PricewaterhouseCoopers Pvt. Ltd.
Social Sector Advisory Services

Report of the Human Development Mission Group

Planning Department, Government of Karnataka

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PRICEWATERHOUSECOOPERS

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Glossary

ASHA	Accredited Social Health Activist
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BPL	Below Poverty Line
BRC	Block Resource Centre
BRP	Block Resource Person
CHC	Community Health Centre
CRC	Cluster Resource Centre
CSC	Common Service Centres
DET	Directorate of Employment & Training
DGET	Directorate General of Employment & Training
DIET	District Institute of Education and Training
DISE	District Information System for Education
DHO	District Health Officer
DH&FWO	District Health and Family Welfare Officer
DoHFW	Department of Health and Family Welfare
DMRHC	Diploma course in Medicine and Rural Healthcare
DPMS	Department of Public Health and Medical Services
DRG	Diagnosis Related Group
DSERT	Department of State Educational Research and Training
DST	Department of Science and Technology
EI	Education Index
FRU	First Referral Unit
GDP	Gross Domestic Product
GoK	Government of Karnataka
GPI	Gender Parity Index
GSDP	Gross State Domestic Product
HDI	Human Development index
HMC	Hospital Management Committee
HRD	Human Resource Development
ICD	International Classification of Diseases
ICDS	Integrated Child Development Services
ICT	Information and communication technologies
IEC	Information, Education and Communication
ISC	Industry Skill Councils
ITI	Industrial Training Institutes

IMR	Infant Mortality Rate
ISRO	Indian Space Research Organization
IPHS	Indian Public Health Standards
KHSRP	Karnataka Health System Resource Project
KPI	Key Performance Indicators
KSQAO	Karnataka State Quality Assurance Organization
KSWAN	Karnataka State Wide Area Network
LMP	Licentiate Medical Practitioners
LPS	Lower Primary School
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MDM	Mid-Day Meal (programme)
MIS	Management Information System
MMR	Maternal Mortality Rate
MMU	Mobile Medical Units
MO	Medical Officer
NCF	National Curriculum Framework
NCSTC	National Council for Science & Technology Communication
NeGP	National e-Governance Plan
NFHS	National Family and Health Survey
NHP	National Health Profile
NRHM	National Rural Health Mission
NSDM	National Skill Development Mission
NSSO	National Sample Survey Organization
OPD	Out Patient Department
OPQS	Operational Policy and Quality Standards
ORC	Open Resource Centres
PHC	Public Health Centre
PMS	Performance Management System
RKS	Rogi Kalyan Samiti
RTI	Right to Information
SDMC	School Development and Monitoring Committee
SIHFW	State Institute of Health and Family Welfare
SNP	supplementary nutrition
SSA	Sarva Siksha Abhiyan
THO	Taluka Health Officers
TPA	Third Party Administrators
UNDP	United Nations Development Programme
UPS	Upper Primary School
VASCSC	Vikram A Sarabhai Community Science Centre
VIMC	Vision Implementation and Monitoring Cell
WHO	World Health Organisation

Executive Summary

In recent times, the concept of human development has found growing acceptance in national and international policy circles. Human development can be looked upon as “the process of enhancing individual and collective quality of life in a manner that satisfies basic needs (as a minimum), is environmentally, socially and economically sustainable and is empowering in the sense that the people concerned have a substantial degree of control over the process through access to the means of social power”. According to the UNDP, the idea of human development embodies the objective of expanding the range of people’s choices and creating an enabling environment for people to attain important capabilities of leading a long, healthy and creative life, to participate in decision making, with a focus on poor and the marginalized.

In the last decade, the state of Karnataka has contributed significantly to the country’s economy, having positioned India on the global map in the field of Information Technology. The State has recorded a relatively high growth rate of Gross State Domestic Product (GSDP) as well as per capita GSDP in the country, during the last decade. Despite this, with a HDI of 0.65, Karnataka ranks 7th among other major Indian states in human development index (HDI), which combines three key aspects of development - life expectancy at birth, knowledge and education levels and standard of living.

The Health Index in the HDI is computed using life expectancy at birth data. Improvement in health status of individuals can positively impact their learning and earning capacity. Karnataka has been one of the pioneer states in the country in providing comprehensive public health services to its people by establishing primary health units to deliver curative, preventive and promotive health, well before the Government of India conceived such an approach. The Karnataka State Integrated Health Policy (2004) has defined the mission for the Department of Health as “provision of Quality Health Care with Equity”. In terms of health and population indicators such as infant mortality, fertility rate, antenatal care, etc. Karnataka fares above country averages but lags behind other southern states on some accounts. Even within the state, regional variations in major health indices and inequitable access to quality health services have persisted. At the same time, while the private sector is coming up with sophisticated high-end care on par with the best in the world, the ordinary citizen of Karnataka grapples with a failing government health system, unable to assure the basic health needs of all. Some of the key challenges and issues faced by the healthcare sector in Karnataka are the decline in the financial resources allocated for health, limited focus on primary healthcare and preventive medicine; poor governance and transparency; need for better health service management with respect to manpower, infrastructure and facilities, and insufficient focus on select population sub groups like women, children and the socially disadvantaged.

Education is the other key determinant of human development. The Education Index (EI) of Karnataka uses two parameters to measure educational attainment - literacy rate and combined primary and secondary enrolment ratio. Education Index in the state has risen from 0.602 in 1991 to 0.712 in 2001. Karnataka stood 5th among the 15 major states whose EI was evaluated in 2001. Although overall education index of the State has shown an improvement, there exist vast disparities in education within the state itself, ranging from a high of 0.752 in Bangalore district to a low of 0.547 in Raichur. Interestingly, for the State as a whole, there is a strong correlation (0.93) between the Education Index and overall Human Development Index, indicating that they have moved together. This is stronger than HDI’s correlation with Health Index (0.62) and Income Index (0.86). The analysis of the education sector reveals the following issues and challenges for the State: inadequacy of infrastructure at schools; the poor quality of teaching/ teachers; insufficiency of allocations for education sector; and failure to leverage private sector and NGOs in financing and managing educational institutions.

There is a need for the State to overcome these obstacles, and aim for a more inclusive growth on the path of sustainable development. This requires the State to focus its efforts by creating long-term measurable and tangible goals, and design and implement strategies aimed at improving the overall healthcare and education levels of its people. In this context, the Karnataka Vision 2020 was framed for charting out Karnataka's future as a progressive state and an inclusive society.

With an aim to drive Karnataka towards actualizing the Vision 2020, twelve cross sectoral transformation areas were identified to guide future policy and strategic imperatives. This report focuses on the three transformation areas related to human development, namely:

- **Improve access and availability of quality healthcare for all**: Through the proposed interventions under this transformation area, the state will strive to be one of the top three states in the country in terms of health index of the HDI and all other RCH indicators. Through this transformation, the State will aim to reduce the Infant Mortality Rate (IMR) from 48 to 10, the Maternal Mortality Rate (MMR) from 228 to 20 and the under-5 Mortality Rate from 54.7 to 15 by 2020.The Vision also targets a reduced Total Fertility Rate (TFR) of 1.8 from the current 2.08 and an increase in the Child Sex Ratio to 975 from 949. The vision is also to reduce the proportion of anaemic women in the reproductive age from 50% to 15% and of anaemic children from 83% to 25%. It is further envisioned that there would be a complete coverage of child vaccination and birth assisted by health personnel, while out of pocket expenditure (OPE) on health will reduce from 80% to 60%.
- **Focus on job-oriented growth through concomitant skill development of workforce**: This transformation area aims at creating an educated, skilled, healthy and empowered population that is an asset and can participate productively in the growth process of the State's economy. The target is to increase the proportion of students in the 16-18 age-group receiving skill training through ITI/ Polytechnics, VET and Modular Employable Skills from 8-10% to 45% while 15% of students in 14-16 age-group would be introduced to skill training during secondary education. It is envisioned that the number of skill training institutes in state be increased from 1500 to 2700 with 100% access to these institutes and a target of 100% literacy in the State by 2020.
- **Develop the state as a vibrant knowledge society:** The Vision 2020 also outlines targets for the State to develop as a vibrant knowledge society. These include 100% Gross Enrolment Ratio (GER) for secondary education, a high proportion of accredited schools, schools with basic infrastructure and accredited higher education institutes. It has also set a target that at least 80% of students should have achieved a minimum education attainment level with no drop-outs in school. A GER for higher education of 25% is envisioned with increase in number of Universities in the State to 50 in the next ten years.

This document attempts to chart out the detailed interventions the State must act upon in the face of impending challenges in terms of human development. These interventions are primarily centred on promoting good governance, departmental restructuring, building capacities, empowering communities technically and financially, enhancing people's participation, establishing and strengthening infrastructure and aligning policy to focus on vulnerable sections of society.

Towards the aim of **improving access and availability of quality healthcare for all**, the following interventions have been proposed.

A key hurdle in the healthcare sector is the lack of adequate infrastructure and medical facilities across the State. It is proposed that this issue would be addressed by **strengthening the primary healthcare system in rural and urban areas through the augmentation of physical infrastructure** to meet Indian Public Health Standards (IPHS). The Health Department will have to undertake a mapping and rationalization of the primary health centres and maternity homes belonging to both the government and private sector. To strengthen the extension services of PHCs, better mobility to Medical Officers through the provision of transport vehicle on PPP basis is being

proposed. At the same time, the State needs to continue to support the Arogya Kavacha Scheme launched under partnership with Emergency Management Research Institute. Capacity building exercise is also proposed to be conducted for RKS/HMC to improve the utilization of funds received by them under various central and state schemes in an efficient and effective manner.

In order to address the manpower shortage in healthcare, the second intervention proposes to **strengthen the manpower for the primary healthcare sector**. A comprehensive study needs to be commissioned to understand the current and projected requirement for medical and paramedical personnel in the State. In addition, in the face of chronic shortages of medical practitioners in rural areas, measures may be introduced to enforce a compulsory two year bond to undertake rural service for MBBS students opting for admission to government medical colleges and government seats in private medical colleges in the state. The possibility of encouraging alternative practitioners by introducing courses such as Diploma in Medicine and Rural Healthcare and short term Nurse-physician courses should be considered. A career path for grassroots health workers like ASHA and ANM to rise to the ranks of a Staff Nurse or even a Nurse-physician should be outlined to incentivize and motivate them in effective service delivery.

In order to lay emphasis on Public Health in the State, it is proposed that Department of Health and Family Welfare (DoHFW) be re-designated as the **Department of Public Health and Medical Services** (DPMS). This department would function under two wings, one related to Public Health (Directorate of Public Health Services) and the other related to Medical Services (Directorate of Medical Services). Furthermore, in order to build a public health cadre in line with the recommendation of the State Task Force Report on Health & Family Welfare, it is proposed to identify and nominate appropriate number of personnel within the existing organisation for degrees in Public Health at reputed institute in the state/ country.

An intervention aimed at Organizational Development and HR innovations in DoHFW to strengthen human resource management capacity within the department has been proposed. This would be achieved by **setting up an HR Unit in DoHFW**. The HR Unit would set directions for critical HR interventions through setting guidelines and making appropriate policy level changes to make the change efforts successful in the desired areas. Gradually, it would shift its focus on playing a more strategic role of spearheading HR initiatives and making HR activities as part of routine and regular activities for the DoHFW.

Recognizing that the provision of health security to the poor forms an integral part of any poverty reduction strategy, it is proposed that the state provide **integrated and comprehensive healthcare insurance** to its citizens. Under the proposed initiative, each beneficiary will be entitled to a coverage of Rs.2 lakh on a family floater basis for tertiary care in addition to automatic enrolment into the centrally sponsored Rashtriya Swasthya Bima Yojana (RSBY) that offers secondary healthcare coverage to the extent of Rs. 30,000 per annum per BPL family. The scheme will ensure cashless hospitalization and surgical procedures to beneficiaries in any of the network hospitals. The State should fully subsidize the premium payment for BPL families. The scheme can also be made open to APL families, who can enrol through the payment of the designated premium amount.

Over the years, while the central government has increased fund flow into Karnataka, the State has reduced its resources in the healthcare sector. Health constitutes only 0.82% of Karnataka's GSDP, close to the country average of 0.9% of GDP. As a proportion of the State's total expenditure, the spending has reduced from 5.6% in 1997-98 to only 3.6% in 2007-08. Moreover, the fund allocation for various sub-sectors is also not consistent with accepted norms. It is, therefore, proposed that the state should **realign the budgetary process in the health department to conform to National Health Policy 2002 guidelines** in a phased manner.

Alongside measures aimed at improving the health system in the State, it is important that the impact of these initiatives be appropriately tracked and monitored. In this context it is proposed that the DoHFW in collaboration with DWCD and DPI develop and maintain a **health and nutrition tracking data base for children** enrolled in anganwadi centres and those in government, aided and

unaided schools studying in classes 1 to 10 covered under the Suvarna Arogya Chaitanya scheme. The proposed information system should be designed to generate reports at the subsequent levels for programme review by the concerned department personnel as well as the health department. It should also facilitate the downward flow of data in the department in the form of feedback/instructions from the State to the district level, and from the district level to the block level functionaries.

This report has also outlined several interventions to **enhance the Education and Skill Development levels of people in the State.**

A critical requirement for any good education system is to have well qualified and committed teachers. An intervention is proposed whereby the Department of Education / Department of State Educational Research and Training can work towards the provision of **good quality teachers in schools.** The aim of this initiative is to ensure provision of appropriate training to teachers of primary and high schools so that they are updated with the knowledge of their subject, newer methods of teaching and basic life skills. This initiative looks at reforming both the content of the teacher training programmes as well as the existing systems of delivery.

Another initiative is proposed to **increase the active management capacities of SDMCs** and to create a sense of ownership of the school by the committee by making SDMC members take active participation in the improvement of school education and to bring an awareness regarding their role and responsibilities towards the school.

The current education system is often critiqued as lacking emphasis on the holistic development of children. In this context an initiative for **reorientation of school curriculum to improve contextual relevance** is being suggested. This is aimed at designing a school curriculum which will improve the overall development of children and their readiness to integrate into the society as productive adults. A more relevant and interesting curriculum will also help in reducing drop-out rates.

