen Kaushalaya Yojana (DDU-GKY), a placement linked skill development scheme of the Ministry of Rural Development, Government of India. DDU-GKY is being implemented by the Assam State Rural Livelihoods Mission (ASRLM). Under the scheme, skill development trainings are provided to the rural youth of age group 15-35 years. Ministry of Rural Development (MoRD), Government of India has approved a target to train 78,508 rural youths in Assam under this scheme. It is assured that at least 70 percent trained youths will be given job placement in organized sectors like automobile, hospitality, health care, information and communication technology after they undergo skill training for 3 to 12 months. Till August, 2019, altogether 39,762 rural youths have been trained in Assam and 34,207 youths have been offered jobs in organised sector. DDU -GKY does not have a yearly target. Instead, it has a total cumulative target of 78,508 youths who need to be trained and given placement during the period 2016-2019.

**FEATURES OF DDU-GKY:**

- 1) **Enable the poor and marginalized to access benefits:** DDU-GKY aims to skill poor rural youth in the age group of 15-35 years and provide them job with a regular monthly wage or salary above the minimum wages.
- 2) **Outcome led design:** Assured placement for at least 70 percent of the trained candidates and minimum mandatory certification.
- 3) **Standards-led delivery:** Standard operating procedures provide essential quality assurance framework for training infrastructure and service delivery.
- 4) **Inclusive program design:** Mandatory coverage of socially disadvantaged groups (SC/ST 50%, Minority 15%, Women 33%)
- 5) **Shift of emphasis from training to career progression:** Incentives for job retention, career progression and foreign placements.

**TABLE-18.5**  
**DEEN DAYAL UPADHAYA GRAMEEN KAUSHALAYA YOJANA (DDU-GKY)**

Year	Financial	
	Target	Utilisation
2015-16	18,82,29,111.00	5,95,63,180.00
2016-17	1,19,02,17,716.00	13,63,13,431.00
2017-18	1,17,78,95,871.75	92,37,19,592.79
2018-19	123,79,72,000.00	56,85,40,000.00
2019-20 (Till Aug,2019)	64,16,76,000.00	24,49,89,000.00

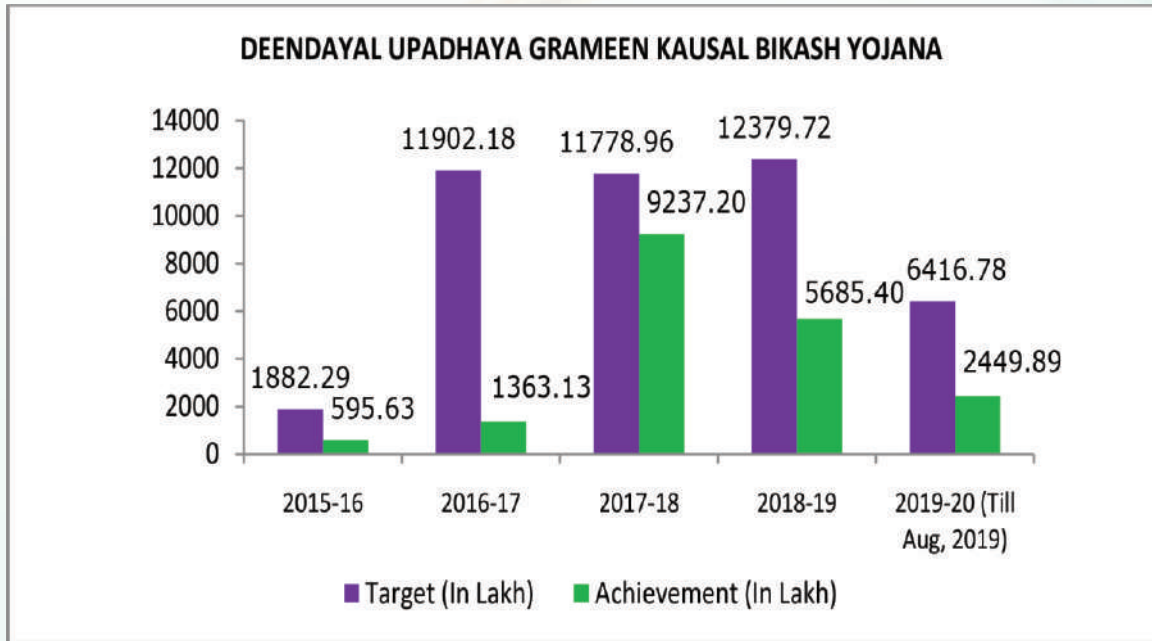


Fig-6

**YEAR WISE PROGRESS OF ASRLM UNDER DDU - GKY**

SI No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20 (Till Aug, 2019)
1	No. of Rural Youths trained	8200	9927	17011	4624
2	No of Rural Youths offered job	5718	6407	17202	4880
3	No of Rural Youths placed in job	1479	3464	10603	4930
4	Total Fund available (Rs. in Crore)	119.02	118.16	123.79	64.16
5	Total Fund utilised (Rs. in Crore)	13.63	92.37	56.85	24.49

N. B: DDU-GKY do not have a yearly target. Instead it has total cumulative target of 1,29,392 youths which need to be trained and 70% of which need to be placed during the period of FY 2016-2022.

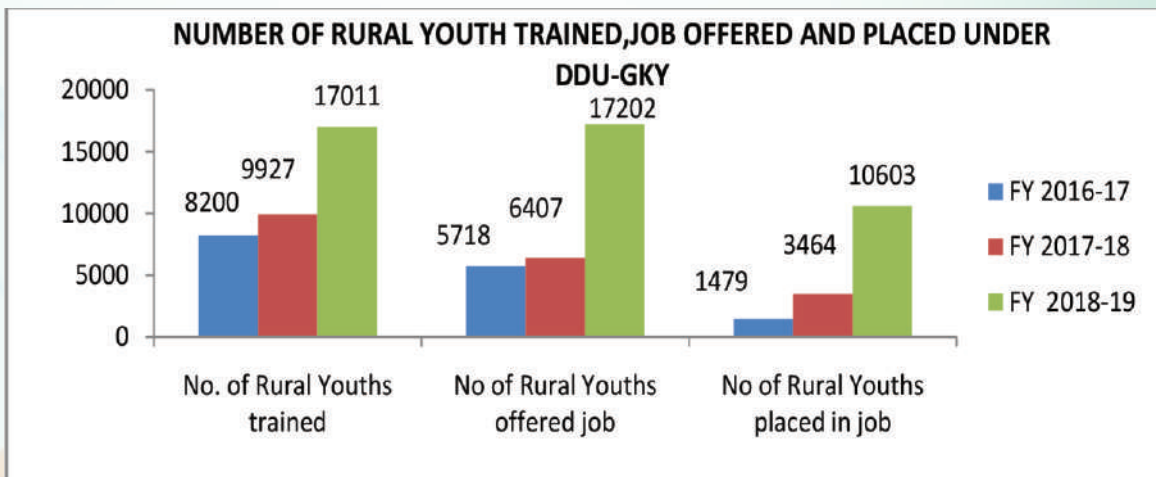


Fig-7

**YEAR WISE PROGRESS OF ASRLM UNDER RSETI**

Sl. No	Year	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20 (till Aug.2019)
1	Total Trained Target	13604	13920	12880	12639
2	Total BPL Trained Target	9523	9744	9016	8847
3	Achievement of Total Trained	15057	14262	13087	4644
4	Achievement of BPL Trained	10798	8867	9552	3519
3	Achievement of Settled	10235	10018	7841	1368
3.1	No. of Settled using Bank Finance	4305	4903	3321	734
3.2	No. of Settled using Own Finance	5930	5115	4520	634

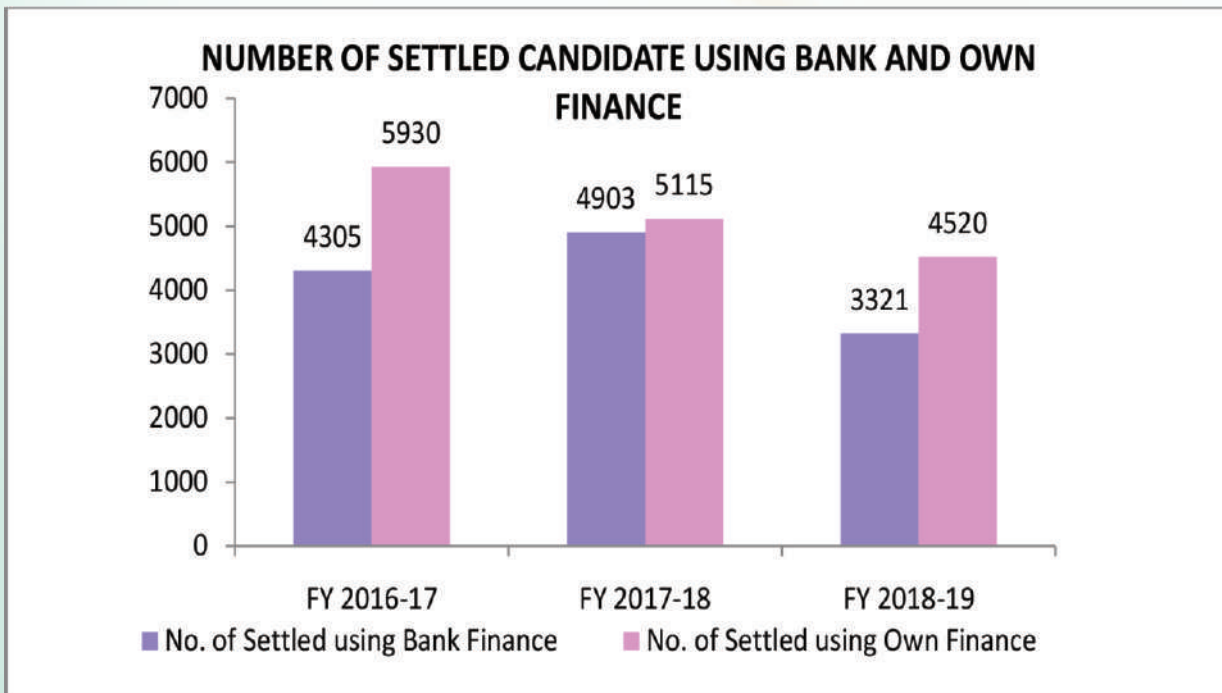


Fig-8

**SKILL DEVELOPMENT TRAINING/STRENGTHENING OF EXTENSION TRAINING CENTRES PROGRAMME UNDER SIPRD:**

The State Institute of Pachayat Rural Development (SIPRD), Assam has been organising skill development training programmes on different activities for providing self employment avenues for unemployed youths, farmers, weavers, artisans and entrepreneurs, as well as given thrust for upgrading the skill of traditional activities for income generation and livelihood promotion. The Government of India has been providing 100 percent grant for strengthening the infrastructure of SIPRD and the State Government also borne its share of 10 percent of total recurring grant. Moreover, the Government of Assam has set up the Resource Centre in IT and Skill Development at Kahikuchi with a view to transfer the benefit of technology development directly to the communities at the grass root level to uplift life and livelihood of rural poor.

During the period 2001-2013, the extension centre has provided managerial and skill development training to 1.6 lakh persons comprising youths, women, farmers, weavers and artisans. During 2015-16 altogether 4700 persons received skill development training on various activities. The SIPRD, Assam had conducted altogether 3000 training programmes during the year 2016-17, 2210 during 2017-18 and 3286 programme during 2018-19. In the trainings altogether 150,000 persons received training during 2016 17, 140,500 persons during in 2017-18 and 165,000 persons during the year 2018-19.

The number of training programmes conducted for elected representatives of the PRIs by the SIPRD was 70 during the year 2018-19; 685 during 2017-18 and 837 during 2016-17. Altogether 5158 elected represented received training conducted by SIPRD during 2018-19. The number of elected representative received training during the year 2017-18 was 27400, and 32090 during the year 2016-17. The SIPRD, Assam thus has been playing a significant role for development of rural areas of the state.

## ANNEXURE -18.01

DISTRICT WISE PHYSICAL ACHIEVEMENT UNDER MGNREGA IN ASSAM 2018 - 19  
EMPLOYMENT GENERATED (Mandays in nos.)

SI. No.	Name of District	EMPLOYMENT GENERATED (Mandays in nos.)				
		SCs	STs	OTHERS	TOTAL	WOMEN
1	2	3	4	5	6	7
1	Kokrajhar	30511	918689	1682888	2632088	1127886
2	Dhubri	19657	1293	2123136	2144086	854130
3	Goalpara	31719	315772	679129	1026620	447186
4	Barpeta	111435	48423	3824092	3983950	1574563
5	Morigaon	370858	301537	3261953	3934348	1622977
6	Nagaon	174430	75910	2783539	3033879	1096107
7	Sonitpur	36528	67470	794020	898018	368730
8	Lakhimpur	162266	1111559	2381763	3655588	1760862
9	Dhemaji	71715	1185467	993481	2250663	1110777
10	Tinsukia	22749	124936	1091837	1239522	513493
11	Dibrugarh	64410	214404	1286213	1565027	741622
12	Sivasagar	25112	63824	643938	732874	323471
13	Jorhat	55827	113655	819611	989093	458547
14	Golaghat	76785	250942	1112298	1440025	586613
15	Kari-Anglong	36383	938175	165777	1140335	530909
16	Dima Hasao	1069	163226	7414	171709	56271
17	Cachar	135481	27019	1558586	1721086	408544
18	Karimganj	188183	15867	2118403	2322453	770829
19	Hailakandi	36998	1948	599382	638328	168518
20	Bongaigaon	58835	11344	865303	935482	359903
21	Chirang	126972	1081795	901727	2110494	945245
22	Kamrup	150697	225445	1674775	2050917	657781
23	Kamrup (M)	34474	37463	55339	127276	56440
24	Nalbari	47521	23660	1842850	1914031	659963
25	Baska	209988	1125492	1328484	2663964	1286335
26	Darrang	42781	6425	1018406	1068612	448195
27	Udalguri	157441	1808586	1925481	3891508	1782761
28	Majuli	63596	237906	239857	541359	189676
29	South Salmara	7217	184	305778	313179	146538
30	Biswanath	50274	165036	527102	742412	316462
31	Charaideo	7039	10745	377821	395605	169547
32	Hojai	131670	23647	942284	1097601	387585
<b>ASSAM</b>		<b>2741621</b>	<b>10697844</b>	<b>39932667</b>	<b>53372132</b>	<b>21928466</b>

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

## ANNEXURE-18.02

## DISTRICT WISE JOB CARDS ISSUED AND EMPLOYMENT PROVIDED IN ASSAM IN 2018-19

Sl. No.	District	Total no. of Job Cards Issued	No. of Households demanded Employment	No. of Households provided Employment	No. of Households provided 100 days employment	No. of Disabled persons provided employment
1	2	3	4	5	6	7
1	Kokrajhar	171453	68655	65376	1386	303
2	Dhubri	184723	68281	61684	179	207
3	Goalpara	138024	44923	40655	68	107
4	Barpeta	277601	120143	109702	1131	2653
5	Morigaon	165529	89466	84670	2111	92
6	Nagaon	213492	103320	95392	1236	110
7	Sonitpur	152675	54935	48430	20	43
8	Lakhimpur	191388	88380	82439	6232	247
9	Dhemaji	128573	71995	64797	670	143
10	Tinsukia	152742	52819	47943	493	68
11	Dibrugarh	173980	90520	82280	179	159
12	Sivasagar	99187	39196	36274	151	90
13	Jorhat	134790	51090	43489	109	55
14	Golaghat	161481	71334	65810	270	74
15	Karbi-Anglong	136710	66478	62920	139	44
16	Dima-Hasao	29272	9050	7764	14	5
17	Cachar	226342	72670	59602	93	32
18	Karimganj	183061	86462	74113	523	63
19	Hailakandi	117894	37414	30611	13	41
20	Bongaigaon	111124	40979	37345	246	54
21	Chirang	103373	62482	58769	835	39
22	Kamrup	250626	86342	76133	174	85
23	Kamrup (M)	43459	6522	5622	12	2
24	Nalbari	130324	58368	52761	869	35
25	Baksa	207016	100212	95036	335	139
26	Darrang	152489	42466	36617	275	57
27	Udalguri	160440	101520	95300	433	57
28	Majuli	37965	24035	21029	67	15
29	South Salmara	46222	14526	12970	4	6
30	Biswanath	130258	40596	36695	37	394
31	Charaideo	61518	23432	21218	146	45
32	Hojai	94958	34437	31273	18	122
<b>ASSAM</b>		<b>4567589</b>	<b>1922748</b>	<b>1744719</b>	<b>18468</b>	<b>5586</b>

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

**ANNEXURE-18.03  
DISTRICTWISE TARGET AND PHYSICAL ACHIEVEMENT UNDER PMAY-G  
IN ASSAM, 2018-19**

District		Annual Target (Nos. of Houses)	House Completed against Target	Under Construction (Sanctioned before 2018-19)	Percentage of achievement against target
1		2	3	4	5
1	Kokrajhar	No Target for 2018-19	NIL	132	
2	Dhubri			278	
3	Goalpara			257	
4	Barpeta			166	
5	Morigaon			328	
6	Nagaon			107	
7	Sonitpur			159	
8	Lakhimpur			94	
9	Dhemaji			192	
10	Tinsukia			87	
11	Dibrugarh			101	
12	Sivasagar			2	
13	Jorhat			66	
14	Golaghat			58	
15	Kari-Anglong			447	
16	Dima Hasao			274	
17	Cachar			256	
18	Karimganj			436	
19	Hailakandi			255	
20	Bongaigaon			42	
21	Chirang			171	
22	Kamrup			19	
23	Kamrup (M)			1854	
24	Nalbari			923	
25	Baksa			1098	
26	Darrang			109	
27	Udalguri			354	
28	Majuli			316	
29	South Salmara			199	
30	Biswanath			183	
31	Charaideo			37	
32	Hojai			7	
<b>Assam</b>				<b>9007</b>	

*Source: Office of the Commissioner of Panchayat and Rural Development, Assam*

**ANNEXURE-18.04**  
**DISTRICT WISE TARGET AND PHYSICAL ACHIEVEMENT UNDER NATIONAL SOCIAL ASSISTANCE PROGRAMME IN ASSAM, 2018-19**

(Rs. In lakh)

Sl. No.	Age Group of 60-79 Years District	Indira Gandhi National Old Age Pension Scheme		Indira Gandhi National Widow Pension Scheme	
		Target	Achievement	Target	Achievement
1	2	3	4	5	6
1.	Kokrajhar		26408		3952
2.	Dhubri		32926		9749
3.	Goalpara		21800		4648
4.	Barpeta		19014		4946
5.	Morigaon		27904		4502
6.	Nagaon		75260		8294
7.	Sonitpur		52107		6393
8.	Lakhimpur		26367		4095
9.	Dhemaji		16900		2321
10.	Tinsukia		24919		4435
11.	Dibrugarh		23272		3374
12.	Sivasagar		20846		4219
13.	Jorhat		39943		2705
14.	Golaghat		21992		3383
15.	Karbi-Anglong		8588		2160
16.	Dima-Hasao		4351		280
17.	Cachar	707927	29419	114141	6069
18.	Karimganj		20226		5436
19.	Hailakandi		18454		2274
20.	Bongaigaon		13675		2573
21.	Chirang		7830		1977
22.	Kamrup		54703		4557
23.	Kamrup (M)		7870		733
24.	Nalbari		32041		3153
25.	Baksa		25083		3569
26.	Darrang		17393		3105
27.	Udalguri		15098		4911
28.	Majuli		-		
29.	South Salmara		-		
30.	Biswanath		-		
31.	Charaideo		-		
32.	Hojai		-		
<b>ASSAM</b>		<b>707927</b>	<b>684389</b>	<b>114141</b>	<b>107813</b>

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

**ANNEXURE-18.05  
DISTRICT WISE TARGET AND PHYSICAL ACHIEVEMENT UNDER SOCIAL NATIONAL  
ASSISTANCE PROGRAMME IN ASSAM, 2018-19**

(Rs. In lakh)

Sl. No.	District	Indira Gandhi National Disability Pension Scheme	
		Target	Achievement
1	2	7	8
1	Kokrajhar	18916	1470
2	Dhubri		2713
3	Goalpara		1347
4	Barpeta		1112
5	Morigaon		1566
6	Nagaon		3080
7	Sonitpur		2451
8	Lakhimpur		1560
9	Dhemaji		848
10	Tinsukia		1648
11	Dibrugarh		234
12	Sivasagar		1933
13	Jorhat		961
14	Golaghat		1294
15	Karbi-Anglong		572
16	Dima-Hasao		106
17	Cachar		2261
18	Karimganj		1764
19	Hailakandi		923
20	Bongaigaon		706
21	Chirang		620
22	Kamrup		873
23	Kamrup (M)		110
24	Nalbari		700
25	Baksa		1266
26	Darrang		1107
27	Udalguri		1458
<b>ASSAM</b>		<b>18916</b>	<b>34683</b>

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

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## CHAPTER-XIX

### SOCIAL SECTOR

Social sector plays a significant role in a developing and emerging economy. It comprises of education, public health, women & child welfare, water supply & sanitation, social justice and other social services. Government implements various welfare schemes for social development in this sector.

#### EDUCATION:

Education is one of the key inputs for balanced social & economic development. Education empowers people with skills & knowledge which ultimately help to boost economic growth. A number of schemes have been initiated by the Government for encouraging development of education among various sections of the population in the State. Development in these sectors can build up strong edifice of a stimulating economy in terms of rising income and employment opportunities, productivity, technology advancement and finally enhanced quality of life in the State. Education may be both formal and informal. Formal education consist of Pre-school, Primary, Upper Primary, Secondary to Senior Secondary, Technical or non-technical or may be Vocational in form.

#### PRIMARY & UPPER PRIMARY EDUCATION:

In Assam, the number of Government/Provincialised in Lower Primary schools is 36262 of which 35102 are in rural areas and 1160 are in urban areas. Likewise, the total number of Upper Primary schools is 5732, of which 5413 is in rural areas while 319 in urban areas, as per DISE 2018-19.

#### DROP-OUT RATE:

As per, DISE 2018-19, the average annual Drop out Rate at Primary level in the State during 2018-19 was 3.1 percent and 5.60 percent in 2016-17. At the Upper Primary level, the drop out rate was 1.9 percent in 2018-19 and 2.51% in 2016-17. Among the districts, Hailakandi registered highest dropout rate of 9.6 percent in Lower Primary level and Karimganj registered highest dropout rate of 9.7 in the upper Primary Level.

#### PUPIL-TEACHER RATIO:

The Pupil-Teacher Ratio (PTR) or Student-Teacher Ratio is the number of students who attend a school or university divided by the number of teachers in the institutions. The Pupil-Teacher Ratio in the Primary level of the State during the year 2018-19 was 22 which dropped from its previous level of 21 in 2017-18. In Upper Primary level too, during 2018-19 PTR of in Assam dropped to 19 against the previous ratio of 18 in 2017-18. The graph below shows the PTR of Primary and Upper Primary in the State during 2017-18 and 2018-19, as per U-DISE 2017-18 and 2018-19.

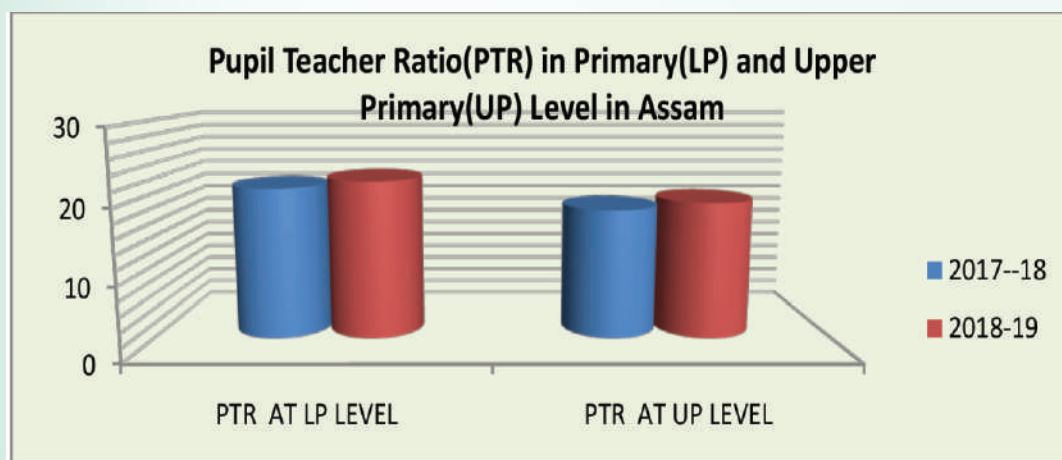


Fig.-1

SOURCE: U-DISE 2017-18 & 2018-19,

#### GROSS ENROLMENT RATIO (GER):

Gross Enrolment Ratio or Gross Enrolment Index is a statistical measure used in the educational sector and by the UN in its Education Index to determine the number of students enrolled in school at several grade levels (like elementary, middle school and high school). The Gross Enrolment Ratio at Primary Level during 2017-18 was 102.6 that dropped from 107.39 in 2016-17 in Assam. However, the Gross Enrolment Ratio at Upper Primary Level during 2017-18 was 98.9 and increased from the previous level in the year 2016-17 which was 96.69, as per U-DISE-2017-18 and U-DISE 2016-17.

#### SARVA SHIKSHA ABHIYAN:

The *Sarva Shiksha Abhiyan (SSA)* is a comprehensive and integrated flagship programme of Government of India to provide compulsory and free education to children of the age group 6 to 14 years. The SSA has made significant progress in achieving universal access and quality education through its programmes

such as opening of new schools, construction of schools & additional classrooms, increase in number of teachers, toilets & drinking water facility, providing text books as well as periodic training & academic resource support, etc. The expenditure incurred on SSA during 2017-18 was 2,132.17 crore.

#### CONDUCT OF GUNOTSAV:

Gunotsav, is a census based assessment that is conducted covering all children from class 2 to 9 of all Govt, Provincialised, Tea Garden managed schools of the state. The four major areas covered in this assessment are: Scholastic, Co-curricular, Availability and use of infrastructure and other facilities, Community participation. So far two phases of Gunotsav have been conducted in different districts of Assam. A comparative analysis of results of Gunotsav 1<sup>st</sup> & 2<sup>nd</sup> rounds are as follows:

**TABLE-19.1  
NUMBER OF SCHOOLS**

Grade	Gunotsav, 2017	Gunotsav, 2018
A+	6037	10678
A	12927	21807
B	13636	10935
C	9163	2299
D	7105	691

Source: Annual Report Samagra Shiksha 2018-19.

The results of the two successive years reveal that there have been marked improvements in school performances.

#### CLUSTER LEVEL TEACHER ORIENTATION:

The state conducted Cluster Level Teacher Orientation for all the elementary level teachers and selected secondary level teachers on various academic issues.

**TABLE-19.2  
MONTH WISE NUMBER OF TEACHER'S ATTENDANCE IN THE CLUSTER LEVEL ORIENTATION:**

Month	No. of Teachers
December, 2018	Elementary-143777
January, 2019	Elementary-151133
February, 2019	Elementary-133706
March, 2019	Elementary-129502

Source: Annual Report Samagra Shiksha 2018-19.

#### STEPS TO IMPROVE ELEMENTARY EDUCATION:

- § The education Department has initiated the process of amalgamation of different categories of schools located in the same campus or nearby.
- § The phase III of Gunotsav will also be continued in the next year to assess the qualitative achievement level of learners in terms of scholastic and co-scholastic aspects in order to improve learning and providing better infrastructural facilities to the schools.

#### SECONDARY EDUCATION:

Secondary education plays a fundamental but complex role in preparing young people for the labour market, especially for people who leave secondary education for a job. In Assam, Secondary Education covers Class IX to Class X for the age group of 14 years to 16 years and Higher Secondary stage covers Class XI to Class XII for the age group 17 years to 18 years. However, amalgamated Secondary Schools are imparting education from Class VI onwards. During 2018-19, there were 3376 numbers of Secondary Schools and 656 numbers of Higher Secondary Schools and 65 numbers are Junior Colleges, 15 Model schools with a total of 4032 high and Higher secondary school (both Govt. and provincialized), 95 Sanskrit Tools and 138 Senior Madrassa as per the latest data available from Assam Higher Secondary Education Council.

The Gross Enrolment Ratio in Higher Secondary Schools (18-23 years) in all categories for male student in Assam is 19.1 and is less than the All India ratio of 26.3. In respect of female students the ratio is 18.3 in Assam while it is 26.4 at All India level. The combined ratio for male and female students is 18.7 in Assam and 26.3 at All India level, as per AISHE Report 2018-19.

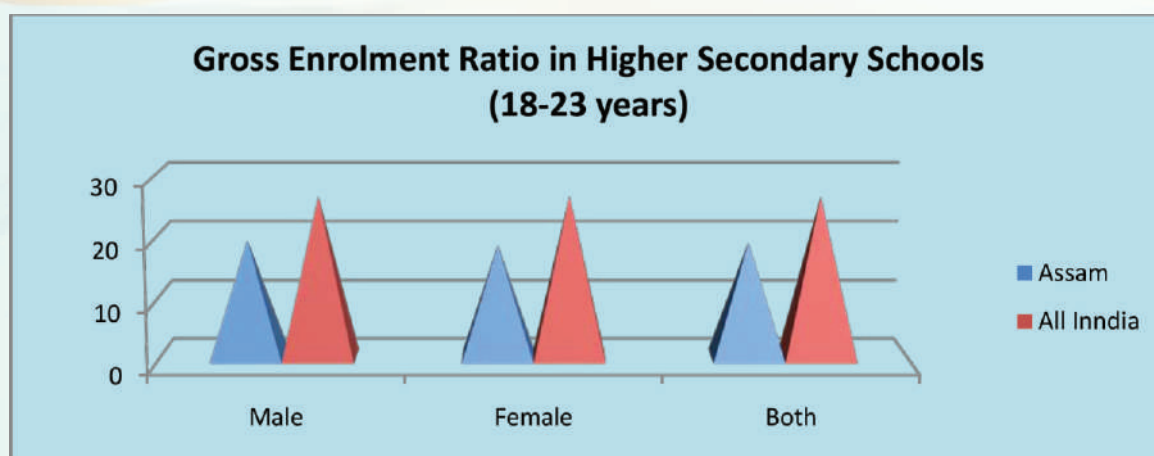


Fig-2

Source: AISHE Report 2018-19

The table 19.3 below shows the facilities in the Higher Secondary Schools as per DISE 2018-19

**TABLE-19.3**  
**GOVERNMENT/PROVINCIALISED HIGH AND HIGHER SECONDARY SCHOOLS HAVING FACILITIES**

Facilities	2018-19
Number of schools)	4309
Available Drinking Water	4204
Boundary Wall /Fencing	2462
Available Girls Toilet	3861
Computer	3200
Ramp	2760
Playground	3162
Library	2698
Electricity connection	4157

Source: U-DISE-2018-19.

**RASHTRIYA MADHAYMIK SHIKSHA ABHIYAN:**

*Rashtriya Madhyamik Shiksha Abhiyan (RMSA)* was launched in 2009 with the objective to enhance secondary education and also improve its quality. The main objective of this scheme is to improve quality of education imparted at secondary level through making all secondary schools conform to prescribed norms, removing gender, socio- economic and disability barriers, providing universal access to secondary level education by 2017, i.e. achieving universal retention by 2020.

**TABLE-19.4**  
**PHYSICAL ACHIEVEMENT (WORKS APPROVED AND PROGRESS MADE) OF RMSA SINCE INCEPTION IN ASSAM**

Activity	Number of Approved unit	Progress as on March, 2019
Additional Classrooms	2445	2086
Science Laboratory	2159	1043
Computer Laboratory	1802	894
Library	1046	878
Art/Craft Room	224	97
Girls Hostel (KGBV)	81	49
CWSN Toilet	131	3
Drinking Water	206	141
Toilet block	737	723
New Schools Building (up-gradation from Upper primary to Secondary)	12	6
Teachers residential quarters	18	0

Source: Annual Report 2018-19, Samagra Shiksha.

**SAMAGRA SHIKSHA ABHIYAN:**

Samagra Shiksha is an overarching programme for the school education sector extending from pre-school to class 12. It has been prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes. It subsumes the three erstwhile Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhamik Abhiyan (RMSA) and Teachers Education (TE). The Goal SDG 4.1 states that "By 2030, ensure that all boys and girls complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes." The scheme envisages the 'school' as a continuum from Pre-school, Primary, Upper Primary, and Secondary to Senior Secondary level. The vision of the scheme is to ensure inclusive and equitable equality education from Pre-school to Senior Secondary stage in accordance with the Sustainable Development Goal (SDG) for Education.

**CURRICULUM FRAMEWORK:**

The current structure of school education must be restructured on the basis of the development needs of students. This would consist of a 5-3-3-4 design comprising: (i) five years of foundational stage (three years of pre-primary school and classes I and II), (ii) three years of preparatory stage (classes III to V), (iii) three years of middle stage (classes VI to VIII), and (iv) four years of secondary stage (classes IX-XII).

**MAJOR OBJECTIVES OF THE SCHEME:**

1. Provision of equality education and enhancing learning outcomes of students;
2. Bridging Social and Gender Gaps in School Education;
3. Ensuring equality and inclusion at all levels of school education;
4. Ensuring minimum standards in schooling provisions;
5. Promoting Vocationalisation of education;
6. Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009 and
7. Strengthening and up-gradation of SCERTs/State Institutes of Education and DIET as a nodal agency for teacher training.

**HIGHER EDUCATION:**

The Directorate of Higher Education and Directorate of Secondary Education was established to give primary focus on expansion and promotion of Higher Education by granting financial assistance to the needy educational institutions besides implementing various programmes for development of general education and assisting for infrastructure development of educational institutions in general with special focus to rural and backward areas. The numbers of Higher Educational institutions in Assam is given in Table-6 below:

**TABLE-19.5**  
**NUMBER OF HIGHER EDUCATIONAL INSTITUTIONS IN ASSAM AS ON 2018-19**

Institutions	Numbers
Universities (including private and Deemed University)	17
Government Colleges	4
Provincialised Colleges	297
Non-Government Colleges	100
Provincialised Sanskrit & PaliTools	95
Literary & Voluntary Organization	25
Government Law College	1
Non-Government Law Colleges	25

Source : Directorate of Higher Education, Assam.