Bridging the gender gap in education is a vital factor that would contribute significantly towards all aspects of women's empowerment. A major intervention by the Education Department is recommended, aimed at encouraging girls to remain in school and reducing drop-out rates. This would be undertaken through measures including improving the existing school infrastructure, ensuring functional girls toilets in each school, review and provision of gender sensitive curriculum, instilling pride and confidence among girl students through celebration of women's day in all schools, providing additional girls-only schools in close proximity to areas inhabited by backward classes and minorities, ensuring the appointment of female teachers in all schools and provision of support systems for girls through contracting expert child counsellors in high schools and designating teacher-counsellors for girls in all schools of the state.

Providing practical / activity-based science, mathematics, and language education will encourage children to transition from the existing system of education where a child is perceived as a 'receiver' of information to one where the child can also be involved in the process of 'constructing' knowledge. Hence, it is suggested to set up **open resource centers in rural areas** which would encourage such forms of learning. Open Resource Centers will help encourage children to be more inquisitive and stimulate their interest in learning. Ministry of Science and Technology, Govt. of India, Indian Institute of Science, Department of Science and Technology India (DST), ISRO, National Council for Science & Technology Communication (NCSTC), Vikram A Sarabhai Community Science Centre (VASCSC) and other reputed science institutions, both in the public and private sector in the state can be approached for innovative ideas and development of appropriate material through partnership / collaboration arrangements.

From a nutritional dimension, an initiative is proposed aimed at **enhancing the nutritional content of mid-day meals** being provided at schools. The Department of Public Instruction should adopt a multi-dimensional approach that would include increasing the allocations per child, providing greater flexibility to schools to procure food supplements locally and design the menu accordingly, and design of training modules on nutrition by qualified nutritionist and imparting this training on a regular

basis to ground level personnel. A special focus should also be given on interventions to encourage community participation in the initiative through promotional and educational programmes in rural areas.

An important avenue to raise the standard of living of the people in the State is by providing them with requisite skills to enable them to undertake remunerative occupations. This would require an overhaul of the existing systems for skill development. An initiative has been proposed under which the Directorate of Employment and Training will be involved in **augmenting the entire system of skill development** in the state by strengthening faculty, curriculum, and infrastructure of the ITIs and related institutions, with a special focus on women and under-served areas. In this direction, the State should frame an appropriate policy for skill development of the workforce and designate a single body which will be responsible for skill development (vocational education and training) in the State.

In order to enhance the higher education system in the State, an intervention has been proposed under which the Department of Higher Education will work to **enhance the flexibility in the academic process for higher education courses** through a semester-based system. The implementation of a semester/credit system calls for several interconnected and coordinated steps that will have to be undertaken by the State's universities and colleges. Enhancing flexibility in the academic process will ensure better learning opportunities, easy inter-institution transferability of students, improved quality and ability to match students' scholastic needs and aspirations.

India is a growing economy and there exists a significant skill shortage in the country whereby graduating students are found to lack the skill sets that are in demand by employers. This challenge also resonates at the state level and can be addressed by a greater interaction between industry and educational institutes. Hence an intervention is suggested whereby the Department for Higher Education should **establish a platform where industries and universities can interact, collaborate, and share experiences, resources, and knowledge in a mutually beneficial relationship**. The proposed structure will specify the roles that industry bodies should play to align the higher education system to the employment opportunities available.

Introduction

In recent times, the concept of human development has found growing acceptance in national and international policy circles. Contrary to a predominant occupation with economic growth of nation-states that earlier theories of development emphasised, the focus here is on building capacities and creating societies where individual potential can be realised. Human development can be looked upon as "the process of enhancing individual and collective quality of life in a manner that satisfies basic needs (as a minimum), is environmentally, socially and economically sustainable and is empowering in the sense that the people concerned have a substantial degree of control over the process through access to the means of social power"[1]. According to the UNDP, the idea of human development embodies the objective of expanding the range of people's choices and creating an enabling environment for people to attain important capabilities of leading a long, healthy and creative life, to participate in decision making, with a focus on poor and the marginalized.

In the last decade, the state of Karnataka has contributed significantly to the country's economy and has played a pivotal role in positioning India on the global map in the field of Information Technology. The state has recorded a relatively high growth rate of Gross State Domestic Product (GSDP) as well as Per Capita GSDP in the country, during the last decade (1990-2001). Despite this, with a HDI of 0.65, Karnataka ranks only 7th among other major Indian states in human development index (HDI).

The Health Index, computed using life expectancy at birth data, constitutes one third of the overall HDI. Improvement in health status of individuals can positively impact their learning and earning capacity. This is further reinforced by trends in HD indices across most countries that indicate that significant improvements in HDI may be brought about by changes in longevity patterns and by reducing mortality, making investments in health a priority for developing nations. The Karnataka State Integrated Health Policy (2004) has defined the Mission for the Department of Health as "provision of Quality Health Care with Equity". In terms of health and population indicators such as infant mortality, fertility rate, antenatal care, etc. Karnataka fares above country averages but lags behind other southern states of Kerala, Tamil Nadu and Andhra Pradesh on some accounts. Even within the state, regional variations in major health indices and inequitable access to quality health services have persisted. At the same time, while the private sector burgeons with sophisticated high-end care, the ordinary citizen of Karnataka grapples with a failing government health system, unable to assure the basic health needs of all.

Education has been regarded by the United Nations as the other key indicator of human development. The Education Index (EI) of Karnataka, on similar lines as the UN HDI, uses two parameters to measure educational attainment of the state: literacy rate and combined primary and secondary enrolment ratio. Education Index in the state has risen from 0.602 in 1991 to 0.712 in 2001. Karnataka stood 5th among the 15 major states whose EI was evaluated. Although overall education index of the state has shown an improvement, there exist vast disparities in education within the state itself, ranging from a high of 0.752 in Bangalore district to a low of 0.547 in Raichur. Interestingly, for the state as a whole, there is a strong correlation (0.93) between the Education Index and overall Human Development Index, indicating that they have moved together. This is stronger than HDI correlation with Health Index (0.62) and Income Index (0.86).

Based on the above observations and with an aim to drive Karnataka towards actualizing the Vision 2020, twelve cross sectoral transformation areas have been identified to guide future policy and strategic imperatives. This paper focuses on the three transformation areas related to human development, namely:

[1] Simon, D. "Development Reconsidered : New Directions in Development Thinking," Geografiska Annaler, (79B:4), 1997, pp 183-201

- Improve access and availability of quality healthcare for all: Through the proposed interventions under this transformation area, the state will strive to be one of the top three states in the country in terms of health index of the HDI and all other RCH indicators. A radical improvement in basic health indicators will be done through a rehaul of delivery systems. The objective is to increase confidence levels of citizens in public health provisioning using innovative schematic interventions and building good public health institutions. Efforts will be intensified to improve the design of health systems, delivery of preventive and promotive medicine and ensure timely access to primary care while strengthening healthcare education.

- Focus on job-oriented growth through concomitant skill development of workforce: This transformation area aims at creating an educated, skilled, healthy and empowered population that is an asset and can participate productively in the growth process of its economy. Given that large proportion of the state's population has not pursued higher education, nor have they been formally certified for a skill, the state will, therefore, be required to undertake massive efforts for skill development of its workforce through involvement of all sections of the society.

- Develop the state as a vibrant knowledge society: Karnataka has been home to many reputed institutions of higher education and research. In the past few decades, the state has also created a niche for itself in knowledge intensive sectors such as space technology, electronics and computer software, biotechnology etc. through the interventions proposed under this transformation areas, the state aims to build on these capabilities to sustain and enhance its competitive advantage. It recognizes that to be a centre of learning, expand the frontiers of knowledge and usher in a vibrant knowledge society, there is a need for effective application of knowledge in sectors like health, agriculture, rural development, small scale industries etc. for improvements in overall quality of its people's lives.

Mission Groups

The Vision for Karnataka 2020 has been adopted by the State Government. In order to operationalize the 12 transformations suggested in the Vision Document, the Vision Group for Karnataka 2020, constituted vide Government Order No. PD 59 SPB 2008, dated 10.10.2008 decided in its second meeting held under the Chairmanship of the Hon'ble Chief Minister on the 24th of June, 2009, that six Mission Groups will be constituted for working out the implementation strategy for the transformations recommended in the Vision Document. Accordingly six Mission Groups were constituted vide Government Order No. PD 71 SPB 2009, Bangalore, dated: 25th July, 2009 *(appended in Annexure A)* for the areas covering Human Development, Social Empowerment, Rural Economic Development, Infrastructure and Industrial Development, Decentralization and Governance, and Karnataka Heritage.

The Mission Groups have been holding meetings with concerned Government Departments and other stakeholders. It was subsequently decided to engage the services of PricewaterhouseCoopers Pvt. Ltd. (PwC) to assist the VIMC to provide the necessary secretarial assistance to 4 Mission Groups and to draft comprehensive short-term, medium-term and long-term action plans containing concrete and specific recommendations for achieving the goals set out in the Vision Document for Karnataka 2020, on the basis of the discussions of these Mission Groups and the transformations suggested in the Vision Document.

The constitution of the Mission Group on Human Development is as follows:

Dr. H. Sudarshan	Chairman
Dr. B.S. Ajai Kumar	Member
Shri M.P. Kumar	Member
Dr. Govind Rao	Member
Dr. K. Kasturirangan	Member
Dr. R. Balasubramaniam	Member

As per the terms of reference specified in the aforesaid GO, the Mission Groups were made responsible for drawing up short term (one year), medium term (three years) and long term (beyond three years) action plans for achieving the goals/outcomes recommended in the Vision Document under each of the sectors by the end of December, 2009.

In pursuance of the terms of reference specified above, the Mission Group on Human Development conducted 3 meetings during August – October 2009 to discuss and deliberate on the priority areas and specific interventions to be initiated.

Key Interventions Proposed

Based on the deliberations of the Mission Group and the strategies suggested in the Vision 2020 document, this paper details the following proposed initiatives with respect to the various areas being covered by the Human Development Mission Group:

I. Healthcare
- A. 1. Strengthening primary healthcare system – physical infrastructure
  2. Strengthening primary healthcare system – human resources
- B. Restructuring of the Health Department to create a public health cadre
- C. Human Resource Management for the Department of Health and Family Welfare
- D. Provision of a comprehensive health insurance scheme
- E. Align budgetary allocations for the health sector to NHP guidelines
- F. Design and implement a child health and nutrition tracking system

II. Education and Skill Development
- A. Providing good quality training for teachers in schools (primary and high-schools).
- B. Capacity building of School Development and Management Committees (SDMCs)
- C. Re-orient school curriculum to improve contextual relevance of content
- D. Bridging the gender gap in education
- E. Developing Open Resource Centres in rural areas
- F. Enhance the nutritional content of the mid-day meal
- G. Augmentation of the existing system of skill development in the state
- H. Enhance flexibility in the academic process for higher education courses.
- I. Create mechanisms for effective industry-university interaction

A mapping of these initiatives to the discussions in the Mission Group meetings and the relevant provisions in the Vision 2020 document is provided in Annexure B.

A summary of all the initiatives with objectives, implementing agency, timelines and budget is given in Annexure D.

Details of Proposed Key Interventions

I. HEALTHCARE

"The enjoyment of the highest standards of health is one of the fundamental rights of all human beings…" Constitution of the World Health Organisation.

Defined in the broader sense, health means not just absence of illness, but also improved workforce productivity, lesser absenteeism rates, improved learning levels of children in school and significant contribution to the intellectual capital of the society. Government is an important player in the provision of healthcare services to citizens, along with non-government organizations, funding agencies, civil society and the communities themselves. The changing demographic profile of the state will result in the state facing an increasing population in the 15-59 age group. A pre-requisite to reap this 'population dividend' is to ensure a healthy and empowered population.

Karnataka has been one of the pioneer states in the country in providing comprehensive public health services to its people by establishing Primary Health Units to deliver curative, preventive and promotive health, well before the Government of India conceived the same approach. The Karnataka State Integrated Health Policy (2004) defines the mission of the health department as the "provision of quality healthcare with equity". Although figures for most health indicators are encouraging in Karnataka, there are wide inequities in the health status within the state. These range from geographic inequity (such as urban/rural, north/south), gender based disparities and age wise disparities, that cut across all aspects of the health system, indicating that good health is enjoyed by select sections of society only.

Even with numerous policies and reforms within the health sector, the state continues to grapple with preventable diseases like diarrhoea and tuberculosis and faces issues such as malnutrition and low vaccination rates. Government policies and programmes have deviated from the Universal Principles of Primary Health Care which enables every citizen to access healthcare -promotive and preventive, diagnostic, therapeutic and rehabilitative services.

NFHS III examined the reasons for poor utilization of government facilities, across the states of India. The results show that 64% households in Karnataka do not use a government facility, as compared to 47% in Tamil Nadu and 50% in Kerala. In Karnataka, the primary reason was poor quality of care as reported by 51% of respondents. The other major reasons were – facility not being nearby (45%), timing (25%), waiting time (32%) and staff absent (14%). As a result, 71.1% of per capita expenditure on health in Karnataka is by the private sector and out of pocket payments contribute up to 80% of the total financial resources for health care.

Investments in health ensure healthy and productive citizens who can contribute to the economic progress of a nation. Better health is central to human happiness and well being. However, higher investments in itself may not ensure better service delivery to the population and it needs to be accompanied by concomitant measures to improve governance and make the system more transparent and effective. The focus of the Mission Group on Human Development with respect to healthcare initiatives was on strengthening the primary healthcare systems, provision of comprehensive health insurance for the poor, restructuring the Health Department to ensure better service provision and initiate better monitoring and evaluation systems for health sector schemes. The Mission Group deliberated on building productive assets for the state through capacity building and institutional strengthening to ensure sustained improvements in the healthcare delivery system in the state. The specific interventions covering these areas are detailed below.

Intervention A1: Strengthening primary healthcare system – physical infrastructure

Title: A1 Strengthening physical infrastructure at all primary health centres and first referral units across the state, in both rural and urban areas.