**GOVT INITIATIVES AND ACHIEVEMENTS FOR HIGHER EDUCATION:**

- An amount of Rs. 56868.29 lakhs (including Rs.31314.29 lakhs for RUSA) has been proposed under State Owned Priority Development (SOPD) Budget 2018-19 in respect of Higher Education for implementation of development schemes and granting assistance to the Universities, Colleges and other institutions.
- In Higher Education, policy changes have been introduced to have non-political eminent educationists as Chairman of Governing Bodies of Colleges and for selection of Principals by a committee headed by Vice Chancellor of the University to which the college is affiliated. The term of appointment of the college Principal shall be five years or till the age of retirement, whichever is earlier, with eligibility for the re-appointment for one more term only after qualifying in a similar process.
- Under the Rashtriya Uchchar Siksha Abhiyan (RUSA), five Pandit Deendayal Upadhyay Model Degree Colleges have been started at Behali (Biswanath), Amjonga (Goalpara), Tulungia

(Bongaigaon), Eraligool (Karimganj) and Dalgaon (Darrang). In addition, academic programme of 2 more colleges at Deithor (Karbi Anglong) and Borkhola (Cachar) will start at an early date.

- The establishment of the three new universities by up gradation of three colleges and the universities has been named as Bhattadev University, Madhavdev University and Kabi Guru Rabindranath Thakur University at Barpeta, North Lakhimpur and Hojai respectively.
- The student excursion programme for colleges to provide them better exposure, a partnership programme with Rajasthan is developed under the Ek Bharat Shreshtha Bharat project.
- A number of ten (10) new Government Law Colleges will be established in Dhubri, Nalbari, Rangia, Nagaon, Diphu, Jorhat, Dibrugarh, Tezpur, Silchar and North Lakhimpur.
- A number of ten (10) new B.Ed. colleges will be established at Karbi Anglong(West),Bongaigaon, Baksa,Nalbari, Kamrup, Morigaon, Dima Hasao,Sivsagar, Biswanath and North Lakhimpur.
- A number of Nine (9) new women colleges will be established predominantly in Minority Areas viz. Sonai, Chenga, Batadraba, Jaleswar, Golakganj, Bilasipara, Mangaldai, Hailakandi and Karimganj.
- Further, six more new degree colleges shall be opened at Borsola (Sonitpur), Doomdooma (Tinsukia), Majuli, Baksa, Chirang and Udalguri in addition to the model colleges under the Uttoron initiative.

#### ACHIEVEMENTS IN THE FIELD OF HIGHER SECONDARY 2018 -19:

1. <b>Fee Waiver</b> : Government has introduced fee waiver scheme in 2018 -19 to the students in H.S. 1 <sup>st</sup> & 2 <sup>nd</sup> year, T.D.C. 1 <sup>st</sup> to 3 <sup>rd</sup> Semester, MA/M.Sc/M.Com fees whose parental annual income is below Rs. 1.00 lakh. A total of 276397 numbers of BPL students benefited in 304 numbers of Govt. & Provincialised Colleges and 2332 numbers. of BPL students benefited in six Universities under this scheme. The Govt. released an amount of Rs. 9173.30 lakh under the Scheme during 2018-19.
2. An amount of Rs 13.50 crore has been released to 27 Colleges @ Rs. 0.50 Crore each and Rs. 2.25 crore has been released to 9 Colleges @ Rs. 0.25 Crore each as grant for the development of infrastructure.
3. Grants for Students excursion of Rs. 3.02 Crore has been released to 302 Colleges @ Rs. 1.00 lakh each.
4. For the development of infrastructure, grants released is-
1) Rs. 50.00 lakhs to Sri Sri Madhab Dev University
2) Rs.20.00 lakhs each to five colleges for Introduction of Vocational Subject.
3) Rs 29.94 lakhs has been released to BRM Govt. Law College.
4) Rs 12.64 lakhs for Opening of P.G. Courses at Majuli College.
5) Rs 27.46 lakhs has been released to Jorhat Kendriya Mahavidyalaya.
6) Rs 250.00 lakhs to Krishna Aadhyamtik University.

#### MEDICAL EDUCATION:

The Directorate of Medical Education, Assam is entrusted with the task of generating human resources like Doctors, Nurses, Technicians, Physiotherapists, Pharmacists and other Health personnel to meet the growing needs of not only the State but the entire North Eastern region. The government of Assam proposes to establish new medical colleges in Karimganj. Construction of Kokrajhar, Tinsukia and Nalbari medical colleges will commence within a short time. The ongoing construction work of Diphu, Dhubri, Nagaon and North Lakhimpur will be further fast-tracked. The table below shows that in nine (9) numbers of medical colleges in Assam the total enrolment is 866 and total number of teachers was 1651 in 2018.

**TABLE-19.6**  
**EDUCATIONAL INSTITUTION UNDER DIRECTOR OF MEDICAL EDUCATION ASSAM, 2018**

Sl. No.	Institution	No. of Institution	Intake Capacity (MBBS/ BDS)	Enrolment		No. of Teachers	
				Female	Total	Female	Total
1	2	3	4	5	6	7	8
1	Gauhati Medical College, Guwahati	1	156	52	156	184	468
2	Assam Medical College, Dibrugarh	1	170	74	170	136	359
3	Silchar Medical College, Silchar	1	100	34	100	55	290
4	Jorhat Medical College, Jorhat	1	100	45	100	59	162
5	F.A.A. Medical College, Barpeta	1	100	36	100	46	152
6	Tezpur Medical College, Tezpur	1	100	37	100	61	168
7	Regional Dental College, Guwahati	1	40	23	40	18	41
8	Government Dental College, Dibrugarh	1	50	22	50	2	6
9	Government Dental College, Silchar	1	50	21	50	2	5

*Source: Director of Medical Education.*

#### **NEW NATIONAL EDUCATION POLICY 2019:**

The draft of the National Education Policy (under the chairmanship of Dr. K. Kasturirangan) was submitted on May 31, 2019. The Committee was constituted by the Ministry of Human Resource Development in June 2017. The report proposes an education policy, which seeks to address the challenges of: (i) access, (ii) equity, (iii) quality, (iv) affordability, and (v) accountability faced by the current education system. The draft Policy provides for reforms at all levels of education from school to higher education. It seeks to increase the focus on early childhood care, reform the current exam system, strengthen teacher training, and restructure the education regulatory framework. It also seeks to set up a National Education Commission, increase public investment in education, strengthen the use of technology and increase focus on vocational and adult education, among others.

#### **HEALTH AND FAMILY WELFARE:**

Health care performance in Assam exhibits sustained improvements over the years. These improvements are the outcomes of concentrated and continued efforts of the Government towards establishing an efficient system of health care and family welfare through effective planning, financing, human and resources management, and infrastructure and supply chain management. The State Government has taken consistent initiatives to reduce prevailing regional disparities and gaps in the access to safe drinking water, sanitation facilities, public and private health care infrastructure, rural infrastructure, access to preventive and medical care, public hygiene, information system on health care and nutrition and skilled manpower.

#### **GENERAL HEALTH:**

Quality and adequate health care services has led to better learning ability, nutritional retention, capability enhancement and standard of living of people. It has also helped in limiting family size, improving basic amenities and reducing poverty significantly.

The State health services has always aimed at providing reliable, affordable, accountable and effective primary health care to the people of Assam, with special care provisions for women and children. For the achievement of this goal, the State has been implementing various Central Government schemes, along with its own schemes and programmes by continuously increasing allocation of funds to the Health sector in successive State Plans.

#### **National Health Mission (NHM)**

Government of India launched the National Health Mission (NHM) to carry out necessary architectural correction in the basic health care, delivery system. The Mission's approach is relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian systems of medicine to facilitate health care. Various measures taken by National Health Mission (NHM) for child and mothers health.

The National Health Mission encompasses its two Sub- Missions , The Nation Rural Health Mission and The National Urban Health Mission. The main Programmatic components include

health systems strengthening in rural and urban areas, Reproductive –Maternal- Neonatal Child and Adolescent health and communicable- and non communicable diseases .The core public health mandate of the National Health Mission is to provide equitable , affordable and quality health care services to the people of Assam .

The State Government along with National Health Mission has taken up schemes to strengthen existing health facilities and also to build new public health infrastructure in Rural, Hilly, Char, Tribal and Tea Garden areas to reduce Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR) and Crude Birth Rate (CBR) in the state.

#### Status of Health Infrastructure in the State.

The status of Health infrastructure in the State is improving over the years.

- At present there are 6 Medical colleges and Hospitals, 25 Civil Hospitals + MMCH (Annex Building of GMCH), 3 Tuberculosis Hospital, 3 Leprosy Hospital, 1 Cancer Hospital , 14 Sub Divisional Civil Hospitals, 946 Rural and 56 Urban PHCs, 74 FRUs, 178 CHCs, 268 State Dispensaries and 4644 Sub Centers, 130 Mobile Medical Unit (80 for tea Gardens and 50 for Non-Tea Gardens, 15 Boat Clinic with 18886 numbers of total beds in the State at the end of 2018.
- The number of Medical and Paramedical staff in the state is 6011 including Ayurvedic Homeopathic doctors and Dental Surgeon. As on 31<sup>st</sup> March, 2019.

#### HEALTH INDICATORS IN ASSAM, 2019:

The health indicators released by Registrar General of India (RGI) shows that the Under Five Mortality rate in Assam is still high than the all India rate. The neo natal mortality has decreased during the last few years compared to the all India rate and this is due to the initiatives taken by the State Health Service for maternal and child health. The table below shows a comparison of some health indicators of Assam and India.

**Table – 19.7  
TRENDS IN SELECTED HEALTH INDICATORS: 2019**

Activity	Total		Rural		Urban	
	Assam	India	Assam	India	Assam	India
Crude Birth Rate (CBR)	21.7	20.4	22.8	22.1	15.0	17.3
Crude Death Rate (CDR)	6.7	6.5	7.1	7.1	4.9	5.4
Infant Mortality Rate. (IMR)	44	33	46	37	21	23
Neo-Natal mortality rate	23	24	21	29	11	15
Under 5 (Five) mortality rate	52	39	56	48	23	28

Source: SRS Bulletin, 2017 and NITI AAYOG

**Table -19.8 (A)  
INFANT MORTALITY RATE BY SEX AND RESIDENCE, 2017**

	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
INDIA	33	32	34	37	36	37	23	22	25
ASSAM	44	41	46	46	44	49	21	21	22

Source : SRS Bulletin, May 2019

The graph below shows that by sex the female Infant Mortality Rate in all India and State of Assam is higher than male Infant Mortality Rate. By residence, the data also reveals that in Rural areas the Infant Mortality Rate is higher than Infant Mortality Rate in urban.

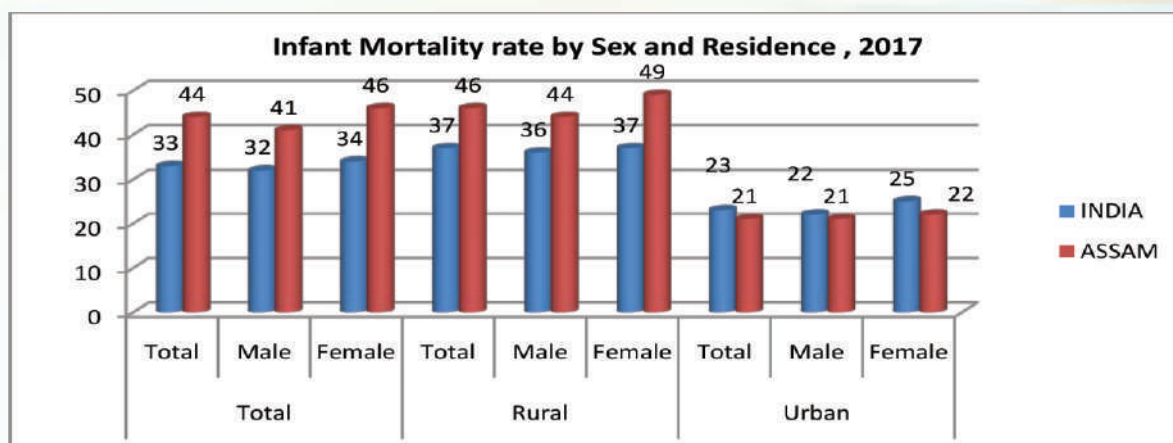


Fig.-3

The graph below shows the trend of Crude Birth Rate (CBR), Crude Death Rate (CDR), Infant Mortality Rate (IMR) and Total Fertility Rate (TFR) in Assam since 2006 to 2016. The CBR, CDR, IMR and TFR which was 24.6, 8.7, 67 and 2.7 in 2006 has declined to 21.7, 6.7, 44 and 2.3 in 2016.

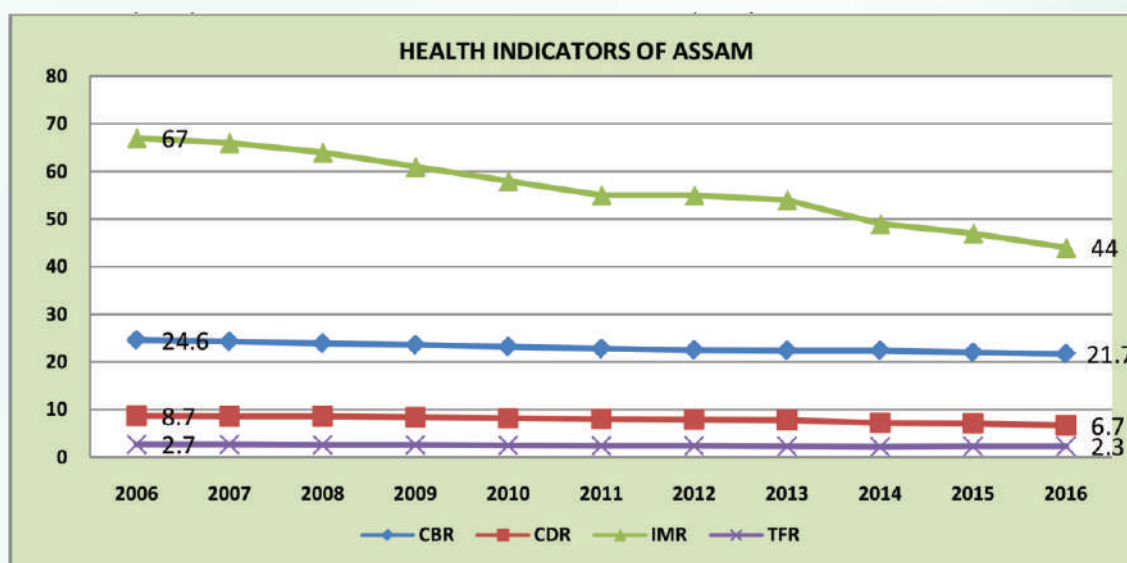


Fig.-4 (A)

Table-19.8 (B)

**COMPARATIVE STATEMENT OF MORTALITY RATE OF ASSAM AND INDIA**

INDICATORS		SRS 2013	SRS 2014	SRS 2015	SRS 2016	3YEARS ACHIEVEMENT
NEONATAL MORTALITY RATE	ASSAM	27	26	25	23	4 POINT DROP
	INDIA	28	26	25	24	4 POINT DROP
U-5 MOTALITY RATE	ASSAM	73	66	62	52	21POINT DROP
	INDIA	49	45	43	39	10POINT DROP
INFANT MORTALITY RATE	ASSAM	54	49	47	44	10POINT DROP
	INDIA	40	39	37	34	6 POINT DROP
PERINATAL MORTALITY RATE	ASSAM	28	26	24	20	8 POINT DROP
	INDIA	26	24	23	23	3 POINT DROP

SOURCE : SRS BULLETIN , RGI.



COMPARATIVE ACHIEVEMENTS OF NHM IN ASSAM AND INDIA, 2018

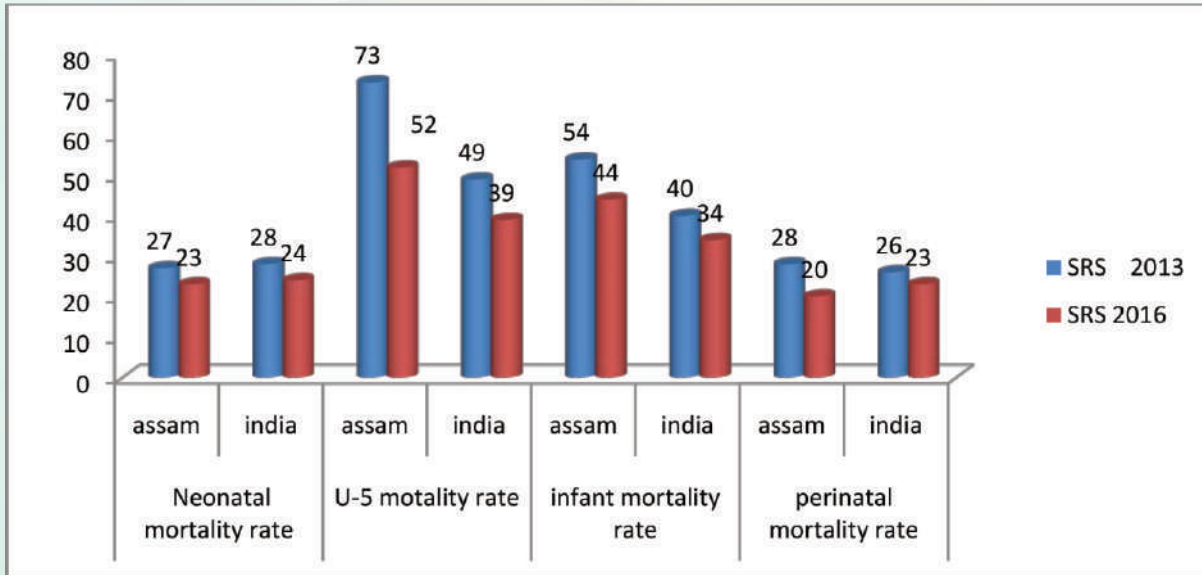


Fig.-4 (B)

**LIFE EXPECTANCY:**

The World Health Organisation (WHO) defined life expectancy as the average number of years that a person expects to live in full health. Life expectancy varies by geographical area and by era. Life Expectancy of a person or population group depends on several variables such as their life style, access to health care, diet, economical status and the relevant mortality and morbidity data. However, as life expectancy is calculated based on averages, a person may live for many years more or less than expected. According to the latest WHO data published in 2018 life Expectancy in India is : Male 67.4, Female 70.3 and total Life Expectancy is 68.8 which gives India a World Life Expectancy ranking of 125. The data available from Sample Registration Survey (SRS), 2010-14 that Kerala has the highest life expectancy at birth (74.9) . If we analyse the data it reveals that during 1990 the life expectancy of Assam for Male was 55.6 and Female was 56.6 but in 2016 as per source life expectancy of Assam for male is 63.5 and for female is 66.9 . As a whole life expectancy at birth in India are 67.9. Among the countries in the world, the highest life expectancy is Monaco ranked first with 89.32 years followed by Japan with 85.26 years.(Source: WHO Report)

**MATERNAL MORTALITY RATIO (MMR):**

Maternal Mortality Ratio (MMR) is the Annual number of Female death per 100,000 live birth from any cause related to or aggravated by pregnancy or its management. The Maternal Mortality Ratio of Assam and India from 2004-06 to 2014-16 is presented through the graph given below.

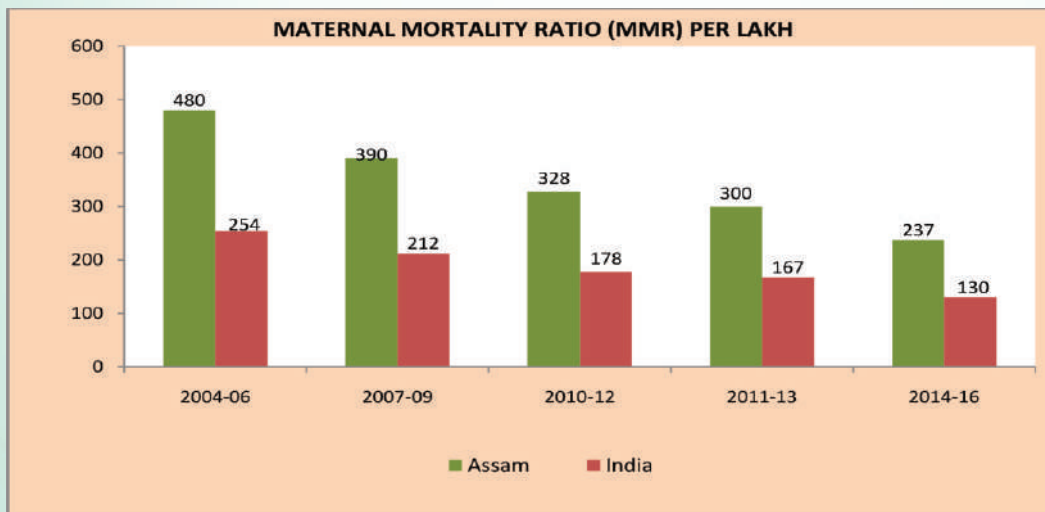


Fig.-5

Source: SRS Bulletin, Registrar General of India & NITI Aayog.

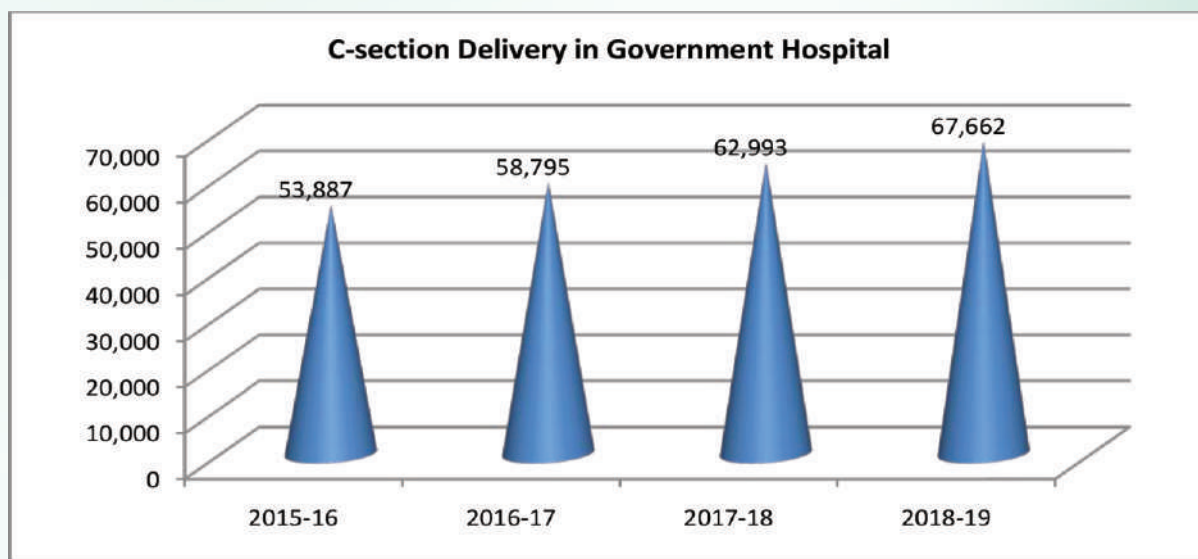
The above graph depicts that there is an overall decline of the Maternal Mortality Rate (MMR) during the period from 2004 to 2016. However, the rate is still very high in Assam in comparison to the All India rate due to some major factors like infections and anaemia during childbirth especially among rural women. There is a downfall of MMR to 22% at the All India level from 167 in 2011-13 to 130 in 2014-16. Likewise, at the state level, the downfall is 21% in the MMR from 300 to 237. Factors responsible for the downfall in MMR include an increase in institutional deliveries, involving private doctors to provide free health checkups to pregnant women at government hospitals, decline in child marriage, reduction in teenage pregnancies etc. Moreover, a facility in public hospitals and health centres, free drugs and diagnostics among other incentives to pregnant women has led to the increase in admission for delivery in Government hospital. Among the Indian states Kerala has the lowest MMR of 46 followed by Maharashtra 61.

#### **INSTITUTIONAL DELIVERY:**

The Govt. under NHM has taken various initiatives to increase institutional delivery in Assam. Institutional delivery in Assam till 2006-07 was not so encouraging. During 2007-08 the number of institutional deliveries in Assam increased by 68 percent and is on an increasing trend resulting in a decline of MMR due to various interventions like Janani Suraksha Yojana (JSY), Janani Sishu Suraksha Karyakram (JSSY), Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) etc. Institutional delivery in the state has increased from 22.7% in 2005-06 to 70% in 2015-16. Similarly, the number of reported institutional deliveries has also increased from 1.49 lakhs in 2005-06 to 5.26 lakhs in 2017-18.

By deploying required specialist doctors and other staffs and required equipment, First Referral Units (FRUs) were made operational. It has resulted in an increased number of C-section deliveries in public health facilities in the year from 53,887 in 2015-16 to 58,795 in 2016-17, providing services to DHs and FRUs. Similarly, total 62,993 C-Section deliveries were conducted in 2017-18 and in 2018-19, 67,662. The graph below shows the trend of institutional delivery in the State since 2014-15 to 2018-19.

**Trend of C-Section Delivery in Assam, since 2015-16**



**Fig.-6**

Source: NHM Report, 2019

#### **1) JANANI SURAKSHA YOJANA:**

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women. The Yojana, launched on 12th April, 2005, by the Hon'ble Prime Minister, is being implemented in all states and Union Territories with special focus on low performing states. JSY is a 100% centrally sponsored scheme and it integrates cash assistance with delivery and post-delivery care. The success of the scheme would be determined by the increase in institutional delivery among the poor families.

The Yojana has identified ASHA, the Accredited Social Health Activist, as an effective link between the Government and the poor pregnant women in 10 low performing states, namely the 8 EAG states and Assam and J & K and the remaining NE States. In other eligible states and UTs, wherever, AWW and TBAs or ASHA-like activists have been engaged in this purpose. She can be associated with this Yojana for

providing the services. Under the scheme 47.50 lakhs mothers have got benefitted in the State till March 2019.

- 1) Benefit to mother for delivery in Government and Accredited Hospitals
  - Rs. 1400/- is for women from Rural Area
  - Rs. 1000/- is for women from Urban Area
- 2) Rs. 500/- for Home Delivery for BPL Women (Benefit to mother)
- 3) Benefit to ASHA
  - Rs. 600/- for delivery in Government and Accredited Hospitals.

## 2) SNEHASPASH:

Sneha Sparsha, literally meaning the 'touch of love', is the recent unique Health Care Initiative for Children below 12 years of age launched by the Department of Health & Family Welfare, Government of Assam. The scheme, being implemented by NHM, Assam, was flagged off on 15<sup>th</sup> April 2013, the first day of Assamese New Year, with an allotted fund of Rs 5 Crore for the Fiscal Year 2012-13.

Sneha Sparsha is a striving public health initiative that aims at bearing expenditure of very high-end specialized treatment such as Thalassemia requiring Bone Marrow Transplant, Liver and Kidney transplant, and Cochlear Implant, limb deformities requiring artificial and motorized limb, neurological anomaly, specialised eye surgery, blood cancer requiring chemo therapy and various solid tumors till March.2019 total 467 patients benefitted under the scheme.

Eligibility: Families with annual income less than Rs. 2.50 Lakh shall be eligible for availing benefits under the scheme, while priority shall be given to BPL families.

**Table-19.9**  
**No. OF BENEFICIARIES UNDER "SNEHASPASHA" DURING 2013-14 TO 2018-19**

Sl. No	Year	No. of Beneficiaries under SNEHASPASHA
1	2013-14	50
2	2014-15	56
3	2015-16	61
4	2016-17	75
5	2017-18	98
6	2018-19	107
TOTAL		467

Source : NHM Report Assam, 2019

## 3) ATAL AMRIT ABHIYAN:

In order to improve the quality of health service government has implemented the Health Assurance scheme named "Atal Amrit Abhiyan" which covers select, high cost, critical care procedures in six disease groups : cardiac, kidney, cancer, neurological conditions, neo natal disease and burn covering individuals in BPL and APL families upto an annual income of Rs.5 lakhs. This is a completely cashless programme. Presently six more "diseases and scenarios" have been added to the extended Atal Amrit Abhiyan. These are ICU packages, trauma, critical care paediatrics and paediatric surgery, bone marrow transplantation, Japanese Encephalitis (JE) and Acute Encephalitis Syndrome. So far total 27,424 cancer patients followed by 20263 nos. of kidney patients and 6470 nos. of heart patients have been benefitted from this scheme.

## 4) WAGE COMPENSATION SCHEME FOR PREGNANT WOMEN OF TEA GARDEN AREAS :

On 1<sup>st</sup> October 2018, Govt. has started another new scheme for pregnant women of tea garden areas. Wage Compensation Scheme for Pregnant Women of tea garden areas of Assam taken up under state health budget for better health and nutrition by providing Rs. 12000/- to each pregnant women of tea garden areas so that she can better look after herself and her un-born baby without compromising the livelihood of her family. Total 17, 847 pregnant women have been registered in the system till date.

## 5) Up-Gradation Sub Divisional Civil Hospital (SDCH):

The upgradation work have started for 5(five) Sub Divisional Civil Hospital to District Hospital at Biswanath Chariali, Sonari, Hatingimari, Hamren, Garmur (Majuli) and one new District Hospital at Hojai has been approved. Further, a total of 128 Model Hospitals have been approved to be set up across the state; out of these, construction of 97 has been completed. Besides, altogether more than 62 Model Hospitals have been made functional with OPD, Delivery and Laboratory facilities.

## AMRIT Pharmacy :

Assam is the first state to introduce AMRIT (Affordable Medicines and Reliable Implants Treatment) pharmacy in the North East India. To make the medicines available at affordable costs "AMRIT" a pharmacy at GMCH, Guwahati is opened. At present there are 24 No. of AMRIT Pharmacies in the state form where patients are able to access the essential drugs at a concession rate.

## 6) Providing Comprehensive primary healthcare to tea garden population through dedicated Mobile Medical Units (MMUs):

Government of Assam has taken various initiatives for improving healthcare services delivery in garden Areas of the state. In order to provide comprehensive primary healthcare services along with diagnostics

facilities Health Department has already launched Mobile Medical Unit (MMU) services in the state on 20<sup>th</sup> June, 2017. Government of India has sanctioned 130 MMUs in the state of which 80 MMUs are exclusively for Tea garden areas. It is expected that, healthcare scenario of tea garden labourers will improve drastically which will also contribute to the reduction of Maternal and Infant Mortality in the state.

**Table –19.10**  
**Performance of MMUs from 20<sup>th</sup> June, 2017 to 31<sup>st</sup> March, 2019**

Sl No.	Item	Performance of MMU till 31 <sup>st</sup> March, 2019
1	No. of camp held	52,740
2	No of patient treated	23,42,274
3	No. of ECG	8,105
4	No. of Ophthalmic	1,02,543
5	No. of blood tested patient	4,13,581
6	No. of urine tested patient	48,827
7	No. of patient referred	71,629

**Source: NHM Report 2019**

### 7) Chief Minister's Free Diagnostic Services:

Quality diagnosis is vital for medical practitioners to make effective decisions about treatment. Access and availability of quality radiology services have been a key challenge for the health system. One of the major component of the out of pocket expenditure of the patient have been the diagnostic tests which is increasing and form the second major segment of such expenditure after medicine. The objectives envisaged under free diagnostics scheme are ---

- i) Ensure the availability of a minimum set of diagnosis appropriate to the level of care.
- ii) Reduce out of pocket expenditure of patient on diagnostics.
- iii) Improve overall quality of health care and patients experience as result of availability of comprehensive healthcare in public health facilities.

To achieve the above objectives, Chief Minister's Free Diagnostics services is launched by Hon'ble CM on 11<sup>th</sup> May 2017, to ensure availability of minimum set of diagnostic service at health institutions up to PHC level. Under Chief Minister's Free Diagnostics services CT SCAN, X-RAY and laboratory service are being provided free of cost to all irrespective of APL/BPL status under public private partnership (PPP) arrangement. An online dashboard kept in public domain, exists for monitoring of the performance of PPP service provider.

### Number of patients availed services under this scheme till 31<sup>st</sup> March, 2019

- X-Ray services = 6,60,879
- CT-Scan Services = 2,40,117
- Laboratory services = 15,96,976

### 8) Free Drugs Services:

The Government of Assam has taken various initiatives for procurement of quality drugs. The essential drug are procured in Generic form and provided free of cost to all OPD and IPD patients. Both the Central and State Government provide budgetary support for this initiative of providing essential drugs free of cost to patients visiting Government hospitals. State has notified the modified Essential Drugs List [EDL] where numbers of free drugs has been significantly increased from 205 to 441 to treat communicable and non communicable diseases along with super-speciality diseases like Cancer, Nephro, Hemophilia, Thalassemia etc. "Assam Medical Service Corporation Limited" (AMSCCL) is incorporated on 2016, as the central procurement agency of the state. For transparent procurement of drugs a scientific e tendering system has been adopted by the Govt.

### 9) Accredited Social Health Activist (ASHA):

ASHAs form the backbone of NHM programme. Approximately 31955 ASHAs (Rural ASHA= 30,619 and Urban ASHA=1336) have been providing laudable service in creating awareness about the availability of various Government sponsored programs. ASHAs are volunteers and they received incentive based on performance. "ASHA Payment and performance monitoring system" has been implemented throughout the state to ensure Direct Bank Transfer (DBT) for payment of incentives to ASHAs using PFMS Portal.

### 10) Boat Clinic:

The islands and sandbars of the river Brahmaputra popularly known as Chars & Saporis are among the most backward area of the state. The main threats to these areas is from frequent floods which play a role of devastation of the communities residing in these islands, thus causing a major concern to the health status of the communities. To meet these challenges, Government of Assam initiated boat clinic service in the year 2008 for these communities. Government is providing health services in these areas of River Island of the River Brahmaputra in 13 districts of the state with 15 Boat Clinic Units. As per report

available, 21,84,379 nos. patients were treated in 29,704 camps organised by Boat Clinic since 2008-09 till March, 2019.