Implementing Agency: Department of Health and Family Welfare

Objective

- To provide comprehensive primary health care to both rural and urban poor.
- To achieve and maintain an acceptable standard of quality of care by ensuring conformity to Indian Public Health Standards (IPHS) with respect to infrastructure and equipment requirements
- Strengthen extension services provided by Medical Officers at PHCs through provision of appropriate form of mobility
- Extend the coverage of Arogya Kavacha scheme to the entire state
- To make the services more responsive, effective and sensitive to the needs of the community, thereby reducing out-of-pocket expenditure on health
- Provide specials attention for infrastructure strengthening to address maternal and child health related challenges to achieve the targets set in the Vision 2020 of reducing MMR from 48 to 10, under five mortality rate from 54.7 to 15 and IMR from 228 to 50
- Special attention to Primary Health Centers (PHCs) and First Referral Units (FRUs) in North Karnataka to bring them up to requisite standards

Need/ Justification

With about 8,143 Sub-centres, 2,195 PHCs and 323 CHCs[2], the healthcare system in Karnataka has been designed in line with acceptable national norms. There are adequate number of health institutions at all levels, largely conforming to population and area norms. Moreover, there are 54 fully functional FRUs in the state. Unlike other states, Karnataka also has an additional heath institution at the village level called the Primary Health Unit (PHU) that offers services of a Medical Officer, along with paramedical and non-paramedical staff. A review of health facilities available across the various districts of Karnataka, however, reveals that while overall figures for the state are within norms, there are wide inter-district variations in population serviced. Current data indicates that sub centers in districts like Bagalkot Chitradurga, Raichur and Bellary have a much higher population coverage, as high as 7700 in Bagalkot, whereas in districts like Dakshin Kannad and Shimoga coverage per sub centre is only around 2500-3000, indicating excess number of centers.

In addition, the quality of infrastructure and facilities available at a majority of PHCs does not meet the set standards. As per the Karnataka Administrative Reforms Review 2001, only 47% of the PHCs were found to have adequate infrastructure, 45% had adequate supplies and about 64% had adequate equipments. It is not just shortage of staff, but erratic supply of equipment, drugs and disposables, and lack of basic amenities like water and electricity in government hospitals and healthcare centres that have resulted in poor quality of services at these centres. This has contributed to low levels of public confidence towards services provided through the public health system.

34% of Karnataka's population resides in urban areas - close to 7% of them reside in slums. With a poverty head-count ratio of 32.6%, and with over 30% of the population (60 lakh persons) living on less than Rs. 19 per head per day in urban areas, urban poverty is an area of serious concern for the state. The living conditions and environment surrounding the slums contribute significantly to high morbidity and mortality rates. While major indicators such as IMR, immunization rates and birth/death rates are better in the urban areas, diseases such as malaria, TB and other vector borne

[2] RHS Bulletin 2008

infections are much higher among urban slums than rural villages owing to the congested and unhygienic living conditions. With low levels of education, dismal living conditions and low incomes, rural migrants are the worst hit in towns and cities. A single episode of illness pushes them into the cycle of debt and poor health status. This necessitates the need for urban areas also to have a robust plan of healthcare provision through primary health centres.

The National Rural Health Mission (NRHM) envisages bringing the quality of services at all three tiers of the rural healthcare system – Sub Centres, PHCs and CHCs – up to the level of Indian Public Health Standards (IPHS) in a phased manner. With the introduction of an ASHA worker in each village under NRHM to promote health seeking behaviour, the primary healthcare sector is bound to witness a growth in demand for services in the immediate future. NRHM envisages fully functional sub-centres, PHCs functional for 24 hours in a day and functional FRUs providing emergency obstetric and neonatal care as well as their gradual strengthening to provide specialist services. To enable the state to comply with these guidelines and meet departmental goals in a timely manner, there is an urgent need to augment and upgrade the physical infrastructure and equipment available for primary healthcare.

Proposed Scheme Outline

PHCs are the cornerstone of rural health services in India covering a population of 20,000 in hilly and tribal areas and 30,000 in plain areas. With 4-6 indoor/observation beds, it acts as a referral unit for 6 sub-centres and refers out cases to CHCs and higher order hospitals located at the sub-districts and districts. Given the important role of PHCs and FRUs in the delivery of health services to the rural population, IPHS have been formulated to benchmark these healthcare delivery units. While recognising that standard setting needs to be a dynamic process, the IPHS has been prepared keeping in view the existing resources available as well as that needed to meet the functional requirements in PHCs and FRUs.
This initiative is being proposed to undertake a baseline mapping of the existing primary healthcare infrastructure and bridge the identified gaps with respect to IPHS standards in a phased manner. Adhering to these standards will ensure better levels of quality healthcare provision in the state. In addition, this initiative focuses on strengthening the extension services of PHCs by ensuring better mobility to MOs through the provision of transport vehicle on PPP basis. At the same time, the state should continue to support the Arogya Kavacha Scheme launched under a PPP arrangement with Emergency Management Research Institute, (EMRI) Secunderabad (GO HFW 10STQ 2007, Bangalore, dated 11th August 2008).

Cities, towns and peri-urban areas of Karnataka are served by Urban Family Welfare Centres and Health Centres set up under the India Population Project VIII (IPP VIII, 1994-2002). In addition there are district hospitals, teaching hospitals and other specialty hospitals. A mapping and rationalisation of the distribution of urban health centres and maternity homes, belonging to both the government and private sector should be carried out. While there is an easier access to health institutions in urban cities and towns, the various private sector providers need to be effectively regulated for acceptable levels of service provision.

Proposed Scheme Details

Phase I
During the first phase of the initiative, the department will have to embark on a baseline mapping of all existing PHCs and FRUs according to two broad parameters:

a) Location and coverage of the PHC against the population and area norms specified by the Bhore Committee recommendations
b) Physical infrastructure and equipment /facilities available at the PHC and FRU against the standards set by IPHS with respect to building, equipment and furniture, drugs, transport facilities, laundry and dietary facilities for indoor patients and waste management. The study

should also assess the gap in the provision of residential accommodation for medical officers, staff nurse, lab technicians, pharmacists and other staff employed at the PHC.

c) Mapping and rationalisation of the distribution of urban health centres and maternity homes, belonging to both the government and private sector to ensure assess and availability of primary healthcare services to urban poor.

This mapping would shed light on three important aspects of primary healthcare delivery system in Karnataka:

- Identify the areas in the state that have remained under-served or un-served in spite of meeting the overall area and population norms.
- Identify the redundant/ defunct centres. It is suggested that the department could use the following broad parameters while assessing the redundancy of any particular PHC:
  - Is the PHC serving a population of 20,000 in hilly or tribal areas and 30,000 in plain areas?
  - Is the PHC operating from a pucca building and has the minimum infrastructure to carry out assured services?
  - Does the PHC have the required manpower available to carry out healthcare services?
  - Does the PHC have out-patient strength of a minimum of 20 patients per day?
  - Is the PHC easily accessible to the target population?
- Highlight the gaps in the provision and quality of physical infrastructure available at the centres as against the IPHS norms. The assessment study will also identify the PHCs that do not have transport vehicles to carry out extension services by the MO in their catchment area.

Phase II

Having identified the three important aspects regarding the location and physical infrastructure in the PHCs and FRUs as well as Urban Family Welfare Centres and Health Centres in urban areas, the second phase would entail to take corrective actions to address these issues.

- The first step would be to re-align policy focus on the under-served and un-served areas in the state. The initiative proposes setting up of new PHCs and FRUs in these areas in a phased manner.
- A simultaneous step would be rationalisation of PHCs identified as redundant. The personnel/ facilities deployed in such centres may be relocated to neighbouring PHCs. This exercise would not only result in savings for the government but also help strengthen services at neighbouring PHCs.The final step would be to augment the physical infrastructure, including the provision for residential accommodation at all PHCs and FRUs in order for them to be compliant to IPHS. Special attention should be given to ensuring that PHC and FRU buildings are environment friendly, disabled friendly, have access to water supply, electricity and telephone. Rain harvesting could be promoted in these buildings. This final step would need to be phased out according to the severity of the deficiency, size of the population being served by the centre and the access to alternative medical care in the area. The state may take up the capacity augmentation of 10% of the PHCs on an annual basis. Given that the department aims to make 200 FRUs fully functional by 2011-12, the phasing of infrastructure augmentation for FRUs would have to be geared to meet this target, with special emphasis on building blood storage facilities at all FRUs. In addition, the state will have to work towards augmenting neo-natal care capacity at all primary healthcare centres and FRUs. It is also envisaged to enhance the mobility of PHC doctors through the provision of transport vehicles on PPP basis to all such centres that do not presently have a vehicle. Each PHC can enter into an agreement with a local car rental company to provide a vehicle twice a week to carry out extension services at terms and conditions that can be agreed at a district/state level. The MOs can use the vehicle to carry out the extension services in the catchment area at least twice in a week. Special attention should be paid to PHCs located in backward districts and in remote areas with limited transport facilities.
- With respect to Urban Family Welfare Centres and Health Centres, the respective municipal corporations should undertake rationalization and augmentation of capacity/ infrastructure in light of the findings of the proposed mapping exercise in Phase-I. While this augmentation can be

funded by the respective municipal corporations, the Health Department may consider extending financial support to smaller municipalities in upgrading their facilities.

The state should continue to support the Arogya Kavacha Scheme for the provision of comprehensive emergency response services covering medical, police and fire. As per the current scheme, EMRI is the nodal agency in the implementation of the scheme and is to deploy 517 ambulances in six phases commencing from November 2008 to March 2010 as contemplated in the MOU covering the entire population of the state and at locations decided by the GoK. The state should extend appropriate support for the extension of this service to cover all districts in the envisaged phased manner. As per the implementation stage of this project, additional requirement from the State Budget will be Rs. 5 crores during 2009-10 and around Rs. 10 crores during 2010-11.

Under NRHM, in an effort to increase the functional, administrative and financial autonomy of PHCs, every PHC is being allotted Rs. 25,000 per annum as untied funds and Rs. 50,000 as an annual maintenance grant for improvements and maintenance of physical infrastructure. As per the guidelines, the untied funds are to be kept in the bank account of the concerned Rogi Kalyan Samiti (RKS) or Hospital Management Committee (HMC) who will spend and monitor both the funds. At the PHC level, the Panchayat Committee/ RKS will have the mandate to undertake and supervise the work undertaken from the annual maintenance grant. Under this scheme, the state will take immediate action towards the creation of RKS/ HMC at each PHC and CHC respectively. As substantial fund will flow to the RKS/ HMC under various central schemes including NRHM, under this initiative, the state needs to engage with the RKS/ HMC members for capacity building exercises to improve the utilization of funds in an efficient and effective manner.

The state should continue with the provision of primary health care through public private participation. Under the existing system, non-public entities have been entrusted with the management of PHC in a unique and pioneering example of public-private partnership in primary health care. The success of PPP in PHC management and its impact as a 'model PHC' have strengthened the idea of PPP.

Institutional Strengthening and Capacity Building Measures

- Capacity building to carry out state-wide assessment study to identify the infrastructure gaps in the existing network of primary healthcare centres
- Planning and prioritising the improvements identified
- Capacity building exercise for RKS/ HMC members to enable them to fully utilise the untied funds and annual maintenance funds provided under NRHM.

Timeline

Activity	Responsible Agency	Time Period
Capacity building training for RKS/ HMC members in fund utilisation	DoHFW	End of Month 5
State-wide assessment study on the physical infrastructure of PHC in the state with respect to location and facilities	DoHFW	End of Month 6
State-wide assessment study to map Urban Family Welfare Centres and Health Centres	Directorate of Municipal Administration (DMA)	End of Month 6
Policy initiative to focus on building new centres in the areas identified as under-served and un-served	DoHFW/ DMA	End of Month 7

Policy initiative to close down redundant PHCs and re-deploy the concerned personnel to the nearest/ needy PHCs	DoHFW	End of Month 7
Prioritisation of PHCs for physical infrastructure augmentation and estimation of the costs to conform to IPHS, including provision for vehicle to PHCs to carry out extension services	DoHFW	End of Month 8
Preparation of Action Plan for infrastructure augmentation across the state to meet IPHS	DoHFW	End of Month 10
Action Plan for infrastructure augmentation across Urban Family Welfare Centres and Health Centres	DMA	End of Month 10
Execution of the infrastructure augmentation plan in a phased manner across the state to meet IPHS	DoHFW	End of Month 12 onwards

Monitoring and Implementation

- A plan to improve the quality of health care begins with assessment of existing level of service delivery. In this respect, DoHFW should develop grading norms for healthcare establishments based on IPHS guidelines.
- Periodic (every 3-5 years) independent assessment and grading of physical infrastructure in PHCs and FRUs by a third party. This agency may be selected through a process of competitive bidding in a transparent manner. Similar assessment studies may be conducted on Urban Family Welfare Centres and Health Centres to assess the gaps with respect to infrastructure facilities.