**Table-19.11**  
**Performance of Boat Clinic During 2013-14 to 2018-19**

YEAR	No. of Camps organised	No. of Patients treated
2013-14	2894	200006
2014-15	3061	210807
2015-16	3350	240199
2016-17	3339	246684
2017-18	3218	221083
2018-19	3470	233785
TOTAL	19332	1352564

Source : NHM Report Assam, 2019

**11) Susrusha:**

A total 386 patients who have undergone kidney transplantation have received the financial benefit under this scheme during August 2010 to March, 2019. Under Susrusha, an amount of Rs.1.00 lakh is granted as financial assistance to people who have undergone kidney transplantation after 1<sup>st</sup> April 2010.

**12) Sanjeevani:**

This scheme covers Village Health Outreach Programmes (VHOP) for early screening, diagnosis and follow up for non-communicable and lifestyle diseases. This scheme covers 62 lakh populations every month. A total of 75,86,975 patients visited Sanjeevani since 1<sup>st</sup> March 2011 to 31<sup>st</sup> March 2019.

**13) Sarathi104 Health Information Helpline:**

Sarathi 104, a 24x7 health information help line has been established for Medical advice and counselling services. Total 1, 44,67,245 calls received by Sarathi 104 since 7<sup>th</sup> November 2010 to 20<sup>th</sup> April, 2019. It is also working as Grievances Redressed System.

**14) Rashtriya Bal Swasthya Karyakrm(RBSK):**

"Rastriya Bal Swasthya Karyakrm" is an initiative aimed at screening of children from 0 to 18 years for 4 'D's - Defect at birth, Diseases, Deficiencies and Development Delays including Disabilities. Children diagnosed with illnesses shall receive follow up including surgeries at tertiary level, free of cost under NHM. Screening of childrens are done at Schools and AWCs through 306 Mobile Teams posted at Block PHC level. The following table depicted the progress of RBSK during 2013-14 to 2018-19.

**Table-19.12**  
**Performance of Rashtriya Bal Swasthya Karyakrm (RBSK) During 2013-14 to 2018-19.**

Sl. no.	Year	Nos. of Children Screened	Nos. of children referred	Total treatment
1	2013-14	1795346	193429	145259
2	2014-15	3124689	152560	17449
3	2015-16	4868879	111232	37959
4	2016-17	6335738	144637	75417
5	2017-18	11693842	108437	95574
6	2018-19	6963751	118070	96828
Total		34782245	828365	468486

Source : NHM Report Assam, 2019

**15) Assam Arogya Nidhi (AAN) :**

Assam Arogya Nidhi Initiative provides financial assistance up to Rs.1,50,000/ to BPL families and families having a monthly income of less than Rs. 10,000/- for general and specialized treatment. Life threatening diseases includes Heart Diseases Heart Surgery, Cancer, Kidney and Urinary diseases, Orthopaedic, Thalassemia, Bone marrow Transplant, AIDS, and chronic Mental illness with Surgical Treatment. Assam Arogya Nidhi scheme has been revived. Till March, 2019 total 3,175 beneficiaries have been benefited under the scheme since inception.

**Table-19.13**  
**Beneficiaries under Assam Arogya Nidhi (AAN) during 2012-13 to 2018-19**

Sl	Year	Nos. of Assam Arogya Nidhi beneficiaries
1	2012-2013	5
2	2013-2014	442
3	2014-2015	497
4	2015-2016	86
5	2016-2017	2124
6	2017-2018	0
7	2018-2019	21
Total		3,175

Source : NHM Report Assam, 2019

**16) Ayushman Bharat – Health & Wellness Centre :**

Ayushman Bharat Yojana also known as Pradhan Mantri Jan Aragya Yojana (PMJAY) is a schme that aim to help economically vurnable Indians who are need of health care. To extend comprehensive holistic care, Ministry of Health & Family Welfare, Govt. of India started Comprehensive Primary Health Care programme, which include preventive, promotive, curative, palliative and rehabilitative aspects of health care. Lack of an effective Primary Health Care services leads to overburdening of the Secondary and Tertiary Care Health Facilities with high out of pocket expenditure. This further increases the gap between health services and community.

To ensure primary health care implementation, three important requisites are: (a) Bringing care closer to people (b) Giving primary health care providers the responsibility for the health of a defined population and (c) Strengthening the role of the primary health care team. Primary Health Care also includes health education and health communication to promote healthy behaviours, practices that are conducive to good health. At community level, trained frontline workers (ASHA/ANM/AWW) will provide basic services, mostly on preventive and promotive health care. It focuses on early detection of risk factors, screening, regular follow-up & improving understanding in the community regarding diseases.

**17) Assam MCTS Call Centre :**

The objective of Assam MCTS Call Centre is to inform the due date of services to be provided to pregnant women and children to avoid drop out and ensure complete services. Information of various schemes implemented under NHM also discriminated during interaction. Assam MCTS Call Centre made operational in 2013-14 and total 44,75,367 numbers of calls made till March 2019.

**Table-19.14**  
**No. of calls made under MCTS Call Centres till March, 2019.**

Year	Mother	HRPW	Child	ANM	ASHA	Total
2013-14	1,74,555	4,681	1,02,729	15,163	69,986	3,67,114
2014-15	6,05,732	28,650	1,00,323	13,453	56,008	8,04,166
2015-16	4,86,022	21,385	74,244	3,205	45,302	6,30,158
2016-17	3,27,504	14,693	1,51,984	1,051	54,732	5,49,964
2017-18	6,19,740	16,917	2,86,068	760	42,385	9,65,870
2018-19	7,71,601	28,988	2,95,759	1,538	60,209	11,58,095
Total	29,85,154	1,15,314	10,11,107	35,170	3,28,622	44,75,367

Source : NHM Report Assam, 2019

**18) Child Care:**

There is significant improvement in Infant Mortality Rate, Neo natal Mortality Rate and Under 5 Mortality Rate in the State. The achievement could be due to various interventions like functioning of Special New Born Care Unit (SNCU), New Born Stabilization Unit (NBSU), New Born Care Corner (NDCC), Home Based New Born Care (HbNC) taken up under National Health Mission.

i) Special New Born Care Unit (SNCU):

Patients of sick new borns have immensely benefited from the establishment of SNCUs. At present 28 SNCUs are functional in the State. The following depicts the services of SNCUs in the state during 2015-16 to 2018-19.

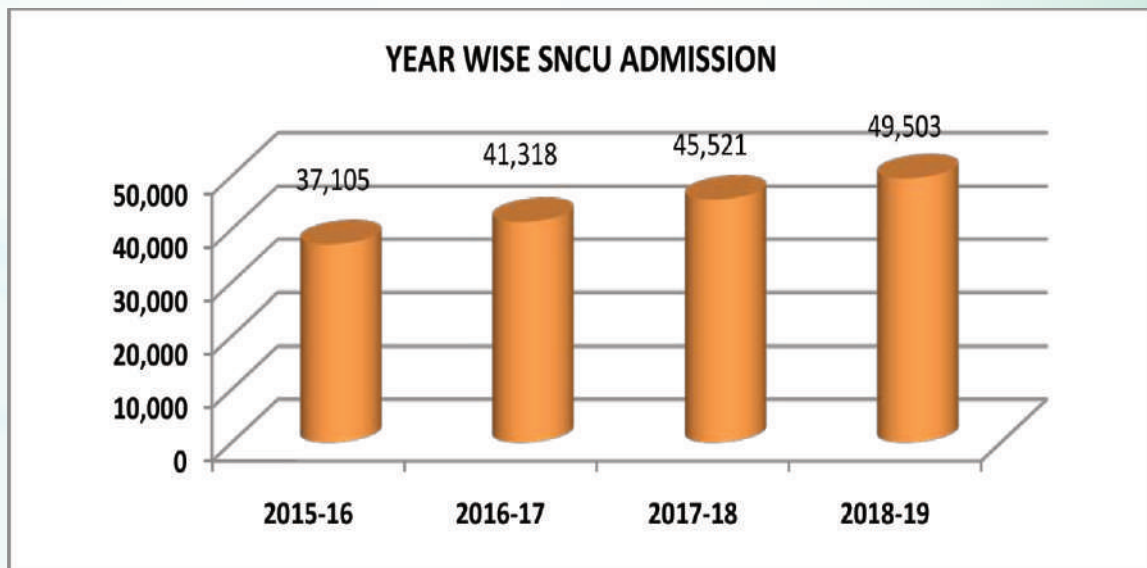


Fig-7  
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- ii) New Born Stabilization Unit (NBSU)  
NBSUs are establishment at FRUs, CHCs and PHCs having high delivery load. It admits sick and low birth weight newborn born at that health facility as well from community near by delivery points. A total of 173 NBSUs have been functioning in the state to take care of sick and low birth weight babies.
- iii) Newborn Care Corner ( NBCC) :  
NBCC is a space within the labour room or in Caesarean OT where temperature maintenance equipments, resuscitation equipments are available to provide essential care to all newborn at birth by SBA and NSSK trained service provider (GNM/ANM/MO). At present 922 NBCCs are functional in the state.
- iv) Free surgery for children having cleft palate and cleft lip :  
Since inception a total of 18,034 children having cleft lip has been operated till March, 2019.
- v) Free Operation for Children Having Congenital Heart Disease :  
Govt of Assam has initiated a scheme for free treatment of children with congenital heart defects in Narayana Hridayalay Hospital Bangluru and Kolkata. According to the scheme, the Govt. bear all medical expense, to and fro fare for the Patient and a guardian and other expenses during treatment for the patient. The following table depicts the services under the scheme till March, 2019

**Table -19.15**

**Free Operation for Children Having Congenital Heart Disease, during 2010-11 to 2018-19**

Sl. No.	Year	Number
1	2010-11	364
2	2011-12	436
3	2012-13	381
4	2013-14	776
5	2014-15	779
6	2015-16	745
7	2016-17	691
8	2017-18	1293
9	2018-19	1079
<b>TOTAL</b>		<b>6544</b>

Source : NHM Report Assam, 2019

**Table-19.16**

**Status of Major Infrastructure Development under NHM as on 31<sup>st</sup> March 2019:**

Sl. No.	Name of the Scheme	Year of Sanction	PIP approved (in nos.)	Taken up (in nos.)	Physical status		
					Completed	Work in progress	Yet to be started
1	Construction of New District Hospital	(2006-07, 2009-10, 2012-13, 2018-19)	8	8	7	1	--
2	MCH Wing	2012-2013	14	14	7	6	1
3	CHCs(Model Hospital)	(2010-11, 2012-13, 2018-19)	128	129	97	16	16
4	New PHC	2008-09, 2009-10, 2012-13	165	165	137	20	8
5	Riverine PHC	2010-11	50	50	49	-	-
6	Sub-Centre	2006-07, 2008-09, 2009-10, 2010-11	2250	1874	1614	182	78
7	Prefeb Sub-Centre	2012-13	626	626	421	107	98
8	Construction of DEIC	2013-14, 2014-15	27	27	24	2	-
9	District Drug Warehouse	2013-14	20	20	17	1	2
10	Blood Bank	2015-16, 2016-17	12	12	9	1	2
11	Strengthening of PHCs	2014-15	2	2	2	0	0
12	New GNM School and Hostel	2014-15	2	2	0	2	0
13	Upgradation SDCH to DH	2018-19	6	6	-	5	1
14	Upgradation BPHC/CHC/FRU to SDHC	2018-19	8	8	-	5	3
15	New PHC with residential quarter at ATCL area	2018-19	15	15	-	2	13
16	Strengthening of SC to H&WC	2018-19	691	691	257	100	334
17	Upgradation of PHC to Urban PHC	2015-16, 2016-17, 2018-19, 2019-20	13	13	7	1	5

Source : NHM Report Assam, 2019

### 19) NATIONAL AYUSH MISSION , ASSAM

The Ministry of AYUSH Govt. of India has launched the National AYUSH Mission in the month of Sept, 2014 to address the gap in the health services by providing AYUSH health Services/ Education throughout the country.

Objective of AYUSH Mission:

- ⇒ Providing cost effective AYUSH services.
- ⇒ Co-located of AYUSH facilities at PHCs, CHCs and DHs.
- ⇒ Upgradation of state pharmacies drugs testing facilities etc.
- ⇒ Supporting Medical Plant Cultivation.

During 2016-17 to 2018-19 for overall development of AYUSH Services and Education Govt. of India had sanctioned an amount of Rs. 13 crores to construct two numbers of Integrated AYUSH Hospital in the State at Majuli and Dudhnoi. Up to the financial year 2018-19 Govt. has already completed the construction of 27 Nos. OPD centre located at PHC, CHCSD and MPCH as targeted at the cost Rs. 405 lakhs. During this period Govt. has sanctioned Rs.474 lakhs to construct Hotels for Medical Students at different Medical Colleges in Assam .For better health of prisoners in the Central and State Jails Govt. has already established 31 nos. Yoga centres at the cost of @ 6 lakh for each. Govt. has already established 3 (three) Yoga wellness centres at Govt. Ayurvedic College , SNJ Homeopathic Medical College and at Assam Secretariat for good health of common people. Viewing the importance of health of the students, Govt. of Assam has been implementing School Health Programme and approved an amount of Rs. 23 lakhs for the same. Moreover under the State Sector Schemes Govt. has constructed one Research centre for Indigenous Medicine at Govt. Ayuvedic Medical College at the cost of 1 crore and establishment 100 numbers of Yoga centres at 100 Development Blocks. For the FY 2019 -20 Govt has proposed Rs. 5,479.40 lakhs for development of AYUSH Services/ Education in Assam.

#### **PUBLIC HEALTH (SANITATION & DRINKING WATER):**

The Ministry of Drinking Water and Sanitation, Government of India, is the Nodal Ministry for the overall policy, planning, funding and coordination of two flagship programmes of the Government of India, namely, the National Rural Drinking Water Programme (NRDWP) for rural drinking water supply and the Swachh Bharat Mission (Gramin) [SBM (G)] for sanitation in the country.

##### **1) Swachh Bharat Mission**

To accelerate the efforts to achieve universal sanitation coverage and to put focus on safe sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014. The Mission aims to achieve a Swachh Bharat by 2nd October, 2019, as a fitting tribute to Mahatma Gandhi on his 150<sup>th</sup> birth anniversary. Swachh Bharat, in rural areas shall mean improving the levels of cleanliness through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised.

In Assam, **SWACHH BHARAT MISSION (G)** has aimed at to provide Individual House Hold Latrin (IHHL) facility to every household in Assam. During 2018-19, the total target of IHHL for both APL and BPL of the state was 74,2,859 numbers while the achievement 2018 -19 was 61,6970 numbers for APL and 12,6,465 numbers for BPL. Likewise the fund available both for central and state was Rs 64309.52 lakh (Rs 52001.14 lakh was central share and Rs 12308.38 lakh was state share). On the other hand, under SBM (U) during 2018-19, the achievement of Household toilet was 51938 unit against the target of 64837 unit. In respect of community toilet the achievement was 372 seats against the target of 523. During the financial year 2018-19 Govt. has released an amount of Rs. 64,309.52 lakh (Rs. 52,001.14 lakh central share and Rs.12,308.38 lakh state share) for implementing the scheme.

##### **2) National Rural Drinking Water Programme (NRDWP):**

The National Rural Drinking Water Programme (NRDWP) is a Centrally Sponsored Scheme aimed at providing every person in rural India with adequate safe water for drinking, cooking and other domestic basic needs on a sustainable basis. Safe water is to be readily and conveniently accessible at all times and in all situations and therefore, the scheme focuses on the creation of the infrastructure.

In Assam, the total habitations covered with functioning drinking water supply facilities was 54614 nos. during 2017-18 and During the FY 2018-19 the total target of Habitation for drinking water facilities was 1651 numbers and achievement is 1267 numbers till 1-4-2019 .The total habitations covered for this scheme till 1-4-2019 was 55171 numbers.

The water supply schemes implemented through central sector during the last four years are shown in the table.

**Table – 19.17**

Year	Target		Achievement	
	Physical (no. of pipe Scheme)	Financial (in lakh)	Physical (no. of pipe Scheme)	Financial (in lakh)
2015-16	550	19424.91	133	16474.57
2016-17	355	10272.00	103	10043.21
2017-18	64	18114.91	62	16712.73
2018-19	193	30075.52	180	26793.77

Source: Chief Engineer PHE.



Likewise, year wise target and achievement under state sector for the last three years are given at below

**Table - 19.18**

Year	Target		Achievement	
	Physical (no. of pipe Scheme)	Financial (in lakh)	Physical (no. of pipe Scheme)	Financial (in lakh)
2015-16	94	1789.44	35	3057.73
2016-17	208	7968.00	35	3220.00
2017-18	187	12958.00	55	1694.33
2018-19	145	6500.00	40	1170.65

Source: Chief Engineer PHE

Year wise physical target and achievement of pipe scheme under state sector.