Key Performance Indicators

- Number of PHCs identified to be meeting population and area norms
- Number of PHCs and FRUs assessed to have the requisite physical infrastructure as per IPHS norms
- List of areas (villages) identified as under-served or un-served by PHCs
- Number of redundant PHCs closed and personnel re-deployed
- Number of PHCs and FRUs where infrastructure additions have brought them up-to IPHS norms
- Number of villages that were identified as un-served/ under-served where new PHC has been established
- Number of FRUs that have been made fully functional
- Number of PHCs and FRUs where infrastructure augmentation has been initiated and number where provision of infrastructure has been completed.
- No of Urban Family Welfare Centres and Health Centres where infrastructure augmentation has been initiated and where provision of infrastructure has been completed.
- Number of PHCs that have been provided with transport vehicle to carry out extension services
- Number of ambulances deployed under the Arogya Kavacha Scheme

Indicative Budget (in Rs.lakh)

Particulars	**Amount (Rs.lakh)**		
	Year 1	Year 2	Year 3
Assessment study	100		
Preparation of Action plans by District Health committees	14.50		
Execution of infrastructure augmentation plan (10% of existing PHCs at Rs.20 lakh per unit)	5037	5037	5037
Deployment of vehicles to PHCs for 2 days a week on PPP	1679	1679	1679

basis (Rs.1 lakh per PHC covering 25% of PHCs per year)			
Functionalisation of FRUs (73 each in year 1 & 2 resp.)	730	730	730
Annual training for RKS members for PHCs (training to RKS members in all 1679 PHCs at Rs.5000 per centre)	83.95	83.95	83.95
Annual training for HMC members for CHCs (training to HMC members in all 254 CHCs at Rs.5000 per CHC)	12.70	12.70	12.70
Allocation towards Arogya Kavacha Scheme	500	1000	
Total Amount	8157.15	8542.65	7542.65

Intervention A2: Strengthening primary healthcare system – human resources

Title: A2 Strengthening manpower at all primary health centres and first referral units across the state

Implementing Agency: Department of Health and Family Welfare; Department of Medical Education; Department of AYUSH

Objectives

- To provide comprehensive primary health care to the community through 24x7 PHCs and fully-functional FRUs with an aim to meet the health care targets set by the Vision 2020 of reducing MMR from 48 to 10; under five mortality rate from 54.7 to 15; IMR from 228 to 50; achieve 100% institutional deliveries and reduce out-of-pocket health expenditure from 80% to 60%.
- To make the services more responsive, effective and sensitive to the needs of the community.
- To achieve and maintain an acceptable standard of quality of care by ensuring conformity to Indian Public Health Standards (IPHS) with respect to manpower requirements
- Develop a cadre of appropriately trained paramedical staff to serve in rural areas and ensure adequately trained paramedical staff in all sub centres and PHCs in the state by 2020
- Provide medical practitioners that are closely knit with the local community to minimise quackery in villages
- Mainstreaming of AYUSH into the healthcare delivery system in Karnataka

Need/ Justification

The state produces a huge number of health professionals each year and the recent recruitment drive (contract or otherwise) has considerably reduced the short supply and vacant positions of doctors and nurses. Karnataka has a peculiar characteristic, however, of having the largest number of trained medical / paramedical manpower being produced each year, but it still faces a chronic shortage of these personnel in primary health centres and district hospitals. Though it has a doctor:population ratio of 1:3240, there are several pockets of population, especially in its more backward regions, that do not have access to a professionally qualified doctor. The state also faces a shortage of trained nurses with a nurse: bed ratio of 1:9 (the international norm is 1:5).

Lack of trained nurses and doctors has a huge impact on the health indicators. For example, Bidar, Gulbarga, Kodagu and Chikmagalur – all with high infant mortality rate – also suffer from lack of manpower at primary level. This underlines the importance of trained manpower for improving health outcomes. In addition, chronic absenteeism of doctors has emerged as an important challenge in the provision of rural healthcare services in the state. While doctors have been sanctioned to primary healthcare centers, their persistent absenteeism has emerged as a serious problem. In the absence of reliable government services available to the people, private doctors, clinics and hospitals are becoming the preferred source of care for both rich and poor. As a result, 71.1% of per capita expenditure on health in Karnataka is by the private sector and out of pocket payments contribute up to 80% of the total financial resources for health care.

While attempts need to be made to increase the availability of doctors to provide primary healthcare services, focus also needs to be accorded to availability of trained persons such as mid-wives and nurses for delivery of services in rural areas. The problem of non-availability of doctors can be somewhat mitigated with service provision by trained midwives and health workers who are more easily available from within the rural community. The following table shows the current manpower position in primary healthcare in the state.

	Sanctioned	In Position	Vacant	% vacancies
Pharmacist at PHC and Sub-centre	2449	1983	466	19%
Lab Technician at PHC and Sub-centre	1650	1242	408	25%
Nurse midwife/ Staff nurse at PHC and Sub-centre	3465	1647	1818	52%
Block Extension Educator	531	428	103	19%
Health worker (Female)/ ANM at PHC & Sub-centre	8487	8028	459	5%
Health assistant (female)/ LHV at PHC	1209	1170	39	3%
Health assistant (male) at PHC	1302	837	465	36%
Doctors at PHC	3528	2814	714	20%

Source: RHS Bulletin 2008

On the other hand, one of the greatest challenges in bringing CHCs to IPHS standards and thereby declare them as FRUs is the non-availability of specialists especially in critical areas like obstetrics/ gynecology, anesthetist and pediatricians.

As per the Health Department projections, the state will have 1679 PHCs functioning 24x7 and 200 functional FRUs by 2011-12. The realization of this goal would entail a large pool of manpower addition to not only fill the current vacancies but also meet the NRHM norms on manpower in these centers. The following table presents the current and recommended manpower norms under NRHM for sub centers, PHC (24x7) and CHCs

		Manpower
Sub Centre	Current	1 ANM; 1 Health Worker (M); 1 Voluntary Worker
	NRHM norm	2 ANM; 1 Health Worker (M); 1 Voluntary Worker
PHC (24x7)	Current	1 MO; 1 Pharmacist; 1 Staff Nurse; 1 ANM; 1 Health Educator; 2 Health Asst (M&F); 1 Lab Technician
	NRHM norm	2 MO; 1 AYUSH Practitioner; 1 Pharmacist; 3 Staff Nurse; 1 ANM; 1 Health Educator; 2 Health Asst (M&F); 1 Lab Technician, 1 Dai
CHC (only clinical)	Current	1 General Surgeon; 1 Physician; 1 Gynaecologist; 1 Paediatrician
	NRHM norm	1 General Surgeon; 1 Physician; 1 Gynaecologist; 1 Paediatrician; 1 Anaesthetist; 1 Public Health Progm Mgr; 1 Eye Surgeon

The government has proposed the mainstreaming of Ayush with the national healthcare delivery system under NRHM. The Department of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy) regulates the medical education, drugs manufacture and practice of these systems of medicine. There are about 103 hospitals across all the sub sectors of AYUSH, with 1545 beds and over 600 dispensaries[3]. Karnataka is known for its Ayurveda and Unani systems of medicine. Currently the Directorate of AYUSH is facing problems due to shortage of staff and improper utilization of funds.

[3] Performance Budget 2007-08, Health & Family Welfare Department, Government of Karnataka

Scheme Outline

As was noted by the Task Force on Health and Family Welfare 2001, in view of the reluctance of MBBS qualified doctors to work in remote areas, there is a need to explore the possibility of alternative practitioners like family physicians with shorter period of study like Licentiate Medical Practitioners (LMP) and Nurse-physicians who may be trained to provide rural healthcare services. Through this initiative, the state will ensure least one adequately trained paramedical staff at each Sub Center and either a MBBS qualified doctor or a LMP / Nurse-physician at each PHC. All 24x7 PHCs will have 3 staff nurses, two medical officers or one MO will be assisted by either one LMP or Nurse physician graduate, and a *Dai* as night assistant.

Following the NRHM, one AYUSH practitioner should be appointed at all 24x7 PHCs in the state in a phased manner. At the same time, the state should also set up AYUSH units in district and taluk level hospitals with a view to increase the utilization of these systems as an alternative to allopathy, with a special focus on backward districts.

In an effort to meet the shortage of doctors at the primary level, the state should take appropriate steps to enforce the bond signed by MBBS students opting for admission to government medical colleges and government seats in private medical colleges in the state.

The state should initiate the process of recruiting, on a contractual basis, an additional MO and two additional staff nurses in all 24x7 PHCs to meet NRHM guidelines. Special attention should also be given to the recruitment of appropriate specialists necessary for functionalisation of FRUs.

In addition, following alternatives should be explored to meet the shortage of medically trained staff at the rural primary healthcare level.

- Assess the need for additional ANM training institutions in light of the requirement and establishment of these institutions
- Establish a Task Force to introduce LMP type course in the state. Lessons may be taken from the recent initiatives in Assam that has introduced the three year Diploma in Medicine and Rural Healthcare (DMRCH) in 2004
- Introduce short-term Nurse-physician course for B.Sc. Nursing graduates
- Establish a career path for ASHA workers who may rise to become staff nurses through experience and appropriate training. Introduction of a condensed bridge course for staff nurses or ANM, who are already working in rural areas to help transition them into a Nurse-physician.

Scheme Details

Under the proposed initiative, the following activities will be initiated:

A. Establish mechanism to enforce bonds signed by MBBS students seeking admission to government medical colleges and government seats in private colleges. In the wake of shortage of doctors in rural areas, the state government introduced compulsory service for MBBS students after their graduation. A bond is to be furnished by all students at the time of admission to government medical colleges and government seats in private medical colleges in Karnataka for the MBBS degree. As per the bond, every student is to serve as a medical practitioner for a minimum of two continuous years in the rural areas in the state upon the completion of the MBBS degree. The breach of the surety entails a payment of Rs. 25,000 (Rs.10,000 in the case of SC/ST candidates). However, experience has shown that most MBBS graduates do not serve the two compulsory years in rural areas. A renewed emphasis needs to be given to ensure strict enforcement of the bond through the following suggested measures:

- There is a need to establish an institutional mechanism to ensure better coordination between the Department of Medical Education and DoHFW to ensure that the MBBS graduates are given their rural postings on time.
- The penalty amount can be enhanced to correctly reflect the actual expenditure incurred by the government in providing MBBS education to the candidates.
- In collaboration with the Karnataka Medical Council, an annual renewal of registration can be made compulsory for the first three years for all students completing MBBS from government medical colleges or those admitted to government seats in private colleges.
- Simultaneously, the renewal of registration can be made conditional on the candidates serving in rural areas for two consecutive years upon completion of MBBS. The renewal application must be accompanied by a written declaration by the candidate stating the completion of the necessary period of rural service, duly attested by the concerned DHO or supervising officer.
- In case of non-renewal of registration in any of the first three years after graduation, the Karnataka Medical Council can inform the state government, who can then initiate appropriate disciplinary action against the candidate.

B. Recruitment of additional manpower as per NRHM guidelines for 24x7 PHCs and functional FRUs

- Recruitment of a second ANM at Sub-Centers. However, the department needs to rationalize the recruitments in light of the actual population served by the centre.
- Recruitment of two additional Staff Nurse and one Dai at all 24x7 PHCs. In this respect, the state should undertake a study on the training capacity and facilities available in the training institutions for turning over the required number of Staff Nurses.
- Recruitment of additional Medical Officer (preferably lady MO) and Ayush Practitioner, either by relocation or on contractual basis at all 24x7 PHCs in the short run. The state should consider recruitment of required number of personnel in the longer-term. In case the state is unable to fill this vacancy through a qualified MBBS doctor, it shall either appoint a DMRHC graduate (as discussed below) as MO at the PHC or appoint a Nurse-physician (as discussed below). Based on the assessed requirements for AYUSH practitioners in the state, the Department of AYUSH will have to devise plans to fulfill these requirements.
- In line with the state's goal of functionalizing 200 FRUs by 2012, the state shall undertake a study to assess the manpower needs for FRUs. Based on the results of the study, the state should ensure that each FRU has at least one gynecologist, anesthetist, and pediatrician and recruitments may be either through direct recruitment or on contractual basis.
- Alternatively, the state may consider using the resources at government and private medical colleges to support primary healthcare services at the village level and sourcing specialists for FRUs. These institutes can act as hubs for training and research for primary healthcare personnel. Karnataka has 39 Medical colleges, of which 10 are government medical colleges and the rest are private medical colleges spread across 23 districts. Six districts (Chamrajnagar, Gadag, Haveri, Kodagu, Koppal and Uttar Kanadda) in the state do not have any medical college. The state may consider carrying out an assessment study to see the feasibility of setting up new medical colleges in these districts.

C. Assess the demand for ANM training and establish training institutions

As per the RHS Bulletin 2008, the current requirement[4] for ANMs at sub-centres and PHCs is about 10,338, whereas only 8,487 posts have been sanctioned resulting in a current shortage of 2,310 ANMs in the state. In addition, as per the NRHM guidelines the post of a second ANM at all sub-centres needs to be sanctioned, which will push up this to 10,453. Given that the current ANM training capacity is about 600 (570 seats in the 19 government ANM training centers and 30 seats in NGO run/ private ANM training centers), the state will need another 17 years to meet the projected

[4] One ANM each for every sub centre and PHC

demand from the current capacity. Though the state has recently sanctioned 9 additional ANM training institutions under the KHSRP programme that would add another 270 seats, it would still be insufficient to meet the demand for ANMs in the near future.

Under this initiative, the state should therefore initiate a comprehensive study to understand the current and projected requirement for ANMs and take constructive steps to bridge this gap.

D. Introduce three year Diploma course in Medicine and Rural Healthcare

- Licentiate Medical Practitioner (LMP) was a recognized medical qualification in India before 1946, when the Bhore Committee effectively made the MBBS the sole entry point into the medical profession in India. The LMP course was offered after completion of school education and was somewhat less extensive than a full-fledged MBBS degree. Recent experience in Assam that introduced a three year Diploma in Medicine and Rural Healthcare, suggests the feasibility of re-introducing such a course to help bridge the gap in the quality of healthcare available in rural Karnataka. The Ministry of Health, GoI and the Medical Council of India has recently initiated the process for a 4-year degree course in Rural Medicine. Towards this end, the state should constitute a Task Force under the Directorate of Medical Education with specialists in medicine, public health, reputed NGOs and medical institutions to look into the introduction of a LMP type Diploma course in Medicine and Rural Healthcare (DMRHC).
- The state can enact appropriate legislation that will provide for the establishment of a regulatory authority in the state to regulate and register the Diploma Holders in Medicine and Rural Health Care (DMRHC) and their practice of medicine in rural areas. It can also regulate opening and running of Medical Institutes for imparting education and training for the course of DMRHC.
- This intensive three year course can be structured in a manner so that the DMRHC graduates are able to undertake basic responsibilities of the physician of first contact and can function independently in the rural environment. Students that have completed their PUC/ ISC in the science stream with biology will be eligible to apply for the course.
- The course may be introduced in the 10 districts that do not have a government medical college.
- The state could consider the provision of stipend/ scholarship to the students opting for this course. This could be similar to the financial assistance presently being extended to ANM trainees by the state government.
- The following table provides an indicative course structure

Year	Subjects
First	Anatomy, Physiology and biochemistry, community medicine
Second	Pathology and microbiology, community medicine and pharmacology
Third	Medicine, Obstetrics and gynaecology, surgery, Orthopedics, Eye, ENT, basic radiology, basics of forensic medicine and basic of human genetics

Source: DMRHC, Medical Institute, Assam

- Based on the report of the proposed Task Force above, the government will need to sanction the appropriate number of faculty posts and establish an institute to deliver this course.
- In the short term (1-3 years) it is proposed that the DMRHC course be conducted at select government medical colleges in the state. The concerned government medical college can be allotted additional funds to form a separate department with the required faculty and facilities to carry out the three year diploma course. In the medium term (5-7 years), a separate institute may be set up for conducting DMRHC course in the state.
- Given that 33% of the existing PHCs in the state do not have a doctor, DMRCH practitioners are a feasible alternative to ensure quality healthcare in rural and remote areas. Under this initiative, adequate number of DMRCH practitioners will be produced in a phased manner to cover existing

vacancies and to cater to centers that have been traditionally plagued by doctor absenteeism. The initiative aims to have in position either a MBBS qualified doctor or one DMRCH practitioners at each PHC in the state by 2020.

E. Introduce short-term Nurse-Physician courses for B.Sc. Nursing graduates

- The proposed Task Force should also look into the feasibility of introducing a short-term Nurse-physician course. A Nurse-physician (NP) is a registered nurse (RN) who has completed advanced education and training in the diagnosis and management of common medical conditions, including chronic illnesses. They provide some of the care provided by physicians and can be the primary healthcare providers in rural and remote areas where a doctor/LMP can not be present at all times.
- The Nurse-physician will be specially trained in clinical skills/ knowledge that are not imparted to nursing graduates. These will include patient history recording, clinical examination, palpate, auscultation, knee-hammer examination, lab investigation and differential diagnosis. These skills will enable the NP to successfully diagnose disease for preliminary treatment and referral in the absence of a doctor.
- The Karnataka State Nursing Council should regulate the NP Training course and grant recognition to the training institutions to conduct this course. They will also be responsible to carry out periodic inspections of physical and clinical facilities at these institutes. The council will be responsible for prescribing syllabus and curriculum and conducting qualifying examination for the Nurse-physician course.
- Candidates will need to complete a minimum of B.Sc. in Nursing to be eligible for this training. Candidates will be trained in primary care specialties, such as general internal medicine, pediatrics, and family medicine. NPs will formally be trained to provide diagnostic, therapeutic, and preventive health care services. Working as members of the health care team, they will take medical histories, examine and treat patients, order and interpret laboratory tests and x-rays, and make diagnoses[5]. Other specialty areas may include general surgery, emergency medicine, orthopedics, and geriatrics. Thus, NP can provide high-quality, cost-effective individualized care that is comparable to the health care provided by doctors
- This advanced nursing course may be conducted through a select number of existing government nursing colleges in the state. The concerned government college will be allotted additional funds to form a separate department with the required faculty and facilities to carry out the course.
- The aforesaid Task Force should also recommend the appropriate posts that would need to be sanctioned within the existing structure to accommodate personnel with this additional qualification. The state may also consider promoting Staff Nurses with the requisite experience and qualification to the post of Nurse-physicians.
- As per the NRHM guidelines, it has been proposed that each Sub-Centre has two Health Workers (Female)/ ANM and one Health Worker (Male). It is being envisaged that by 2020, each sub-centre will have one Nurse-physician who will be assisted by one ANM and one Health Worker (Male). Given that there are 8,143 functioning Sub-Centers in Karnataka, the state will have to train/ produce at least 8,143 Nurse-physicians in phased manner by 2020. These Nurse-physicians may be selected (based on experience and merit) from the existing pool of ANMs and staff nurses to undergo the training or could be new recruits who have undergone the training.

F. Career path and training modules for grass-root level health workers

- Annual/ bi annual training for grass root level workers in the area of medicine and community and public health needs to be provided. A well informed and skilled health worker has the ability to catalyse good health behaviour and practices. But, it is imperative that they are appropriately supported in this task with regular training and skill upgradation. Courses/training in public health

[5] Based on training received by students to the American Academy of Physician Assistants

need to be incorporated in the ANM/ASHA training modules and should be repeated / refreshed each year. As per NRHM guidelines, ASHAs are envisaged to undergo a total of 23 days training in five episodes. After a period of 6 months of her functioning in the village, it is proposed that she be sensitized on HIV / AIDS issues including STI, RTI, prevention and referrals and also trained on new born care.

- In addition, the proposed Task Force needs to design and clearly define a career path for these grass-root health workers. It must suggest minimum experience levels and qualification norms that may enable grass-root workers, including ASHA and ANMs to rise to the ranks of a Staff Nurse or even a Nurse-physician.

Institutional Strengthening and Capacity Building Measures

- Assessment of recruitment needs for personnel at Sub-Centres, PHCs and FRUs
- Amendment to requirements by Karnataka Medical Council for renewal of registration certificate for MBBS graduates from government medical colleges and candidates admitted to government seats in private medical colleges in Karnataka.
- Formation of a Task Force on improving the availability of medically trained manpower to serve rural areas in Karnataka
- Enactment of Karnataka Rural Health Regulatory Act
- Regulatory Authority for DMRHC – to register the DMRHC graduates and to regulate opening and running of Medical Institutes for imparting education and training for the course of DMRHC
- Capacity building of Karnataka State Nursing Council to design and introduce Nurse-physician course
- Around 800 candidates will have to be trained to become Nurse-physicians each year in order to meet the requirement of 8,028 trained NPs by 2020. It is proposed that all existing ANM vacancies (460 posts) be filled by new recruits of NPs over a period of five years. For the remaining 7,568 posts, the state will select from its existing pool of Staff Nurses and ANMs, based on their experience, merit and willingness to work in rural areas. They will be nominated to undergo the course and their expenses shall be borne by the state.

Timeline

Activity	Responsible Agency	Time Period
Constitute Task Force	DoHFW	End of Month 1
Manpower requirement study for sub-centres, PHCs and FRUs in line with the NRHM requirements, including need for AYUSH practitioners	DoHFW	End of Month 4
Submission of Task Force Final Report	Task Force	End of Month 7
Initiate recruitment drive for all levels of personnel at Sub-Centre, PHCs and FRUs	DoHFW	Mid of Month 7
Formation of a DMRHC regulatory body	DoHFW	End of Month 9
Capacity building exercise for Karnataka State Nursing Council	DoHFW	End of Month 9
Training programmes for grass root health sector workers	DoHFW/ Dept of Medical Education	End of Month 10
Sanction of additional posts to accommodate trained nurse physicians	DoHFW	End of Year 2
Sanction of posts to accommodate DMRHC graduates	DoHFW	End of Year 4

Monitoring and Implementation

- DoHFW through its HR Unit will have to carry out periodic assessments on whether adequate number of trained personnel are being produced to meet the demand at the village level. At the same time, there is a need to have periodic assessments to examine the need for the short-term rural medical degree once the shortfall in rural doctors is met.
- The Karnataka Rural Health Regulatory body will regulate opening and running of Medical Institutes for imparting education and training for the course of DMRHC. It should also regulate and register the Diploma Holders in Medicine and Rural Healthcare and their practice of medicine in rural areas.
- Training needs assessment for grass-root health sector workers
- Karnataka Medical Council should track all registration renewals for MBBS graduates and report any deviations to the department

Key Performance Indicators

- Capacity of DMRHC course
- Enrolment into DMRHC course (end of year 2)
- Number of DMRHC graduates (end of Year 5)
- Capacity of Nurse-physician course
- Enrolment into Nurse-physician Course (end of year 2)
- Number of Nurse-physician graduates (end of year 3)
- Training of grass-root workers
- Sanction of additional posts as per requirements and recommendations of Task Force
- Percentage of MBBS graduates that have undergone annual renewal of registration and number of doctors reported by Karnataka Medical Council for disciplinary action due to non-renewal or not serving in rural areas as per the bond requirements.

Indicative Budget

Short term (1-2 years)	**Amount (Rs.)**
Constitution of Task Force	30,00,000
Technical Assistance to Karnataka State Nursing Council in design and implementation of advance training course for nurses	1,00,000
Costs associated with setting up Karnataka Rural Health Regulatory body	1,00,000
Additional Allotment for 2 Govt. Medical Colleges to conduct DMRCH course	2,00,00,000
Additional Allotment for 4 Govt. Nursing Colleges to conduct NP training course	1,00,00,000
Total Costs (Rs.)	3,32,00,000
Medium Term (3-5 years)	
Costs of training Staff-nurses/ ANM to be Nurse-physicians	8,68,69,980
Cost of setting up institute for providing DMRCH	20,00,00,000
Sanction of additional posts (placement of 800 NP per year)	11,56,03,200
Total Costs (Rs.)	40,24,73,180
Unit costs of Sanctioning Additional Posts in line with assessment study	

Unit costs of sanctioning post of second doctor at 24x7 PHC	2,34,600
Unit costs of sanctioning post of Ayush Doctor at 24x7 PHC	2,22,870
Unit Costs of sanctioning Posts for DMRCH graduates per annum	2,13,660
Unit Costs of sanctioning Posts for Nurse-Physician per annum	1,85,790
Unit costs of sanctioning posts for two additional Staff Nurses at 24x7 PHCs	1,48,950
Performance related remuneration for Dai at 24x7 PHC	250 per delivery

Intervention B: Restructuring of Health Department to create a public health cadre

Implementing Agency: Department of Health and Family Welfare

Objective

Restructuring the department into two separate streams, one related to Public Health (Preventive) and the other related to Medical (Clinical/ Curative) to

- Revive and recognise the importance of Public Health Services
- Develop separate cadre for Public Health and Medical Services within the state health department
- Reorganisation of the divisions on the basis of integrated responsibilities and current needs

Need / Justification

As per the Calcutta Declaration on Public Health (December 1999), there is a need to promote public health as a discipline, to recognise the leadership role of public health in formulating and implementing public policies, to create a supportive environment and enhancing social responsibility and to advocate increased allocation of human and financial resources for health to strengthen and reform public health education, training and research. The current structure of health services in the state has evolved over the years. It has been moulded by the differing emphasis on preventive and curative aspects of healthcare at different points of time. The focus on curative care and immunisation over the last two decades has eroded the public health (preventive) element in the approach towards health services in India. The State Cadre and Recruitment Rules adopted since 1994 also did not accord any preference for public health professionals in the health department, resulting in dependence on clinical professions to design and deliver public health services in the state. The limited focus on important aspects of preventive healthcare including epidemiology, demography, disease surveillance, health research, environmental sanitation and health programme management has adversely impacted the delivery of such public health services.

One of the main recommendation of the Task Force on Health and Family Welfare, Government of Karnataka (2001) was the creation of two separate cadres for Public Health (Preventive) and Medical (Curative) under the Department of Health and Family Welfare. In addition, the Indian Public Health Association (IPHA) has also proposed the creation of a separate Public Health cadre during its 52nd All India Public Health Association Conference, 2008. It is critical to have a cadre of Public Health Managers, with adequate knowledge and education and practice in public health to take over the charge of management, supplies and services, equipment and drugs, staff management etc., thus leaving the clinically qualified doctors to discharge their clinical duties more effectively.

Policy and Legislation, Schemes and Administrative Action

The existing Department of Health and Family Welfare services, needs to be re-designated as the Department of Public Health and Medical Services (DPMS). This department can have two wings, one related to Public Health (Directorate of Public Health Services) and the other related to Medical (Directorate of Medical Services). The 2001 Task Force report outlines the following main elements of the modified structure:

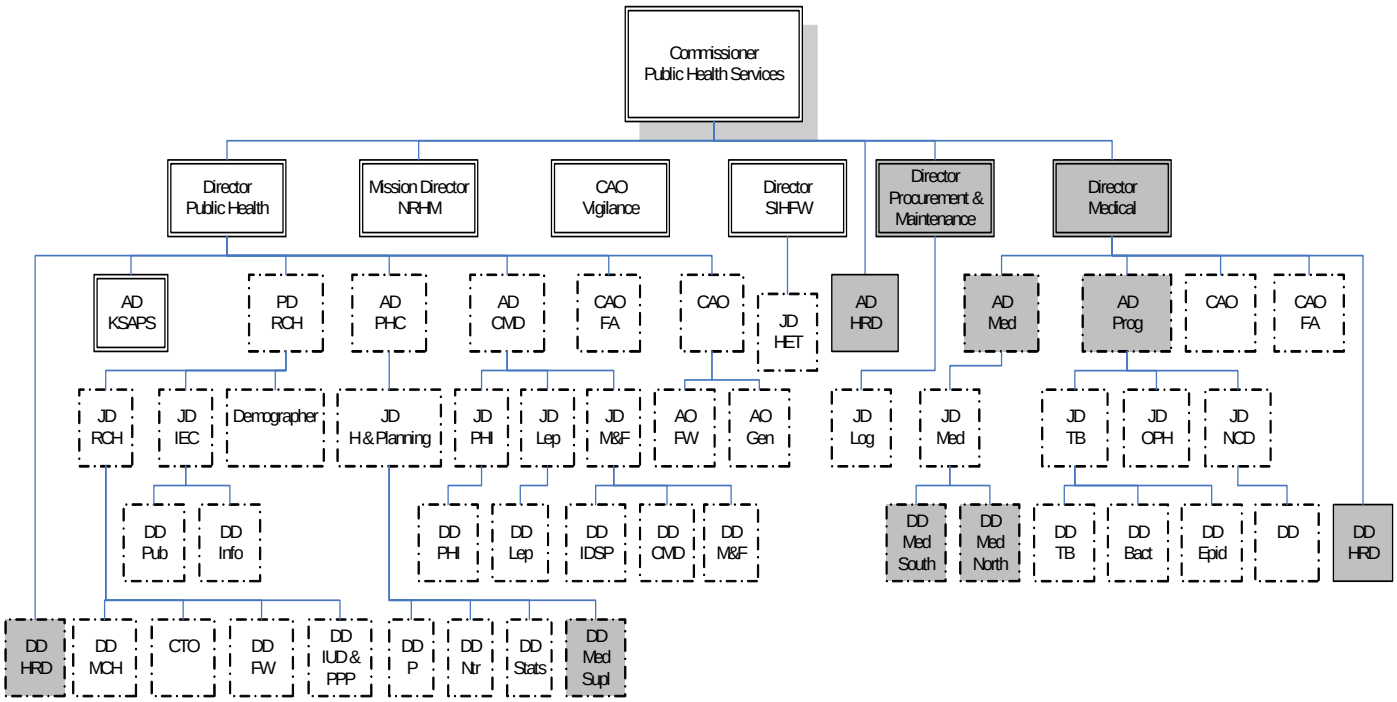
- PHC doctor will be the common direct recruitment point with the basic minimum qualification being MBBS, though candidates with Post Graduate qualifications are also eligible
- All newly recruited doctors would serve a minimum period of 6 years in a PHC
- After completing this minimum period of service at the PHC:
    - Those with Medical (Clinical) PG qualification would be assigned to the Medical Cadre
    - Those with Public Health qualification would be assigned to the Public Health Cadre

- Those without a PG qualification may opt for either cadre, subject to acquiring the PG qualification necessary for that cadre within a stipulated period. The state will meet the costs for acquiring this PG qualification, only for the first attempt and for one subject.
- Those without a PG qualification and who also do not want to acquire one will continue to work as PHC doctors.