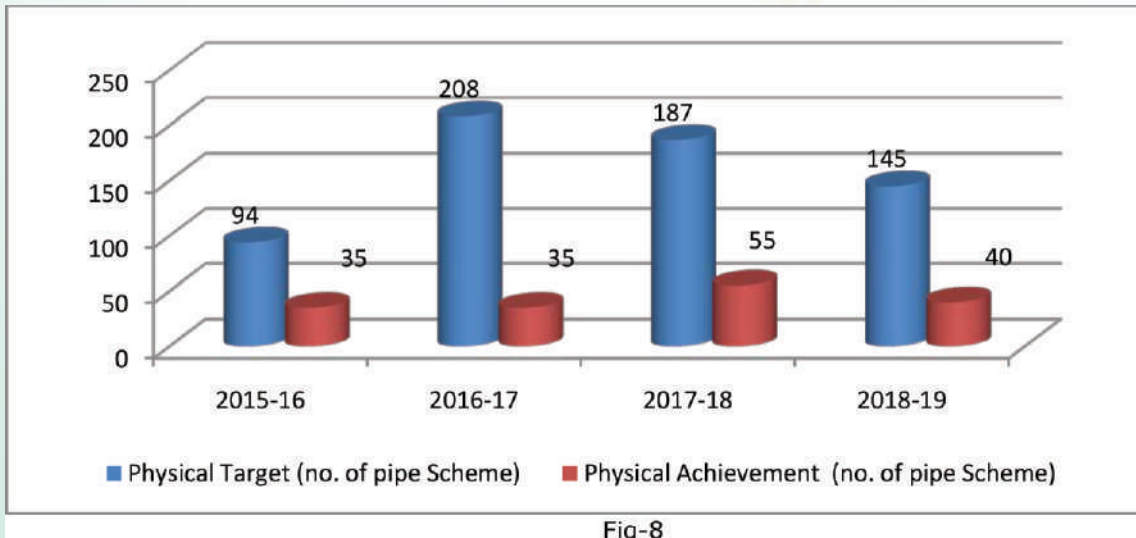


Fig-8

Year wise Financial target and achievement of pipe scheme under central sector.

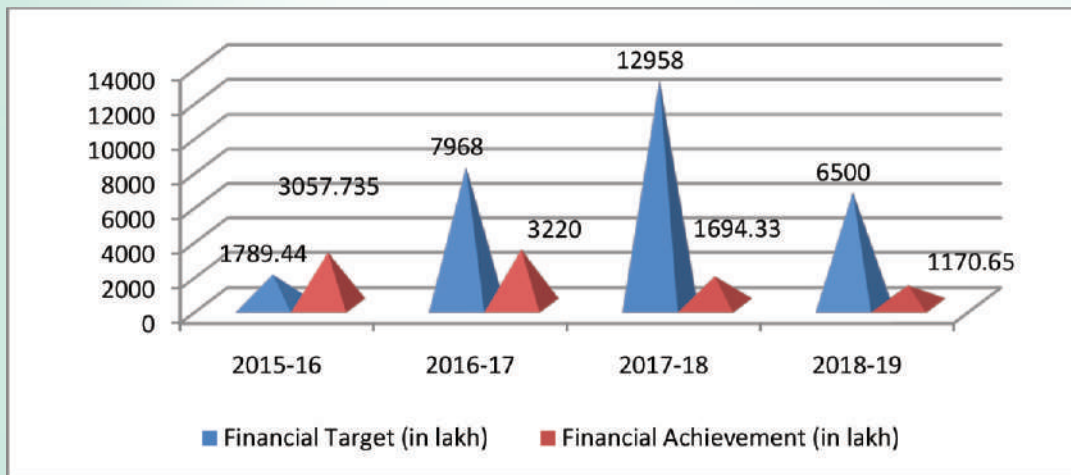


Fig-9

**SOCIAL WELFARE:**

The Social Welfare Department is one of the major Departments in the State which plays a key role in implementing various schemes for the welfare of the women and children as well as for the differentially abled persons, senior citizens and transgender community in the State. The Department executes various schemes under the Ministries of Women & Child Development and Social Justice & Empowerment, of Govt. of India and some scheme of state Government. The Centrally Sponsored Scheme (CSS) in the State are also implemented by the Department and the Directorate. Besides there are also State Level Schemes that aim at improving status of women, elderly person and adolescents girls.

**Integrated Child Development Services (ICDS) Scheme:**

ICDS initially launched in 1975 in one block only, has been expanded over the years and now covers all blocks of the State. In the initial year, BPL (Below Poverty Line) households were considered for coverage under ICDS. However since 2005, it was expanded to cover all habitations and areas in the State based on health and nutrition status of the beneficiaries instead of the BPL criteria. The scheme is implemented through 62153 Anganwadi Centres (AWC) in the State.

The scheme is funded by Central and the State Government in the ratio 90:10 for general assistance and 90:10 for supplementary nutrition for all states of NE region.

**OBJECTIVES:**

The main objectives of ICDS schemes are-

- (a) To improve the nutritional and health status of children in the age group 0-6 years.
- (b) To lay the foundation for proper psychological, physical and social development of the child.
- (c) To reduce the incidence of mortality, morbidity, malnutrition and school drop-out rate.
- (d) To achieve effective coordinated policy and its implementation amongst the various departments to promote child development.
- (e) To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

**Step taken by State Government for ICDS scheme:-**

Supplementary Nutrition Programme (SNP) is being implemented in all the ICDS Project.

- Supply of Take Home Ration (THR) among the children of 6 months to 3 years, Pregnant Women & Lactating mother.
- Hot cook Meal (HCM) among the children of 3 years to 6yrs age group through Anganwadi Centre Managing Committee (AWCMC).
- A numbers of 39138 Anganwadi buildings have been constructed.

**POSHAN**

India and Assam has been battling issues of malnutrition for decades, but the problem is still rampant. More than half of the young female population in Assam suffers from anaemia. Child stunting in Assam has declined from 46.5% in 2006 to 36.4% in 2016 – a fall of about 22%. With 1.4 million under five children stunted, Assam contributes to 3% of the stunted children in the country. The POSHAN Abhiyan(National Nutrition Mission) has been launched by the Indian government to address this issue.

The goal is to reduce-

- Stunting by 2%,
- Under-nutrition by 2%,
- Anaemia by 3%, and
- Low birth weight by 2% per year

For stunting, the 2% mark is a minimum, as the aim is to reduce the rates of stunting from 38.4% to 25% by the year 2022. An amount of Rs.11342.03 Crore has been released by the Government of India for implementing the POSHAN Abhiyaan till date. The Department has purchased Smart Phone (CAS) and Devices for the Weighing of Children and Mothers.

In the first phase 5 districts namely Dhubri, Goalpara, Barpeta, Darrang and Karimganj have been selected under the POSHAN Abhiyan in which Anganwadi Centre wise manpower and infrastructure mapping completed. In the Second Phase another 19 districts have been included in the POSHAN Abhiyaan in Assam during 201819 namely Baksa, Bongaigaon, Cachar, Charaideo, Chirang, Dhemaji, Dibrugarh, Dima Hasao, Golaghat, Hailakandi, Hojai, Kamrup Kokrajhar, Marigaon, Nagaon, Sivsagar, South Salmara Mankachar, Tinsukia & Udalguri.

An initiative for convergence meeting at state level has been scheduled on 5th of every month for conversing and interacting with line Department for successful implementation of POSHAN Abhiyan. Two (2) Committees- State Level Inter Departmental Task Force on Nutrition and State Level Advisory Committee have also been constituted to roll over the POSHAN Abhiyaan and monitor the same. A total number of 6, 47,508 persons have been covered by the programme.

**Scheme for Adolescent Girls (SAG):**

The objective of this scheme is to improve the nutrition and health status of girls in the age group of 11 to 14 years (Out of School), to equip them to improve their home-based and vocational skills, and to promote their overall development. A total number of 54, School dropout Adolescent girls in age group of 11 to 14 years in 23 Districts of Assam has been assessed under Nutrition component @ Rs.9.5/- per day per beneficiaries.

**Integrated Child Protection Scheme (ICPS):** ICPS is aimed at building a protective environment for children in difficult circumstances & other vulnerable children, through government-civil society partnership. ICPS brings together multiple existing child protection schemes under one umbrella & integrates additional interventions for protecting children & preventing harm. The current status in the State shows that Child Welfare Committees (CWCs) are functional in all District of Assam. Juvenile Justice Board (JJBs) have been constituted in all District of Assam and are functional. The State Adoption Resource Agency has been functioning since 2011 and there are 19 Special Adoption Agencies at present in Assam. The State Child Protection Society has organized a series of training programme for overall staffs of JJ institution on the following issues

- i) Prescribed rules for institutions under JJ
- ii) Principal of JJ Act
- iii) Child Right issues
- iv) Psychological support
- v) How to deal children in conflict with law from the psychological point of View.

### **National Crèche Scheme for the Children of Working Mother**

Under the Scheme, children in the age group 0-6 years from families with monthly income below Rs. 12,000/- are eligible to avail the benefits of this scheme. In addition to being a safe space for the children, the crèches provide services such as supplementary nutrition, pre-school education and emergency health care, etc. The Scheme provides support to voluntary organizations for setting up crèche for children of working and ailing mothers. Under the scheme a Voluntary Organization can run a crèche for 25 children below six years of age. On 1st January, 2017, the National Creche Scheme was launched across the 27 districts of Assam. There are 641 numbers of Creche Centre in Assam. The Break-up of Creche centres are as follows-

Creche Centres	Numbers
1. Social Welfare Board (SWB)	229
2. Indian Council of Child Welfare (ICCW)	364
3. BAJSS	48

### **WOMEN AND DEVELOPMENT**

Under the article 15(3), the Constitution of INDIA allows for positive discrimination in favor of women. The article, under right to equality, states: "Nothing in this article shall prevent the State from making any special provision for women and children. The Rashtriya Mahila Kosh (National Credit Fund for Women) was set up in 1993 to make credit available for lower income women in India. More recent programmes initiated by the Government of India include the Mother and Child Tracking System (MCTS), the Indira Gandhi Matritva Sahyog Yojana Conditional Maternity Benefit plan (CMB), and the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls – Sabla. These programmes are in conformity with 'Achieve gender equality and empower all women & girls', one of the Sustainable Development Goals.

#### **Pradhan Mantri Matritva Vandana Yojana:**

Pradhan Mantri Matritva Vandana Yojana (PMMVY) is a maternity benefit program run by the Government of India. It is implemented by the Ministry of Women and Child Development. It is a conditional cash transfer scheme for Pregnant Women and Lactating Mother (PW&LM) for first live birth only. It provides partial wage compensation to women for wage loss during childbirth and childcare and provides conditions for safe delivery and good nutrition and feeding practices. Under PMMVY, a pregnant woman and lactating mother (PW&LM) shall receive a cash benefit of Rs. 5000/- in three installments. First Installment of Rs. 1,000/- will be disbursed at early registration of pregnancy, second instalment of Rs. 2000/- can be received after at least one ANC visit (can be claimed after 6 months of pregnancy) and third Installment of Rs. 2000/- is paid after child birth is registered and child has received first cycle of BCG, OPV, DPT and Hepatitis B or its equivalent/substitute.

#### **Beti Bachao Beti Padhao:**

Beti Bachao Beti Padhao (BBBP) is a social campaign of the Government of India that aims to generate awareness and improve the efficiency of welfare services intended for girls. Since well coordinated convergent efforts are needed to ensure survival, protection and empowerment of the girl child, the Government has announced Beti Bachao Beti Padhao initiative. The BBBP was launched on 24th January, 2015 in Guwahati, Kamrup (Metro) of Assam on pilot basis. At present, the scheme is carried forward in districts of Dhemaji and Cachar. An amount of Rs 25 lakh is allocated for each district of Assam.

#### **Swadhar Greh:**

Scheme for Women in Difficult Circumstances was launched by the Department of Women and Child Development in 2001-02. The objectives of this scheme are:-

- 1) To prevent women from exploitation and to support their survival and rehabilitation, the scheme of Short Stay Home for women and girls was introduced as a social defence mechanism by the Department of Social Welfare.
- 2) The scheme is meant to provide temporary accommodation, maintenance and rehabilitative services to women and girls rendered homeless due to family discord, crime, violence, mental stress, social ostracism or are being forced into prostitution and are in moral danger.

There are all together 16 numbers of Swadhar Greh at different districts of Assam.

**Women Helpline-181:-** The Scheme of Universalisation of Women Helpline is intended to provide 24 hours immediate and emergency response to women affected by violence through referral (linking with appropriate authority such as police, One Stop Centre, hospital) and information about women related government schemes programmes across the country through a single uniform number-181.

Women Helpline (WHL) is now integrated with all One Stop Centre in all 33 District of Assam.

#### **ONE STOP CENTRE (OSC):**

One Stop Centres (OSC) is intended to support women affected by violence, in private and public spaces, within the family or community and at the workplace. Women facing physical, sexual, emotional, psychological and economic abuse, irrespective of age, class, caste, education status, marital status, race and culture will be facilitated with support and redressed by providing specialized services. Government of India provided 100 % fund for this scheme.

The OSC now integrated with Women Helpline 181 and other existing helpline. Women affected by violence and need of redress service could be referred to OSC through Helpline.

**Service Provided through One Stop Centre include:-**

- Emergency Response and Rescue Service
- Medical Assistance
- Assistance to women in lodging FIR/NCR/DIR
- Psycho-social support/counselling
- Legal Aid and Counselling
- Shelter
- Video conferencing Facility

**Ujjawala Scheme**

The Union Ministry of Women and Child Development formulated central scheme "Ujjawala"- which is a comprehensive scheme for rehabilitation and reintegration of victims of trafficking. Funding pattern of this scheme is 80:10:10 where 80% is provided by Government of India, 10% is provided by State and 10% has to be borne by the implementing agency. There are all together 20 numbers of Ujjawala in different districts of Assam.

**Mahila Shakti Kendra Scheme :-**

Government of India has approved a new scheme namely, Mahila Shakti Kendra which is meant to provide "one stop convergent support services for empowering rural women with opportunities for skill development, employment, digital literacy, health and nutrition". It will provide an interface for rural women to approach the government for availing their entitlements and also empowering them through training and capacity building. Mahila Shakti Kendra scheme is implemented in all districts in Assam.

**State Commission for Women:**

Assam State Commission for women is a statutory body under the "Assam State Commission for women Act, 1994". It consists of the Chairperson, Vice Chairperson, 7 (seven) members and Member Secretary appointed by the State Government. The Functions of the Commission include -A) to investigate and examine all matters relating to women. B) Look into complaints and take up suo motu notices relating to issues of women.

The budgeted amount for the current financial year (2018 19) for salary is Rs 45 lakh (Rupees Forty Five Lakh) only for this scheme as shown in the Annexure 19.06.

The budgeted Amount for the current financial year (2018 19) for repairing and renovation of office building of State Women Commission is Rs 14.20 lakh (Rupees Fourteen Lakh Twenty Thousand) only.

**Financial Assistance to Victim of Rape:**

In furtherance of the goal of ensuring restorative justice to affected women, the above scheme aims to provide: a) Financial assistance to victims of rape; b) Support services such as shelter, counselling, medical aid, legal assistance, education and vocational training depending upon the needs of the victim. The budgeted amount for the current financial year (2018-19) is 300 lakh. for this scheme as shown in the Annexure 19.06.

**Working Women Hostel:**

The scheme aims at providing available, safe and conveniently located accommodation for working women, especially, with day care facility for their children, preparing State guideline proper implementation of the Scheme in urban, semi urban, and rural areas. Government of Assam proposed to establish 43 Nos. of Working Women Hostel in 33 districts of Assam. Based upon the necessity more than one working women hostel will be set up in Kamrup(M), Kamrup(R), Nagoan, Jorhat, Dibrugrah and Tinsukia districts.

**Deen Dayal Divyangjan Sahajya Achoni :-**

The Govt. of Assam launched this scheme on 3<sup>rd</sup> Dec, 2017 (in conformity with the "International Day for Persons with Disabilities" under which one-time grant of Rs.5, 000 was provided to each of the persons with disabilities having Disability Certificates. The scheme is implemented for persons with disabilities (PwDs) and elderly persons and transgender by Social Welfare Department, Govt. of Assam. A total of 15, 111 numbers of beneficiaries have been benefitted with the scheme during 2017-18.

**Deen Dayal Divyangjan Pension: -**

The Deen Dayal Divyangjan Sahajya Achoni has been replaced by a new scheme called "Deen Dayal Divyangjan Pension" since 2018-19.

It is a new scheme which was launched by Hon'ble Chief Minister, Assam on 10<sup>th</sup> January, 2019. The objective of the scheme is to provide monthly pension of Rs.1, 000/- to each of the persons with disabilities for taking care of their health.

**Rehabilitation Grants to Persons with Disabilities (PwDs) :**

Rehabilitation grants were provided @ Rs.10, 000 to each of the persons with disabilities for their self-employment and rehabilitation up to 2017- 18. But from 2018- 19, the grant amount has been enhanced to Rs. 20,000/-. The budgeted amount for the current financial year (2018-19) is 300 lakh for this scheme as shown in the Annexure 19.06.

**Scholarships to Students with Disabilities: -**

Scholarships are provided to the students with disabilities @Rs.200/- pm (i.e., 2400/-yearly) to each who are studying in schools and colleges. Apart from this, scholarship of Rs.3, 000/- p.m is also provided to students with disabilities who are pursuing medical & technical education courses.

**National University:-**

The Ministry of Social Justice & Empowerment, Department of Empowerment of Persons with Disabilities (Divyangjan), Govt. of India, desires to set up a National University in Assam to focus on various issues for the welfare of persons with disabilities (PwDs). For the purpose, a plot of land comprising 50 acres in Kamrup district has been selected during 2018-19 with a view to setting up of the aforesaid University for greater interest of the students/persons with disabilities in Assam.