- Vacancies for MO (PHC) would be filled by temporary appointments, until such time a direct recruitment is made.
- Vacancies above the level of MO (PHC), left vacant due to unavailability of suitably qualified candidates, may be filled by temporary appointments on contractual basis till such time as suitable internal candidates become available.
- The choice of PG courses would be guided by the needs of the department and not based on personal preferences of the officer. Promotions would therefore be within the cadre and no interchange across the cadres would be permitted
- The Public Health and Medical wings would consist of divisions based on current needs with each wing being headed by a Director
- The overall management of the department could be carried out by the Commissioner or Director General of Public Health and Medical Services.

Proposed Organisational Structure

Broadly in line with the recommended structure in the 2001 Task Force report, the following is the proposed structure for the Department of Public Health and Medical Services. The shaded boxes present the new positions proposed. As is evident, most of the restructuring is possible by rearranging the existing posts under appropriate divisions.



Commissioner of Health Services/ Director General of Public Health and Medical Services: will function as existing and will head the Department and will report to the Secretary / Principal Secretary (Health). The key activities to be performed by the person holding this post could be:

- Implementation of all the government health programmes
- Monitoring and supervision of all national and state health and family welfare programmes in the state

- Ensuring coordination among the various directorates and divisions within the health system as well as related departments

Under the proposed structure, the Commissioner will have the following functional heads reporting to him/ her:

Director (Medical)	New
Director (Public Health)	Re-designation existing post of Director(H&FWS)
Director (Procurement and Maintenance/ Logistics)	Upgrading existing post of AD(GMS)
Director (SIHFW)	Existing
Mission Director NRHM	Existing
Chief Vigilance Officer	Existing

Directorate of Medical Services

- **Director (Medical):** is a new post and will be the operational head of the clinical and curative services of the Directorate of Medical Services. The Director (Medical) will be supported by two Additional Directors – A.D. (Medical) and A.D. (Programmes).
- **A.D. (Medical):** is an existing post and will look after hospital and hospital management aspects of the Directorate. The AD will be responsible to develop an efficient referral mechanism to ensure speedy treatment at various levels of hospital care. A.D. (Medical) will be assisted by a J.D. (Medical), who will have two D.D.s under him/ her – D.D. Medical (South) and D.D. Medical (North).
- **A.D. (Programmes)**: is a new post and has been created to bring about greater emphasis and coordination among the various health programmes. This post will be assisted by three existing Joint Directors – TB, OPH and NCD. These J.D.s will primarily be responsible for the curative and research aspects in their respective areas.

Directorate of Public Health Services

- **Director (Public Health):** is a re-designation of the post of Director (Health and Family Welfare) and will be overall in-charge of the Public Health development in the state and will utilise his/her resources for effective implementation of the various National and State level public health programmes. The post will be assisted by the following four ADs – KSAPS, RCH, PHC and IDSP.
- **A.D. (Karnataka State Aids Prevention Society):** is an existing post and reports directly to PD (KSAPS)
- **A.D. (RCH):** is an existing post and will continue to perform the key current functions. The post will be assisted by JD (RCH), JD (IEC), Demographer and System Analyst.
- **A.D. (PHC):** is the overall head of the PHCs in the state and looks after the operational issues related to them. The post is assisted by a JD (Health and Planning). In addition to the three existing D.D.s – Planning, Nutrition and Statistics – it is proposed to add a D.D. (Medical Supplies) to assist the J.D.
- **A.D. (CMD)** is an existing post as PD (IDSP) and has been re-designated as AD (CMD) who will supervise the activities of various national and state programmes relating to vector borne diseases (M&F), Leprosy as well as Vaccine Institute and the Laboratory. Each of the above functions is to be managed by respective Joint Directors.

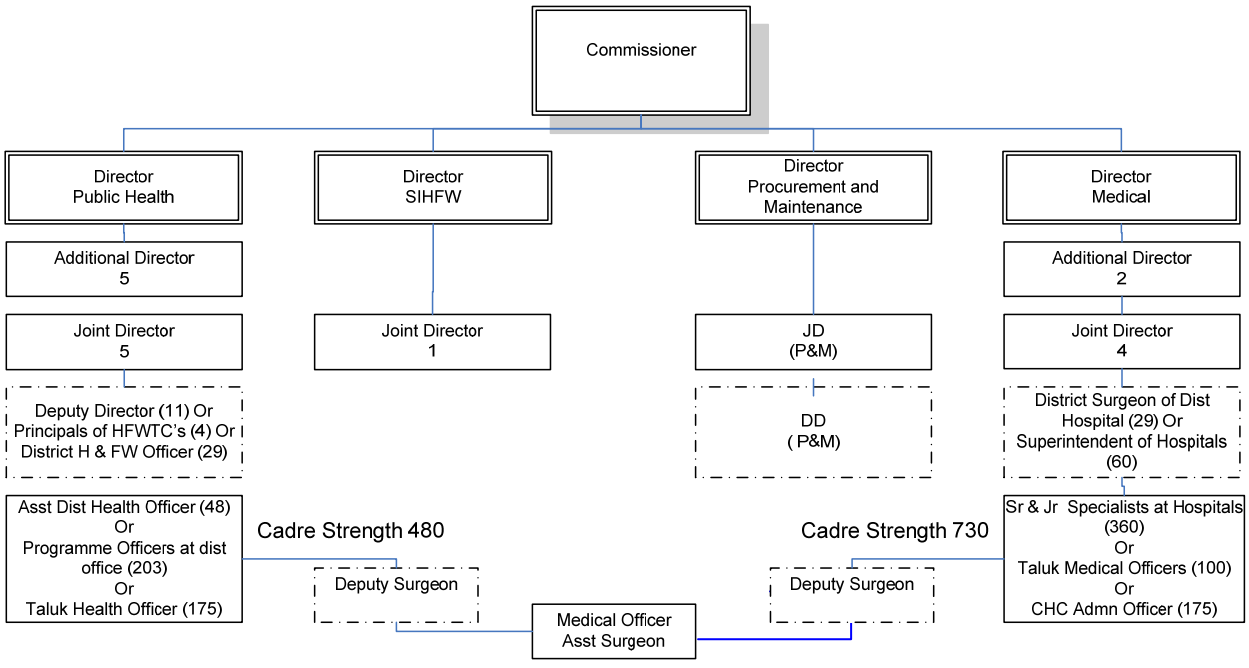
Director (Procurement and Maintenance): in line with the recommendations of the Task Force, this post is being proposed in the new structure. This post may be created by upgrading the existing post of AD (GMS). In the existing structure, the procurement and maintenance of various equipment

and civil works is distributed across the various departments. It is proposed to centralise these activities by creating a separate cell reporting to the Commissioner. This post will be assisted by the existing post of J.D. (Logistics)

Director – State Institute of Health and Family Welfare (SIHFW): is an existing post and heads the training function of the department and SIHFW, which will be autonomous and will continue to report functionally to the Secretary / Principal Secretary of Health.

A.D. (HRD): Under the new structure, it is proposed to introduce an A.D.(HRD) and two D.D. (HRD) to take care of the human resource issues that include recruitments, promotion, appraisals, training, performance management, incentives/ rewards system, transfer policy and human resource planning functions for the department. AD (HRD) will head the proposed HR unit [6]. This unit will be responsible for initiating HR reforms for the identified critical areas in consultation with top leadership of DoHFW to set directions and policies for the HR initiatives, to monitor and supervise the implementation of HR initiatives, to work out strategy for gaining employee participation and initiate effective communication strategy for the reforms and to support recruitment of personnel at high and strategic level for supporting the reforms agenda in the department

The following diagram presents the overall progression of personnel in the proposed Department of Public Health and Medical Services. It also represents the cadre strength for both the divisions – 480 personnel in Public Health and 730 personnel in Medical.



Institutional Strengthening and Capacity Building Measures

- Select appropriate number of personnel to acquire PG qualification in public health
- Introduce a foundation course for public health and medical streams at the time of induction.
- Continue with the special training programmes related to special diseases like TB, Leprosy, Aids, Malaria, Control of blindness as is existing

[6] Details on the HR unit are covered under initiative C- Human Resource Management for DoHFW

Programme Implementation

Short Term (1 year)

- **Amendment to C&R rules:** the restructuring of the health services would call for the amendment of the Cadre and Recruitment rules and for the consideration of the transitory arrangements. As per the Task Force Recommendations, a Committee with the Commissioner as Chairman needs to be set up for this purpose, with a mandate to complete the process in a specific time so that the new structure is in position in about 6 months.
- **Preparation of job chart:** Though an externally aided project has taken efforts in identifying job charts for all the senior positions of the department, it has not yet been vetted by the government. Further, in view of creation of certain new posts/ designations in the proposed restructuring, a proper job description assumes significance for improving efficiency and accountability.
- Establishing an appropriate **transitory mechanism** for "exercise of options" by the present staff would be one of the major issues to be dealt with during the restructuring process. The 2001 Task Force report suggests the following alternatives:
  - Present personnel at the appropriate levels could be given the choice to opt for induction into a particular district cadre, with no option to return to the department cadre later. Post would, in this case, be reassigned to the districts with personnel. Those who do not do so would continue on the departmental cadres as at present and the current system of postings will continue for them.
  - As and when there are vacancies in posts up to the district level, these could be transferred to the ZP, with the financial allocation, as a first step in constituting the new cadre over time.
  - The recruitment of doctors should be made transparent by instituting a separate recruitment cell at the state level. All new vacancies will be assigned to the district cadre concerned and recruitment could be made as suggested earlier. Over time, the present departmental cadres at the district level would be phased out.

Medium Term (3-5 years)

- Existing practice of recruiting doctors and para-medical staff through a district level committee headed by the deputy commissioner needs to be continued as existing.
- Identify and nominate appropriate number of personnel within the existing organisation for degrees in Public Health (MD - Preventive and Social Medicine) / Diploma in Public Health and depute them to any reputed institute in the state/ country (like All India Institute of Hygiene and Public Health (AIIH&PH), Kolkata)

Long Term (8-10 years)

- Institutionalise recruitments into the two divisions based on merit and seniority.
- A system of promoting district level cadres to the state level based on merit and experience should be instituted
- The existing SIH&FW can be upgraded into an apex institute comprising of various departments such as epidemiology, demography and statistics, maternal and child health, communicable diseases, environmental sanitation and health promotion wings with appropriate hierarchy of teaching faculty.
- Establish institutes in the state that will offer world class education and training in public health. Karnataka should collaborate with these institutes as partner in training and research, and for strategic alliances with existing institutions

Programme Monitoring

- A high level steering committee under the chairmanship of the State Health Minister needs to be constituted to review the implementation of the recommendations at periodical intervals till the system is well established and functioning.

Key Performance Indicators

- Amendment to C&R rules for categories of staff as per the Task Force report recommendations

- Number of posts for which job chart have been finalised as against the requirements
- Number of new recruitments done at district level as against the requirements – under different categories
- Number of posts for which district cadres have been finalised as against the requirements
- Number of personnel that have acquired Public Health qualification as against the requirements

Indicative Budget

Particulars	Amount (Rs.)
Sanction of new posts	18,62,850
Expenses related to sponsoring PGD courses in Public Health for 5 Medical Officers per year	25,78,000
Total Amount	44,40,850

Intervention C: Human Resource Management for the Department of Health and Family Welfare

Implementing Agency: Department of Health and Family Welfare

Objective

The immediate objectives for the Human Resources (HR) Unit for next 2-3 years will be:

- To initiate HR reforms for identified critical areas
- To set directions and policies for the HR initiatives
- To monitor and supervise the implementation of HR initiatives
- To work out strategy for gaining employee participation and initiate effective communication strategy for the reforms
- To support recruitment of personnel at senior and strategic levels for supporting the reforms agenda in the department

Once the HR initiatives get going, the unit can enhance its role to cover other areas as well under the umbrella of HR. Further, it could try to induce an employee friendly culture in the organisation to make HR practices more effective and efficient. Some of the major long-term objectives (4-7 years) of HR unit are:

- To induce employee friendly initiatives and imbibing professional culture in DoHFW
- To continuously monitor the ongoing initiatives and rolling out new initiatives
- Evolving HR functions to a professional level through benchmarking and implementing best practices
- Working closely with subject matter experts and consultants for further improving HR functions and building capacity of internal HR employees for taking up advanced HR roles

Need/ Justification

According to the Administrative Reforms Commission Report of 2001, the Karnataka Department of Health and Family Welfare had a total of 63,973 sanctioned positions across all cadres from A to D.[7] In spite of advances in communication systems and technology, healthcare remains a predominantly labour intensive field in India. The existence of adequate and competent manpower is a prerequisite for the efficient functioning of the state healthcare infrastructure.

The existing organisational structure of the DoHFW is mostly hierarchical, with limited horizontal communication and reporting built in. This does not facilitate team approach, especially at district levels. Communication is largely limited, and lacks intra and inter-department co-ordination. Internal organisation of the sub-departments and the DoHFW as a whole is such that key functions like Planning, Monitoring, Quality Assurance, Legal and Human Resource Management are missing or exist in a token or archaic form. Despite the department being highly human intensive, there is no central database on human resources. There is a lack of effective and clearly written down Human Resource Management (HRM) policy, that often contributes to poor productivity, particularly in remote and rural areas.

The lack of incentives, supervisory support, proper work culture and the absence of effective performance monitoring contribute to high staff absenteeism. Workforce management is unplanned, with health workers having to do ten years or more in difficult postings owing to the lack of a transparent and fair transfer policy. Wide span of control, especially at top levels, key staff holding multiple charges, multiple reporting lines, poor work culture, high levels of vacant posts, redundancy in some sanctioned posts, lack of logical and meaningful performance indicators, lack of role clarity,

[7] Group A consists of all state directors, medical officers, surgeons, specialists, etc. Group B – Technical Officers, Inspectors, Asst Directors, Social Scientists etc. Group C- Pharmacist, Nurses, Health Assistants, Health Visitors, Laboratory Technicians etc. Group D- mechanic, plumber, junior lab assistants, etc

and lack of institutionalized mechanisms for capacity development are some of the other critical human resource issues that affect the department.

Scheme Outline

Under this initiative, the department will initiate a process of Organisational Development and HR innovations in DoHFW and strengthen human resource management capacity within the department by helping set up an HR Unit. This unit will be placed under the AD (HRD) recommended in the restructured Departmental structure[8]. The HR Unit would set directions for critical HR interventions through setting guidelines and making appropriate policy level changes to make the change efforts successful in the desired areas. Gradually, it would shift its focus on playing more strategic role of spearheading HR initiatives and making HR activities as part of routine and regular activities for the DoHFW. During the initial phase of the formation (2-3 years), the HR unit will be primarily playing the role of policy making and driving HR initiatives. However, with the passage of time, it would take up a wider role of infusing professional culture and taking the HR practices to the professional level that can be compared with better managed professional enterprises.

This initiative will address the urgent need of a robust HR strategy and framework that:

- can contribute to the development of the employees and the department,
- facilitates workforce planning for DoHFW enabling timely interventions in addressing gaps and effective utilisation of the workforce,
- develop a performance management framework that can set, capture and evaluate the performance of both institutes and individuals and reward them appropriately,
- develop a comprehensive training framework to assess training needs systematically and impart training effectively to employees at all levels of the department

Scheme Details

Under the proposed scheme, the following activities need to be initiated:

- Establish a fully functioning Human Resource Unit. This will include detailed plans on the HR unit structure, core objectives, linkage with government, staffing requirements, job descriptions, skill requirements and also making the unit functional to take on all the envisaged responsibilities.The proposed HR Unit will have four key positions, viz.,
    - Leader/Head HR Unit (HR and OD strategy expert) – this position will be responsible for leading all the HR and OD initiatives for the DoHFW and will provide direction to the HR unit and people working under HR unit.
    - Workforce Planning expert – this position will work under supervision of Head – HR Unit. He/she will be responsible for workforce planning initiatives for the department.
    - Performance Management expert – this position will work under supervision of Head – HR unit. He/she will be responsible for performance management related initiatives for the department.
    - Training and Capacity Building expert – this position will work under supervision of Head – HR unit. He/she will be responsible for training and capacity building initiatives for the department's employees.
- Develop a pragmatic human resource policy for DoHFW that will include rationalised district level staff, transfer & posting policy, training, promotion and incentive systems - which are equitable, avoid corruption and reward performers. Human resource policy will have special emphasis on transfer and placement policy for the underserved and tribal areas and special incentives

[8] The proposed organizational structure for the DoHFW is provided in detail under Intervention B.

systems for underserved areas. Tenure security of officers in critical positions could be an important element for such a policy.

- Develop an Action Plan for reorientation and restructuring departmental units to simplify and consolidate its structure and sub-departments at the state and district levels so that synergies can be obtained and compartmentalisation and fragmentation can be reduced.
- Carry out sub-department wise staffing review and rationalisation exercise, which will lead to optimum allocation and also lead to abolition of redundant vacant posts and creation of new posts as required.
- Introduce Performance Management including sub-department wise review of roles and responsibilities and drawing up of clear job charts, review the performance indicators and introduction of meaningful and logical indicators, preparation of 'Operational Manuals', particularly at district and sub-district level (which will make working systems smoother) and setting up of a comprehensive and centralised database of staff details linked to the Department's HMIS.
- Assist sub departments to prepare comprehensive annual training plans which will address the requirements of different categories of staff.

Institutional Strengthening and Capacity Building Measures

- Orientation training to HR unit staff
- Defining process of capturing KPIs and training personnel involved in it. At the initiation of the scheme, the department may strive to train at least 1/3rd of its employees during the first year. The coverage may be scaled up to 2/3rd in the next year and cover all employees from the third year onwards. At the end of three years, all employees of the department will necessary undergo at least 5 days of training every year.
- Capacity building within the department personnel to conduct training needs assessment

Timeline

Activity	Responsible Agency	Time Period
Establish HR unit within the department; recruitment of required staff	DoHFW	End of Month 3
Develop Employee Information System – compilation of detailed workforce data for all sub-departments	HR unit	End of Month 6
Recommendations on grouping / abolition of positions and outsourcing of functions	HR Unit	End of Month 9
Identification of KPIs for service delivery units/critical functionaries	HR Unit	End of Month 10
Roll out of Performance Management System	HR unit	End of Month 11

Monitoring and Implementation

- Identification of cadres/positions for grouping / abolition / outsourcing
- Implementation of Performance Management System (PMS)
- Rolling out process of Training Needs Assessment, preparing Training Plan, preparing Training Budget and implementation of Training
- Monitoring the effectiveness of the PMS and making amendments from time to time
- Training effectiveness assessment

Key Performance Indicators

- Constitution of the HR Unit and recruitment of key personnel

- Developing the Employee Information System
- Compilation of detailed Workforce data for all sub-departments
- Recommendations on grouping / abolition of positions and outsourcing of functions
- Developing the Performance Policy and Framework
- Establishing KPIs for Service Delivery Units and key functionaries
- Establishment of Performance Management System
- Piloting PMS and KPIs
- Developing the Training Policy and Framework
- Training Implementation

Indicative Budget

Budget of Heads	**Amount (Rs.)**
Recurring annual costs	
Salary for HR unit personnel	24,00,000
Training budget (assuming training expense of Rs.5000 per personnel for 1/3rd of employees per annum)	10,55,55,450
One time costs	
Developing MIS/ HMIS	1,00,00,000
System Improvements	1,00,00,000
Total Amount (Rs.)	12,79,55,450

Intervention D: Provision of a comprehensive health insurance scheme

Implementing Agency: Department of Health and Family Welfare; Department of Labour and Employment

Objective

- The scheme aims to enhance the access to quality healthcare of BPL families by providing cashless treatment of diseases involving hospitalization, surgery and treatment through a network of government and private healthcare providers.
- This comprehensive health insurance scheme aims to reduce the out-of-pocket expenditure on health from the current 80% to 60% by 2020.

In the pilot phase, the scheme will cover an estimated 25.95 lakh[9], households holding ration cards (see table below) in the 'C' category districts of Gulbarga, Bidar, Raichur, Koppal, Bijapur and Bagalkot. (these districts have been categorised as such based on RCH parameters by Ministry of Health and Family Welfare, Govt. of India). Over a period of 3 years, this scheme will be expanded to all the districts of the state.

Classification of Ration Card Holders (31.3.2008)

Districts	BPL	Anthyodaya	APL	Annaporna	Total
Bagalkot	1,85,247	47,660	1,76,902	0	4,09,809
Bidar	1,67,445	45,175	1,89,681	0	4,02,301
Bijapur	1,62,772	56,556	1,56,538	0	3,75,866
Gulbarga	3,95,280	1,04,506	2,93,447	1673	7,94,906
Raichur	1,39,516	60,279	1,53,096	0	3,52,891
Koppal	1,37,727	42,062	80,099	0	2,59,888
Total of six districts	11,87,987	3,56,238	10,49,763	1,673	25,95,661
As a % on State Total (%)	20%	30%	20%	12%	21%
State Total	59,99,145	11,99,527	52,28,572	13,409	124,40,653

Source: Karnataka at a Glance, Directorate of Economics and Statistics, GoK

Need / Justification

Providing health security to the poor forms an integral part of any poverty reduction strategy. The WHO has estimated that more than 80% of total health expenditure on health in India is private, flowing directly from households to the private-for-profit health care sector. It has been shown that, on an average, the poorest 20% of Indians are 2.6 times more likely than the richest to forgo treatment when ill, primarily due to the high costs associated with availing healthcare. It has also been estimated that at least 24% of all Indians hospitalized fall below the poverty line, both due to costs associated with and the income forgone due to hospitalization. One of the key strategies specified in Karnataka Vision 2020 is that the state will work towards pooling of all insurance scheme funds to enhance coverage and reach with an aim to reduce out-of-pocket health expenditure in the state, especially for the poor. Given this context, the provision of health security to the poor through an integrated state-sponsored health insurance scheme is a critical initiative. Even the National

[9] Source: Director of Food and Civil Supplies

Health Policy 2002 has talked about a health insurance scheme funded by the government with service delivery through the private sector, as an option that states may explore.

Health insurance is a growing sector and there are several models and delivery mechanisms to choose from. Effective and viable risk pooling can provide the necessary health security to the poor for critical high-end care and to reduce out-of-pocket expenditure. Currently there are a number of health insurance schemes available to specific target groups within the state and with varying cost models and coverage. A brief of some key schemes are given below.

The **Yeshaswini** scheme targeted towards members of cooperative societies has successfully operated since its introduction and is run by a trust and is based on the actual cost model. It offers coverage of Rs.2 lakh per person covering about 1,600 surgical procedures, wherein the beneficiary contributes Rs.600/- and government contributes Rs.650/- a total of Rs. 1,250/- per annum.

The **Rashtriya Swasthaya Bima Yojna** is designed to provide insurance cover to BPL households from major health shocks involving hospitalization. About 75% of the financing is provided by GoI, while the remainder is borne by the state government. The BPL families are entitled to more than 700 in-patient medical procedures with a cost of up to Rs. 30,000/- per annum for a nominal registration fee of Rs. 30/-. Coverage extends to the head of household, spouse and up to three dependents.

The **Suvarna Arogya Chaitanya** is a comprehensive health check-up campaign for all children in Government, aided and unaided schools studying in classes 1 to 10 standards. A total of about 65-70 lakh children have undergone the check-up. In case of severe complications, they are referred for treatment in appropriate hospitals. School health cards have been provided under the Sarva Shiksha Abhiyan. The transportation charges for referrals are being provided under the Akshara Dasoha scheme.

The **Suvarna Arogya Suraksha** has been proposed by the DoHFW, Govt. of Karnataka. The scheme is intended to benefit BPL families both in urban and rural areas in Karnataka, in a phased manner. The Scheme proposes to cover 5 members of a family as enumerated and photographed on the BPL card. Government of Karnataka or a Trust created for this purpose will pay the premium on behalf of the BPL beneficiaries for the insurance. The benefit package covers tertiary care for catastrophic diseases. Sum assured is Rs.1,50,000 on a family floater basis per year with an additional buffer of Rs.50,000/- per year for the entire family on a case to case basis.

A comparative analysis of the current health insurance schemes existing in the state is provided in Annexure C for reference.

Scheme Outline

Through this initiative, the state should provide integrated and comprehensive healthcare coverage to its citizens. Enrolment into the proposed scheme should also result in automatic enrolment to the centrally sponsored Rashtriya Swasthya Bima Yojana (RSBY) that offers secondary healthcare coverage to the extent of Rs. 30,000 per annum per BPL family. In addition, under this proposed initiative, each smart card holder will be entitled to a coverage of Rs. 2 lakh on a family floater basis for tertiary care. For effective and professional management of the scheme, a Public Private Partnership (PPP) is envisaged between the State Government, Insurance Companies, Third Party Administrators (TPA) and Government/ private sector Hospitals. The following five primary stakeholders are important for this scheme:

1. **State Government:** A state level nodal agency within the Department of Health and Family Welfare (DoHFW) will have to be set up for the scheme implementation. This agency can have representation from various relevant departments within GoK as well as from other appropriate

non-governmental and civil society organizations. The state will bear the entire premium for BPL card holders, with the beneficiaries paying a token amount towards enrolment to the scheme.

2. **Nodal Agency:** A nodal agency will be set up with representation from concerned departments, NGOs, members of civil society and technical experts. This agency will be responsible for inter-departmental coordination, the administration of the scheme covering programme design, implementation and monitoring.
3. **Insurance Company:** An insurance company will be selected through competitive bidding for each district. The government can enter into an agreement with the selected insurance company for a period of one year. The insurer must agree to cover the RSBY benefit package prescribed by GoI as well as the tertiary care procedures under the propose initiative through a cashless facility. The insurance company will appoint a Third Party Administrator (TPA). The TPA will be required to have an office in each of the districts covered under the scheme. The agreement period with the TPA will also be for a period of one year. A smart card will be issued by the insurance company that will store biometric information, photographs, hospitalization and other medical episodes relevant for the scheme etc.
4. **Network Hospital:** The network of healthcare providers will include:
   a) Hospitals run by the government fulfilling relevant requirements for the scheme given below, or
   b) In case of private hospital, it should comply with minimum criteria in terms of medical infrastructure (as per Rajiv Arogyasri scheme) including:
      i) It should have at least 50 inpatient beds
      ii) Fully equipped and engaged in providing Medical and Surgical facilities along with Diagnostic facilities i.e. Pathological test and X-ray, ECG etc.
      iii) Fully equipped operation theatre of its own wherever surgical operations are carried out
      iv) Fully qualified nursing staff under its employment round the clock
      v) Fully qualified doctors that are physically in-charge round the clock
      vi) Administrative capacity to maintain day to day records and to provide necessary records of the insured patient to the insurer as and when required
      vii) Using ICD and OPQS[10] codes for Drugs, Diagnosis, Surgical procedures etc
      viii) Having sufficient experience in the specific identified field of healthcare

   In addition, the hospital should be able to provide the following services to BPL beneficiaries:
      a) Free OPD consultation
      b) Discounts on diagnostic tests and medical treatment required for beneficiaries
      c) Minimum of 10-12 free health camps per annum in villages for the screening of BPL patients at identified villages.
5. **Beneficiaries:** The scheme is intended to benefit all ration card holders in the state; with the pilot phase covering families in the six (6) 'C' category districts. For the purpose of this scheme, all members of a family will be considered that have been enumerated and photographed on the ration card. Any additions to the family during the currency of the policy shall not be eligible for coverage and such additions need to be included at the time of renewal of the policy provided that the names have been duly incorporated in the ration card. During the second phase of the scheme, families across the state will be eligible for the insurance cover.