**College for Students with Hearing Impaired:-**

The Assam Association of Deaf, Gopinath Nagar, Guwahati, a registered non-government organization has been running a Junior College at Gopinath Nagar, Guwahati to cater to the needs of deaf students. The Govt. of Assam has accorded approval for an amount of Rs.3.50 crore (Rupees three crore fifty lakh) only for 2018 -19 to undertake construction works of permanent building of the aforesaid College. The proposed building is not only for the students of

Junior College but also it will cover the students of North East Degree College for Hearing Impaired of the same premises. An amount of Rs.2.50 crore only has been earmarked in the budget for 2019-20.

**Welfare of Transgender community:-**

This is a new scheme which was introduced in 2018-19. Transgender are a section of people in our society. They also have constitutional rights to enjoy all the facilities and privileges equally along with other people in our society as envisaged in the Constitution. But due to some biological disorder or some social taboo, they are lagging behind from the rest of the community. This new scheme proposes to include preparation of data-base on transgender community, skill development training, entrepreneurs etc. so as to bring about a transformative change in their lifestyle and livelihood activities with proper rehabilitation.

**ANNEXURE-19.1  
NUMBER OF LOWER PRIMARY AND UPPER PRIMARY SCHOOLS  
(GOVT./PROV. UNDER DEPTT OF ELEMENTARY)**

Sl. No.	District	Lower Primary		Upper Primary	
		Rural	Urban	Rural	Urban
1	2	3	4	5	6
1	Baksa	1321	0	252	0
2	Barpeta	1623	39	289	14
3	Biswanath	897	14	59	4
4	Bongaigaon	734	32	152	14
5	Cachar	1849	46	270	8
6	Charaideo	631	22	82	4
7	Chirang	759	18	79	9
8	Darrang	1032	21	100	4
9	Dhemaji	1211	19	138	4
10	Dhubri	1437	79	307	26
11	Dibrugarh	1209	45	173	14
12	Dima Hasao	697	53	124	12
13	Goalpara	1337	33	198	9
14	Golaghat	1108	31	173	12
15	Hailakandi	1003	25	275	15
16	Hojai	716	40	109	14
17	Jorahat	1055	28	136	2
18	Kamrup Metro	214	235	18	55
19	Kamrup	1738	20	221	1
20	Karbi Anglong	1061	59	132	15
21	Karimganj	1535	24	248	9
22	Kokrajhar	1293	18	208	12
23	Lakhimpur	1489	37	339	11
24	Majuli	442	0	67	0
25	Morigaon	1160	10	171	3
26	Nagaon	1644	49	277	15
27	Nalbari	931	14	152	2
28	Sivasagar	1030	38	175	6
29	Sonitpur	931	38	63	8
30	South Salmara Mankachar	322	0	59	0
31	Tinsukia	1017	41	119	14
32	Udalguri	1064	15	156	1
33	West Karbi Anglong	612	17	92	2
	<b>Assam</b>	<b>35102</b>	<b>1160</b>	<b>5413</b>	<b>319</b>

Source : DISE- 2018-19

**ANNEXURE-19.02**  
**DISTRICT WISE GOVERNMENT/PROVINCIALISED HIGH AND HIGHER SECONDARY**  
**SCHOOLS HAVING FACILITIES, 2018-19**

Sl. No.	District	No. of Schools	Available Drinking water	Boundary wall/fencing	Available Girls' Toilet	Computer	Ramp	Play Ground	Library	Electricity connection
1	2	3	4	5	6	7	8	9	10	11
1	Baksa	189	184	83	165	130	93	164	115	183
2	Barpeta	305	302	140	279	196	167	218	179	280
3	Biswanath	92	92	70	88	74	55	73	64	91
4	Bongaigaon	78	76	38	77	59	63	68	45	77
5	Cachar	164	134	93	145	119	87	99	112	160
6	Charaideo	58	58	33	53	43	36	53	21	58
7	Chirang	50	50	36	46	41	36	49	35	49
8	Darrang	145	144	87	132	94	81	98	85	143
9	Dhemaji	161	161	61	146	111	106	140	121	156
10	Dhubri	162	161	81	147	108	101	117	96	156
11	Dibrugarh	148	147	107	132	120	125	116	92	148
12	Dima Hasao	43	35	23	35	32	41	22	36	35
13	Goalpara	121	120	71	114	92	106	104	88	117
14	Golaghat	168	165	108	146	141	122	134	74	166
15	Hailakandi	58	54	36	49	40	28	26	36	55
16	Hojai	73	68	36	61	48	46	47	44	71
17	Jorahat	180	179	118	172	158	159	133	125	180
18	Kamrup Metro	123	109	98	111	95	80	74	70	121
19	Kamrup	288	286	156	263	224	145	197	184	277
20	Karbi Anglong	86	82	79	83	73	59	71	75	85
21	Karimganj	113	107	63	99	82	65	67	78	105
22	Kokrajhar	93	93	68	86	72	64	80	42	88
23	Lakhimpur	302	295	112	247	229	184	212	176	271
24	Majuli	78	78	26	59	57	41	56	11	73
25	Morigaon	119	119	65	106	84	78	86	61	118
26	Nagaon	224	223	141	208	169	130	163	195	222
27	Nalbari	182	180	115	154	133	112	115	136	174
28	Sivasagar	157	157	100	124	111	97	106	53	155
29	Sonitpur	104	103	59	100	88	78	78	71	103
30	South Salmara Mankachar	32	32	10	28	13	15	21	26	29
31	Tinsukia	91	91	73	79	69	83	66	70	91
32	Udalguri	82	80	46	79	64	46	72	45	81
33	West Karbi Anglong	40	39	30	38	31	31	37	37	39
	<b>Assam</b>	<b>4309</b>	<b>4204</b>	<b>2462</b>	<b>3851</b>	<b>3200</b>	<b>2760</b>	<b>3162</b>	<b>2698</b>	<b>4157</b>

Source : DISE- 2018-19

**ANNEXURE-19.03**  
**DISTRICT WISE PTR, DROP OUT AND TRANSITION RATE**

Sl. No.	District	PTR		Dropout rate		Transition Rate from Primary to upper Primary
		Lower Primary	Upper Primary	Lower Primary	Upper Primary	
1	2	3	4	5	6	7
1	Baksa	15	10	5.0	0.0	100.0
2	Barpeta	24	20	2.2	2.1	100.0
3	Biswanath	25	20	0.0	0.0	100.0
4	Bongaigaon	25	23	2.1	0.0	100.0
5	Cachar	20	29	3.6	0.6	96.5
6	Charaideo	16	13	5.1	5.1	97.8
7	Chirang	18	20	7.1	0.7	99.4
8	Darrang	26	22	2.1	1.3	95.9
9	Dhemaji	20	14	4.2	2.2	100.0
10	Dhubri	30	26	2.0	3.9	100.0
11	Dibrugarh	22	18	5.7	4.9	95.2
12	Dima Hasao	6	4	1.7	1.4	100.0
13	Goalpara	26	24	5.1	0.0	100.0
14	Golaghat	23	18	2.4	0.7	98.1
15	Hailakandi	20	14	9.6	8.7	87.1
16	Hojai	34	33	0.0	0.0	100.0
17	Jorahat	18	12	0.0	0.0	100.0
18	Kamrup Metro	22	16	2.3	0.0	100.0
19	Kamrup	22	17	0.0	0.0	100.0
20	Karbi Anglong	22	13	2.7	0.0	100.0
21	Karimganj	23	31	4.8	9.7	88.6
22	Kokrajhar	21	18	4.7	2.8	90.5
23	Lakhimpur	21	11	1.2	5.5	100.0
24	Majuli	11	9	2.6	0.1	100.0
25	Morigaon	23	23	3.8	3.9	99.4
26	Nagaon	26	21	1.2	5.5	98.8
27	Nalbari	18	10	5.8	0.0	100.0
28	Sivasagar	10	7	3.5	0.6	100.0
29	Sonitpur	26	26	2.7	0.3	92.0
30	South Salmara Mankachar	35	33	2.6	8.3	100.0
31	Tinsukia	24	27	5.0	3.2	93.7
32	Udalguri	23	20	6.9	1.3	96.0
33	West Karbi Anglong	24	14	7.7	3.1	100.0
	<b>Assam</b>	<b>22</b>	<b>19</b>	<b>3.1</b>	<b>1.9</b>	<b>100.0</b>

Source : DISE- 2018-19, \*Dropout rate is calculated based on 2 years U-DISE Data.

Note : Transition Rate above 100 have been considered 100.

**ANNEXURE-19.04**  
**HEALTH SERVICES FACILITIES UNDER GOVERNMENT SECTOR IN ASSAM FOR THE YEAR 2018-19**  
*(In Nos.)*

Sl. No.	District	Health Services Facility under Government Sector									
		Civil Hospital	SDCH	FRU	Sub Centres	Primary Health Centres		State Dispensaries		Community Health Centres	
						Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12
1	Kokrajhar	1	1	0	161	43	0	16	0	4	0
2	Dhubri	1	2	0	245	41	0	14	0	8	0
3	Goalpara	1	0	1	154	37	0	13	0	6	0
4	South Salmara	-	-	-	-	-	-	-	-	-	-
5	Barpeta	1	1	0	264	48	0	8	1	9	0
6	Morigaon	1	0	1	123	33	0	13	0	6	0
7	Nagaon	1	0	5	351	75	0	25	0	17	0
8	Hojai	-	-	-	-	-	-	-	-	-	-
9	Sonitpur	1	2	0	279	53	0	15	0	9	0
10	Biswanath	-	-	-	-	-	-	-	-	-	-
11	Lakhimpur	1	1	0	156	25	0	7	0	8	0
12	Dhemaji	1	0	0	98	20	0	2	0	4	0
13	Tinsukia	1	0	0	164	20	0	5	0	7	0
14	Dibrugarh	0	0	0	234	30	0	7	1	8	0
15	Sivasagar	1	2	0	220	43	0	4	0	4	0
16	Charaideo	1	-	-	-	-	-	-	-	-	-
17	Jorhat	0	2	1	144	40	0	9	0	6	0
18	Golaghat	1	1	0	144	40	0	5	0	4	0
19	Karbi Anglong										
20	Karbi Anglong West	1	1	0	145	42	0	9	0	6	0
21	Majuli	-	-	-	-	-	-	-	-	-	-
22	Dima Hasao	1	0	0	72	11	0	2	0	2	0
23	Cachar	1	0	1	270	30	0	5	0	4	0
24	Karimganj	1	0	0	222	29	0	7	0	7	0
25	Hailakandi	1	0	0	107	13	0	3	0	3	0
26	Bongaigaon	1	0	0	94	28	0	3	0	4	0
27	Chirang	1	0	0	87	23	0	10	0	3	0
28	Kamrup	1	1	3	279	66	0	28	0	11	0
29	Kamrup (M)	0	0	2	48	25	0	0	14	3	0
30	Nalbari	1	0	1	121	42	0	17	0	11	0
31	Baksa	1	0	0	157	36	0	14	0	6	0
32	Darrang	1	0	0	159	32	0	13	0	7	0
33	Udalguri	1	0	0	146	21	0	8	0	5	0
	Assam	25	14	15	4644	946	0	262	16	172	0

N.B: SDCH= Sub Divisional Civil Hospital, PHC= Primary Health Centre.

FRU = First Referral Units,

Source : Directorate of Health Services, Assam.



**ANNEXURE-19.05**  
**NUMBER OF BEDS IN DIFFERENT TYPE OF GOVT. HEALTH INSTITUTES IN ASSAM, 2018-19**

Sl. No.	District	Number of Beds						
		CH	BPHC	MPHC	CHC	SDCH	MCH	Total
1	2	3	4	5	6	7	8	9
1	Kokrajhar	150	24	164	60	75	0	473
2	Dhubri	200	42	148	180	240	0	810
3	Goalpara	150	30	144	150	0	0	474
4	South Salmara	-	-	-	-	-	-	-
5	Barpeta	100	54	168	240	30	380	972
6	Morigaon	100	18	132	150	0	0	400
7	Nagaon	190	66	276	510	0	0	1042
8	Hojai	-	-	-	-	-	-	-
9	Sonitpur	190	48	200	240	120	0	798
10	Biswanath	-	-	-	-	-	-	-
11	Lakhimpur	100	36	68	240	50	0	494
12	Dhemaji	100	30	72	120	0	0	322
13	Tinsukia	100	24	104	210	0	0	438
14	Dibrugarh	0	36	96	240	100	1385	1857
15	Sivasagar	150	48	148	120	100	0	566
16	Charaideo	-	-	-	-	-	-	-
17	Jorhat	200	42	148	150	50	410	1000
18	Golaghat	100	30	140	120	50	0	440
19	Karbi Anglong	100	48	152	150	0	0	450
20	Karbi Anglong West							
21	Majuli	-	-	--	-	-	-	-
22	Dima Hasao	100	18	32	60	0	0	210
23	Cachar	50	48	100	120	0	929	1247
24	Karimganj	100	30	96	240	0	0	466
25	Hailakandi	100	24	36	90	0	0	250
26	Bongaigaon	150	36	96	120	0	0	402
27	Chirang	150	0	100	90	0	0	340
28	Kamrup	200	78	232	330	100	0	940
29	Kamrup (M)	350	6	96	90	0	2017	2559
30	Nalbari	100	42	160	330	0	0	632
31	Baksa	150	0	164	150	0	0	464
32	Darrang	100	42	92	210	0	0	444
33	Udalguri	150	0	96	150	0	0	396
Assam		3630	900	3460	4860	915	5121	18886

N.B: CH= Civil Hospital, BPHC= Block Primary Health Centre. MPHC= Mini Primary Health Centre.  
CHC = Community Health Centre, SDCH =Sub Divisional Civil Hospital, MCH = Medical College Hospital  
Source : Directorate of Health Services, Assam.

**ANNEXURE -19.06**  
**SCHEME IMPLEMENTED UNDER SOCIAL WELFARE IN ASSAM**

(Rs. In Lakh)

Sl.No.	Scheme	2017-18		2018-19	
		Total Budget Provision	Expenditure	Total Budget Provision	Expenditure
1	2	3	4	5	6
1	State Commission for women	50.00	50.00	45.00	45.00
2	Financial Assistance & Support Services to Victims of Rape	5.00	0	300.00	0
3	Rehabilitation Grant to Disabled Persons	20.00	9.80	300.00	169.00
4	Mahila Samridhi Yojana	500.00	0	500.00	454.99
5	Mukhya Mantrir Mahila Samridhi Achoni	250.00	0	244.50	227.49
6	Implementation of ICDS Scheme (State Share)*	8200.00	2645.15	7704.00	3146.01
7	Implementation of ICPS (State Share)	333.33	36.91	131.25	125.62
8	National Creche Scheme (State Share)	47.73	0	133.33	0
9	National Mission of Empowerment of Women including IGMSY (Maternity Benefit Schemes) (State Share) PMMVY	511.00	45.61	1136.42	416.69
10	Empowerment of Adolescent Girls (State Share)	151.72	0	33.33	0
11	One Stop Crisis Centre (State Share)	43.17	0	43.17	0
12	Swadher Greh Scheme (State Share)	56.54	37.88	17.45	0
13	Implementation of Ujjwala Scheme (State Share)	73.98	55.94	25.21	25.21
14	Mahila Shakti Kendra (State Share)	115.65	0	115.58	0

\*including salary and honm., an amount of RS.2500.00 lakh.

Source : Directorate of Health Service, Assam

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**CHAPTER-XX****SDG INDIA INDEX: BASELINE REPORT 2018 IN CONTEXT OF ASSAM WITH STRATEGIES TO IMPROVE THE STATE'S RANKING AND CATEGORISATION<sup>1</sup>****1. SDG India Index 2018: National Target Value, State Index Value and categorization**

The SDG India Index is developed to provide a holistic view on social, economic and environmental states of the country and its States and Union Territories, tracking on a set of 62 national indicators covering altogether 13 SDGs (Number 1 to 11, 15 and 16). The SDG India Baseline Index 2018 ranks the states and union territories SDGs wise as well as by cumulative indices. The index constructed for each SDG considers few targets, numbering three to seven, from a number of targets considered by the UN to cover the SDGs. The report assigns a statistically worked out national target value for the states against each of the targets or indicators. The index considers raw data available from different Ministries of government of India and state governments to construct the indicators.

1.1. The 62 SDG indicators selected for SDG India Index Report 2018, the national target value and index value for Assam against each of the indicators SDG wise, along with the SDG Index Score for Assam and the country as a whole is given in a tabular form captioned as - Performance of state of Assam on various selected SDG indicators. For the sake of comparability, the state wise data and values of each of the indicators have been rescaled from its raw form into a score ranging from 0-100 (0 being lowest performer and 100 indicating the target has been achieved) applying a well established statistical formula. The score assigned to the state for each of the SDGs has been calculated as arithmetic mean of normalized values of all the priority indicators giving equal weightage to all priority indicators and similarly the Composite SDG India Index Score for the State is calculated as arithmetic mean of Goal Scores across 13 out of 17 Goals giving equal weightage to each of the SDGs, which was rounded off to the nearest whole number.

1.2. Based on the State's SDG Index Value, the report classifies the states against each of the SDGs, as well as the overall, based on Composite SDG India Index Score and classifies the states into four categories as mentioned in Table 1.

Table 1: SDG India Index Value for different categories

SI.	Category	SDG Index Value
1	Aspirational	0 - 49
2	Performer	50 – 64
3	Front Runner	65 – 99
4	Achiever	100

**2. Assam: Observations on State Index Values, Ranking and Categorisation:**

2.1. Assam with composite SDG India Score (CSI) of 49 (against the target value of 100) has been placed at bottom third rank among the states of the country. The CSI for the country is 57, whereas the index ranges for the states in the country from 42 to 69, with Himachal Pradesh and Kerala being at the top with a CSI of 69 and Uttar Pradesh being at bottom with CSI of 42. The state of Assam has been put in the category of Aspirational states with CSI value of 49 (<50). In the country, none of the states has been placed under 'Achievers' category. Three states namely Himachal, Kerala and Tamil Nadu are placed under 'Front Runners' category and all other States have been placed under 'Performers' category leaving three states Uttar Pradesh, Bihar and Assam under 'Aspirational' category.

2.2. The report captures selected indicators of 13 SDGs (SDGs 1 to 11, 15 and 16) and based on the Index Value assigned to each of the indicators of SDGs; the SDG Index Value for the States has been worked out adopting a well defined statistical method. The State Index Value for each of the indicators for Assam is shown in the table at Annexure; but the summarised score of the Index Score for each of the SDGs in Assam is presented in table 2. To have a comparison of Assam with other states and the country as a whole, the National Index Score of SDG, and the states with minimum and maximum range of score in the Index are presented in table 2.

<sup>1</sup>Contributed by the Centre for Sustainable Development Goals, Assam Administrative Staff College, Guwahati

Table 2: The State Index Values for 13 selected SDGs assigned to Assam as per SDG India Index Report 2018

\*(As: Aspirational, P: Performer, F: Front Runner, Ac: Achiever)

SI	SDG No	SDG India Index Value for Assam (out of 100)	National Index Score	Range among states (Min-Max)	*Category assigned in SDG in Assam
1	1	53	54	37 Jharkhand -71 Mizoram	P
2	2	53	48	35 Jharkhand - 74 Mizoram	P
3	3	30	52	25 UP - 77 Tamil Nadu	As
4	4	54	58	40 Orissa - 77 AP	P
5	5	35	36	24 Bihar -50 Kerala	As
6	6	42	63	38 Tripura – 100 Gujrat	As
7	7	18	51	71 Meghalaya – 78 Uttarakhand	As
8	8	61	65	33-Manipur—81 AP	P
9	9	35	44	0-Goa—72 Manipur	As
10	10	75	71	47-Arunachal-100 Meghalaya& Mizoram	F
11	11	32	39	25 West Bengal—71 Goa	As
15	15	100	90	43 Haryana—100 Assam &5 Other States	Ac
16	16	53	71	50 Bihar—91 Himachal	F
17	Composite Score	49	57	-----	As

2.3. On perusal of the information furnished in Table 2 above, the following conclusions are drawn which are significant to prioritise the SDGs requiring immediate attention of all concerned departments in Government of Assam.

2.3.1. The state with composite SDG Index of 49 is placed under the Aspirational category. The score however is lower than the country average of 57, indicting the country as a whole is a performer to the SDG index.

2.3.2. Among the 13 SDGs, the state of Assam has excellent score of 100 and put under Achiever's category only in SDG number 15 (life on land); indicating better status of forest cover, status of water bodies and population of wild elephants.

2.3.3. The state has been put under 'Front Runner' category in respect of two SDGs- SDG number 10 (Reduced inequality) and 16 (peace, justice and strong institutions) with SDG Index Score of 71 in both the goals.

2.3.4. The state is put under 'Performer' category in respect of four SDGs – number 1 (no poverty), 2 (zero hunger), 4 (quality education) and 8 (decent work and growth) with scores of 53, 53, 58 and 61 respectively.

2.3.5. In respect of the rest six SDGs- number 3 (good health and well being), 5 (gender equality), 6 (clean water and sanitation), 7 (affordable and clean energy), 9 (industry, innovation and infrastructure) and 11 (sustainable cities and communities) with index Scores of 30, 35, 42, 18, 35, and 32 respectively, the state is put under 'Aspirational' category.

2.3.6. Among the states with all selected SDGs, Assam does not figure as a state with least (minimum) SDG India Index Value.

2.3.7.

### 3. Poor ranking and categorisation: Reasons and ongoing interventions:

The goal-wise indicators in the report of 2018 reflect poor performance of Assam. The report states possible reasons behind the poor performance and ponders on ongoing interventions to improve position of the state as discussed in the following paragraphs.

3.1. **GOAL 3** : The report for the SDG three takes into consideration of targets to reduce maternal mortality rate, under-five mortality rate, maternal and child health mainly on nutrition, and universal immunization for children below two years of age. These development interventions are mainly dealt by the Health and Family Welfare and Social Welfare Departments. In addition, the goal takes into account of two indicators - the number of tuberculosis cases per lakh population and number of health workers present in the state per lakh population. The indicators identified under Goal three had very poor record in the state till 2004-05; but in subsequent period some positive trend has been seen till 2015-16 (to the data of NFHS-4 report), but at a lower rate of improvement. The state has made considerable progress from 2016-17 and present position is expected to be much better than reflected in the 2018 report. The NFHS 5

Report which is expected by the end of 2020 may reflect the improvements achieved by the state. The state has taken up many schemes to address the MMR and under 5 mortality rates. The recent annual scorecard under Anaemia Mukh Bharat (April 2018-2019) published by NITI Aayog has put Assam at Rank 3 with a score of 54.5 which clearly reflects that efforts of the state government are gaining momentum and state is on way to achieve the goals of relevant SDG indicators.

3.2. **GOAL 5:** This Goal considers the targets relating to continuing discrimination against the women and children as well as participation of women in the workforce. In these two indicators the state is improving its position. However, three prime indicators which have stood on the way to achieve the goal are domestic violence, poor representation of women in legislature and percentage of women using family planning norms. The health index (2nd edition) published in June 2019 ranks Assam at 15 with an index of 48.85 (assessment year 2017-18), some improvement from the rank of 16 in with an index of 44.13 in 2015-16. The report also presents Assam as one of the five most improved states in India on health index.

3.3. **GOAL 6:** Non-availability of recent data on the indicators of population having access to safe drinking water sources, individual toilets and open defecation free districts have affected to have the measure on this goal. The available data show very few ODF districts and low proportion of habitations with clean drinking water. The state however under the **Swachh Bharat Mission, has** constructed 32,37,768 toilets and achieved cent percent sanitation coverage. Further, an independent survey conducted by Jal Shakti Ministry, Government of India, reports that 96.5 percent households of the state are using toilets regularly. The only indicator, the state lacks focus is installation of sewage treatment plants in towns and cities of the state. The score of the state in sewerage treatment is almost zero (0.03) against the national target of 68.79. **Massive effort from the state government departments (MAD, UAD, GDD and Municipal Corporation Board, Town Committees) is required to take up this task on war footing for achieving the national target set under the goal and improve its ranking.**

3.4. **GOAL 7:** The poor performance in this goal as per report has been mainly due to negligible proportion of households in the state is using clean fuel for cooking and poor percentage (8.29%) share in installed capacity of renewable energy against the national target of 40 percent. The change brought by the Ujjwala scheme and expanding network of solar energy in last few years is expected to improve the state ranking towards this goal.

3.5. **GOAL 9:** Non-availability of recent data on all weather road connectivity, as the last census of 2011 had revealed, effected to have a measure on this goal. The proportion of habitations covered in the state under the PMGSY is now 36.67 percent, against the national target of 100 percent. In addition, low internet connectivity, low mobile density in the villages and towns and poor percentage of gram panchayats covered under Bharat Net contributes towards the poor ranking of the state to achieve this goal..

3.6. **GOAL 11:** The SDG India Index reports poor performance in this goal on the ground of very poor coverage under PMAY (0.26%) and improper sewerage system, waste collection, disposal and recycling etc. in the state. The government of Assam has planned construction of one lakh PMAY-G houses during 2019-20. The foundation laying ceremony of PMAY-G houses was held in the month of August 2019 in presence of the Union Minister for Rural Development. This initiative will improve coverage under PMAY, **but lot of effort is required to improve sewerage system, waste collection, disposal and recycling process in the state.**

#### 4. Efforts for improvement in SDG Index Score

4.1. The SDG India Index Report 2018 is an important first step in the enabling comprehensive tracking of the progress made by the country and the states towards achieving the SDGs. This baseline report being the first will be followed by the subsequent reports probably on annual basis. It is learnt that the next SDG Index Report 2019 is likely to be released by NITI Aayog soon covering more SDGs and Indicators in addition to those covered under SDG Index Baseline Report of 2018. India, being one of the signatories to the United Nation's Resolution on SDGs has committed to achieve all the 17 SDGs by 2030 and to track the progress of implementation or achievements on SDGs. The Ministry of Statistics and Programme Implementation, Government of India identifies 306 indicators covering all 17 SDGs.

4.2. Assam, having adopted SDG framework in its development planning right from the adoption of SDGs by UN has already set its vision and prepared detailed development agenda the 'Assam Agenda 2030' indicating the monitorable indicators against each of the SDGs. The state is in process of finalizing the State SDG Indicator Framework in the line with MOSPI indicators with a robust monitoring framework to track the process of implementation of plan and programmes contributing towards SDGs. The state has also decided to come up with 'Human Development and Sustainable Report' at an interval of three years reflecting the outcomes of the SDG indicators based on sample survey commencing from the year 2019.

4.3. The state needs appropriate strategy to improve its SDG Index Score and categorisation, for all SDGs individually as well as in a composite manner. The state expects a visible impact on the SDG Index by making use of its available human and finances resources in a concentrated manner targeting all the SDGs.

In order to achieve a faster progress and create a visible impact, the state government is prioritizing certain SDGs for short term action (2019-2022), a few for medium term action (2019-2026) and the remaining ones for long term (2019-2030) action with ultimate aim of achieving all the SDGs by 2030. **The aim towards strategizing the time bound action for SDGs is to ensure that by 2022 state improves its categorisation from 'Aspirational' to at least 'Performer' for selected SDGs and by 2026 the state moves to the next category of 'Front Runner' and then by 2030 state becomes 'Achiever' in respect of all the SDGs individually as well as compositely.**

4.4. Short term strategic plan: The SDGs with the indicators included for short term strategic plan are those have been assigned SDG Index Score below 50 and categorized under 'Aspirational' category-the lowest in category classification adopted in SDG India Index Baseline Report: 2018. The department(s) concerned in implementing programmes and schemes relating to these indicators advised to take immediate and prompt action by up scaling the ongoing schemes and programmes or launch new schemes to improve the performance against the selected indicators keeping the year 2022 as target for achieving the goals so that when India moves to its 75<sup>th</sup> year of independence, the state becomes at least a 'Performer' to the SDG India Index. The SDGs wise indicators along with the name of concerned departments for action to improve the Index Score are presented in Table 3.

Table 3: SDG Indicators and Department for Action under short term strategic category

SDG No	INDICATOR SELECTED UNDER SDG INDIA INDEX REPORT 2018	DEPARTMENT CONCERNED FOR ACTION
3	1. Maternal Mortality Ratio (deaths per 100,000 live births)	Health and Family Welfare Department
	2. Under-five mortality rate (deaths per 1000 live births)	
	3. Percentage of children aged 12-23 months fully immunized (BCG, Measles and three doses of Pentavalent vaccine)	
	4. Tuberculosis incidence per 100,000 population	
	5. Total physicians, nurses and midwives per 10000 population	
5	1. Sex Ratio at Birth	Health and Family Welfare Department
	2. Average female to male ratio of average wages/salaries received per day for age 15-59 years for rural and urban	Department of Labour Welfare
	3. % of ever married women aged 15-49 who have experienced domestic violence	Home Department
	4. % of women in recently conducted state Assembly Elections	Election Department
	5. % of female labour force participation to male work force participation rate	Department of Labour Welfare
	6. % of women in age group of 15-49 using modern methods of family planning	Health and Family Welfare Department
6	1. % of population having safe and adequate drinking water	PHE
	2. % of rural households and individuals having toilets	
	3. % of districts verified to be ODF	
	4. % installed sewage treatment capacity as a proportion of sewage generated in urban areas	GDD, UDD & MAD
	5. % annual ground water withdrawal against annual net availability	Ground Water Board
7	1. % of household electrified	APDCL
	2. % of households using clean cooking fuel	Consumer Affairs Department
	3. Renewable share of installed generation capacity	APDCL / APGCL
9	1. % of targeted habitations connected by PMGSY roads	PWD Roads
	2. No. of mobile connections per 1000 persons in rural and urban areas	Central Ministry
	3. No. of internet subscribers per 100 persons	
	4. % of Gram Panchayats covered under Bharat Net	
11	1. Houses completed under PMAY as % of net demand assessment of houses	P&RD
	2. % of urban households living in slums	UDD & GDD
	3. % of wards with 100% door to door waste collections	
	4. % of waste processed	

**4.5. Medium Term Strategic Plan:**

Medium term strategic plan includes all those SDGs and indicators for which the SDG Index Scores are in the range of 50 to 64 and the state has been categorized as ‘Performer’. The departments concerned to these SDGs and indicators are desired to upscale their schemes and programmes concerning to the indicator(s) so that by 2026 (or earlier) they move to next category of ‘Front Runner’ and attain ‘Achiever’ category by 2030 or earlier to the targeted year. . The adopted indicators of SDGs and concerned departments involved for the tasks to improve the index score are presented in Table 4.

Table 4: SDGs, indicators and the concerned departments for medium term strategic plan

SDG No	INDICATOR SELECTED UNDER SDG INDIA INDEX REPORT 2018	DEPARTMENT CONCERNED FOR ACTION
1	1. Proportion of population living below the national poverty line.	Panchayat and Rural Development
	2. Percentage of households with any usual member covered by a health scheme or health insurance	
	3. Persons provided employment as a percentage of persons who demanded employment under MGNREGA	
	4. Proportion of the population (out of total eligible population) receiving social protection under maternity benefit	Department of Social Welfare, Health and Family Welfare
	5. Number of homeless population per 10,000 household	Panchayat and Rural Development
2	1. Proportion of rural households covered under the public distribution system to rural households with monthly income of highest earning member is less than Rs.5,000/	Civil Supplies and Consumer Affairs
	2. Percentage of children under age 5 years who are stunted	Department of Social Welfare
	3. Percentage of pregnant women age 15-49 years who are anaemic (<11.0g/dl)	
	4. Agriculture productivity of wheat and rice (yield per hectare)	Department of Agriculture
4	1. Adjusted Net Enrolment Ratio at elementary level (1-8 & Secondary (9-10) school	Departments of Elementary Education and Secondary Education
	2. Percentage of correct responses on learning outcomes in language, mathematics & EVS of class 5 students	
	3. Percentage of correct responses on learning outcomes in language, mathematics, science & social studies for class 8 students	
	4. Percentage of children in age group of 6-13 years who are out of school	
	5. Average annual drop-out rate at secondary level	
	6. Percentage of school teachers professionally qualified	
	7. Percentage of elementary and secondary school with teacher pupil ratio less than equal to 30	
	3. Renewable share of installed generation capacity	
8	1. Annual growth rate of GDP per Capita (at constant prices of 2011-12)	All Departments
	2. Average unemployment rate per 1000 persons for male & females	Central Ministry
	3. Percentage of households of households with bank A/C	
	4. Number of ATMs per lakh population	
16	1. Reported cases of murders per lakh populations	Home Department
	2. Reported cognizable crimes against children per lakh population	Law and Justice
	3. Estimated number of courts per 10 lakh population	
	4. Estimated reported corruption crimes per 1 crore population	Home Department
	5. Percentage of births registered	Health and Family Welfare Department
	6. Percentage of population covered under Aadhar	Central Ministry

**4.6. Long Term Strategic Plan Category: SDGs & Indicators**

The state has been put under the category of ‘Front Runner’ against SDG 10 and in ‘Achiever’ category for SDG 15. The department(s) concerning to SDGs 10 is / are desired to scale up its / their pace of performance to attain ‘Achiever’ category before 2025 and maintain the ‘Achiever’ category till or beyond 2030. Departments concerning to SDG 15 must ensure their “Achiever’ status continues till and beyond 2030.

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| 6. Sri Utpal Medhi,                | Research Officer            |
| 7. Sri Mukul Sarma,                | Research Officer            |
| 8. Smti. Manjila Zahan,            | Research Officer            |
| 9. Sri Debanan Saikia,             | Research Officer            |
| 10. Sri Jyoti Pd. Hazarika,        | Research Officer            |
| 11. Sri Karmeswar Nath,            | Statistical Officer         |
| 12. Smti. Mitali Borbora,          | Statistical Officer         |
| 13. Sri Ramen Kalita,              | Statistical Officer         |
| 14. Smti. Labanya Kalita Talukdar, | Inspector of Statistics     |
| 15. Smt. Nandita Saikia,           | Inspector of Statistics     |
| 16. Sri Dhruvajyoti Kalita,        | Inspector of Statistics     |
| 17. Dr. Rajesh Mishra,             | Inspector of Statistics     |
| 18. Md. Aftab Hussain,             | Sub-Inspector of Statistics |
| 19. Sri Biswajit Goswami,          | Sub-Inspector of Statistics |
| 20. Sri Biren Ch. Boro,            | Sub-Inspector of Statistics |
| 21. Sri Ratan Barman,              | Computer                    |
| 22. Smti. Babita Barman,           | Computer                    |

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