Proposed Scheme Details

Geographical coverage: As per the RSBY guidelines, the state can take up 20% of the districts each year for the next five years starting with the six C category districts in 2010-11. By 2015-16, the scheme will cover all households across the state. The selection of the districts for each phase will be decided by the DoHFW given the performance on major health indicators in respective districts.

[10] International Classification of Diseases (ICD) and Operational Policy and Quality Standards (OPQS)

Enrolment: The ration card will be used for enrolment/ identification for availing this health insurance scheme. The target beneficiaries will have to register themselves in the scheme at the nearest PHC/ government hospital. Alternately, BPL families may enrol themselves into the comprehensive health insurance scheme at the mobile stations set up locally for enrolment into RSBY. Each station/ PHC/ Government hospital will be equipped with the hardware required to collect biometric information and to print smart cards with photographs. The smart card along with an information pamphlet describing the scheme and the list of hospitals should be provided on the spot once the beneficiary has paid a fee of Rs. 30. The state should pay this charge for families having the Anthyodaya card. Families above the poverty line and who wish to enrol into the scheme should pay the entire insurance premium and the charges for the smart card.

BPL families that hold RSBY smart cards may use the same to enrol to the proposed comprehensive health insurance scheme.

Sum insured on floater basis: The scheme will cover expenses related to hospitalization and surgical procedures of the beneficiaries up to a maximum of Rs. 2 lakh per family per year. The benefits per family will be on a floater basis, the total reimbursement of Rs. 2 lakh may be availed individually or collectively by members of a family. In addition, the enrolment to the scheme will also enable beneficiaries to avail the insurance cover provided by the RSBY that entitles BPL families to more than 700 in-patient medical procedures with a coverage of up to Rs. 30,000 per annum.
Payment of premium: Beneficiaries will be segregated into two categories for the purpose of premium payment.

- Anthyodaya card holders: The government/ nodal agency shall pay 100% of the insurance premium on behalf of the all Anthyodaya card holders to the insurance company directly.
- BPL card holders: will be required to make a nominal registration fee of Rs.30 that will entitle them to the cover offered under RSBY. The state will fully subsidise the premium payment towards tertiary care offered under the proposed initiative.
  APL card holders: 100% of the premium amount will be contributed by APL beneficiaries. APL families will have the option to either enrol for only tertiary healthcare insurance under the proposed initiative or both secondary (as under RSBY) and tertiary care. The premium amount will be adjusted to reflect their choice.

Disease/ procedures covered: based on the coverage offered by the Suvarna Arogya Suraksha Yojana, the following is an indicative list of diseases/ procedures that may be covered under the scheme - Cardiovascular diseases, Cancer treatment including Surgery, Chemotherapy and radiotherapy; Neurological diseases; Renal diseases, Burns; Neonatal; and Poly trauma cases (not covered by Motor vehicle). As indicated above, the beneficiaries will also be entitled to insurance cover provided under RSBY that covers over 700 in-patient medical procedures relating to secondary care. In addition, all beneficiaries above 50 years will be entitled for one annual free medical check-up at any of the network hospitals. The finalisation of the coverage would have to be done by the selected insurance company in consultation with the DoHFW and Department of Labour, GoK.

Implementation Procedure: The insurance company through their TPA shall establish help desks at the district and taluk levels. These will be the contact point for beneficiaries who want to avail healthcare treatment under the scheme. The TPA help desk coordinator on recommendations of a PHC/government hospital doctor, will refer the patient to one of the network hospitals. The network hospitals will have in place Insurance Counters that will aid the patients through the procedural paper work and medical treatment to make the whole process cashless. Each of the empanelled hospitals will be equipped with smart card readers and trained staff.

The scheme will be implemented as a cashless hospitalization, arranged by the insurance company through a TPA. The hospital will raise the bill on the TPA, which shall process and settle the claim in consultation with the insurance company. The insurance company shall keep adequate floating

funds available at the disposal of the TPA to meet claim expenses. A tripartite agreement shall be entered into between the state government, insurance company and the TPA initially for one year in each district.

The insurance company shall be selected through a process of competitive bidding. Each bidder will submit a technical and financial proposal that will be evaluated by a panel of officials/experts identified by the state government. The financial bid will essentially detail the annual premium per enrolled family. The insurer will be compensated on the basis of the number of smart cards issued, i.e., households covered. Each contract will be specified on the basis of an individual district in a state and the insurer must set up an office in each district where it operates. While more than one insurer can operate in the state, only one insurer can operate in a single district at any given point in time. The insurance company shall appoint a TPA to manage the administrative activities, including settlement of claims.

As has been the experience in the Rajiv Aarogyasri scheme in Andhra Pradesh, health camps will be the primary means to mobilise beneficiaries for this scheme. All the network hospitals will be required to organise at least 10-12 health camps as per a schedule agreed with the nodal agency. In addition, the state will mobilise the Arogyamitras, proposed under the Suvarna Arogya Surakhsha Yojana to create awareness among the community.

Timeline

Activity	Responsible Agency	Time Period
Constitution of State level Nodal Agency	DoHFW, GoK	End of Month 1
Drafting RFPs; Call for Tenders for Insurance Companies and TPAs	DoHFW and Nodal Agency	End of Month 2
Completion of Selection process of Insurance Company and TPA through the process of competitive bidding in each district	Nodal Agency	End of Month 4
Tripartite agreement between Nodal agency, TPA and Insurance Company	Nodal Agency	End of Month 5
Enrolment/ Finalisation of Network Hospitals (The insurance company and TPA will negotiate rates of various surgical procedures covered under the scheme in consultation with the nodal agency.)	Nodal agency, Insurance Company and TPA	End of Month 7
Setting-up of Insurance Counters in Network Hospitals with appropriately trained manpower and equipment	Insurance Company and TPA	End of Month 8
Operationalization of the Scheme	DoHFW and Nodal Agency	End of Month 9

Institutional Strengthening and Capacity Building Measures

- The state shall set up a state level nodal agency dedicated for scheme implementation. The Nodal Agency will be constituted with representatives from the concerned government departments, NGOs with experience of implementing and design of social insurance programmes and other sector experts.
- The state shall train ASHA workers, ANMs and functionaries at PHCs, CHCs and District Hospitals to refer beneficiary to the district/taluk level help desk of the TPA.
- The network hospitals will appoint/ train help desk coordinators for Insurance Counters at hospitals. Each hospital will be equipped with smart card readers

Programme Monitoring

It is envisaged that the entire process workflow including pre-authorisations, claim processing and payments will be completely automated through an appropriate ICT solution with a web-based online portal. As has been envisaged in the RSBY beneficiaries will be given smart cards with biometric access control, which will allow the hospital computers to download and refer to the patient's medical history and other relevant details. The transaction process begins when the member visits a network hospital and his/her card is swiped. If a diagnosis leads to a procedure, the appropriate prescribed package will be selected in the software menu. Upon release, the card will be swiped again and the pre-specified cost of the procedure will be deducted from the available balance on the card. Each beneficiary will be provided a printed receipt.

The scheme should explore the possibility of adopting the Diagnosis Related Group (DRG) system as a fraud control mechanism to check the cases/ surgeries conducted at network hospitals. DRG is a classification of patients by diagnosis or surgical procedure (sometimes including age) into major diagnostic categories (each containing specific diseases, disorders, or procedures) for the purpose of determining payment of hospitalization charges, based on the premise that treatments of similar medical diagnoses generate similar costs. Under the system in use in USA, a dollar value is assigned to each group as the basis of payment for all cases in that group, without regard to the actual cost of care or duration of hospitalization of any individual case, as a mechanism to motivate health-care providers to economise.

The TPA will set up a 24 hour helpline wherein beneficiaries can call in with their queries regarding aspects of the scheme. They will also register any grievances that the callers may have regarding the scheme and forward these to the concerned entity. For each of the grievance received, the call centre will assign a complaint number and will revert back to the complainant within 5 days with follow-up.

In addition, regular review meetings on the performance/administration of the scheme would be held between GoK / DoHFW / Nodal Agency and the Insurance Company / TPA / Network Hospitals at the district and state levels.

Key Performance Indicators

- Timeframe for processing of claims
- Number of medical camps held at the pilot districts
- Number of persons approaching the help desks regarding the scheme
- Frequency of review meetings held at the district level
- Frequency of review meetings held at the state level
- Number of grievances received regarding the scheme
- Number of grievances redressed within the timeframe

Indicative Budget (in Rs. Lakh)

Phase I: Budget estimates for the pilot in the 6 districts*	
Premium at Rs.400 per BPL household in pilot districts (assuming enrolment rate of 60% among BPL and 100%for Anthyodaya HHs)	4276
One time payment for Smart Cards for Anthyodaya HHs in the pilot districts	106.90
Training expenses for about 423 personnel at government hospitals, PHCs and CHCs in pilot districts (@ Rs.1000/ person)	4.23
Administration Costs (including issuance of identity cards - @ 5% of premium)	213.80
Total amount	4596.80

Phase II: Budget estimates for implementation in Phase I and balance 50% of districts*	
Premium at Rs.400 per BPL family enrolled in Phase I (assuming enrolment rate of 65% among BPL and 100% among Anthyodaya HHs)	451.37
Premium at Rs.400 per family for BPL HHs in districts covered in phase II	2874.18
One time payment for Smart Cards for Anthyodaya HHs in new districts covered	51.92
Training expenses for about 423 personnel at government hospitals, PHCs and CHCs in pilot districts (@ Rs.1000/ person)	4.23
Administration Costs (including issuance of identity cards and assumes 5% of premium expense)	369.40
Total amount	7809.22

Phase III: Budget estimates for state-wide implementation	
Premium at Rs.400 per BPL family enrolled in Phase I (assuming enrolment rate of 70% among BPL and 100% among Anthyodaya HHs)	7793.34
Premium at Rs.400 per family for BPL HHs in districts covered in phase II	3042.00
One time payment for Smart Cards for Anthyodaya HHs in new districts covered	51.92
Training expenses for about 423 personnel at government hospitals, PHCs and CHCs in pilot districts (@ Rs.1000/ person)	4.23
Administration Costs (including issuance of identity cards and assumes 5% of premium expense)	541.76
Total amount	11429.06

**Number of Anthyodaya and BPL families as per data as on 31-03-2008 available with the Director of Food and Civil Supplies, GoK*
Phase II and Phase III will each cover 50% of the Anthyodaya and BPL families residing in non-pilot districts that were not included in Phase-I. The choice of dsitricts will be finalised after consultation with concerned departments and after evaluation of district level Human Development performnace.

Intervention E: Align budgetary allocation for the health sector to NHP guidelines

Implementing Agency: Department of Health and Family Welfare

Objective

To realign the budgetary process in the state health department to conform to National Health Policy 2002 guidelines, i.e.,

- Align share of state sector spending on health from 3.6% in year 2007-08 to 5% by 2010 and to 8% by 2015
- Ensure the recommended proportions of budgetary allocations for primary, secondary and tertiary care (at 55%, 35% and 10% respectively) and also across rural and urban areas.

Need/ Justification

Funding for public health sector in Karnataka is comprised of funds from central government, state government and external assistance. Private sector financing is mainly through out of pocket expenditure by individuals, NGOs, trusts and corporate bodies, including private insurance expenses. Over the years, while the central government has increased fund flow into Karnataka, the state has reduced its resources. Health constitutes only 0.82% of Karnataka's gross state domestic product (GSDP), close to the country average of 0.9% of GDP. As a proportion of the state's total expenditure, the state has drastically reduced spending from 5.6% in 1997-98 to only 3.6% in 2007-08. In the NHP 2002 guidelines, the states were advised to increase their allocations on health to 7% of their total budget by 2005 and further to 8% by 2010.

Additionally, the sector wise allocation of funds in Karnataka is not as per NHP 2002 recommended norms of 55% for primary, 35% for secondary and 10% for tertiary sectors. In 2003-04, the primary sector received 54% of health sector allocation, while the shares of secondary and tertiary were 13% and 34%, highlighting the skewed allocation towards tertiary care (see table below). The trend of seeking care for primary/ secondary level health problems at tertiary institutes can be corrected by improving service delivery at the lower levels. In addition, the proportion of expenditure on tertiary care has risen significantly. Primary health care proportion is in line with planned figures, yet condition of the health facilities and services in rural areas is not as per requirement. The poor state of primary care units and the health seeking behaviour of the population takes them directly to the super specialty hospitals, by passing the primary and secondary levels, thus increasing the patient load on the tertiary hospitals. Secondary sector too has faced huge reduction in allocation from 20% to13%.

Trends in Health Expenditure (HE) by Sector in Karnataka

Sectors	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Primary %	55	48	50	49	51	49	54
Secondary %	20	23	24	21	19	18	13
Tertiary %	26	28	27	30	30	33	34
Total HE (Rs crore)	708	819	975	1006	1086	1004	1063

Source: Karnataka Development Report 2007

Analysis of the break up of total health expenditure in rural and urban areas shows that over the last decade, the proportion of total health expenditure on rural health services decreased from 31.4% in 1997-98 to 29.8% in 2003-04. There needs to be adequate focus on these services, as it forms the only source of healthcare for a large section of the state's population.

However, as per the Karnataka Planning and Statistics Department, almost 14% of the ninth Plan outlay for Medical and Family Welfare remained unspent at the end of 2002. While the outlay in the subsequent Plan was increased by about 39% to Rs.1530 crores, in the end of 2007 the actual expenditure had cumulated to only Rs.1215 crores, with almost 21% of the outlay remaining unspent. As a result, due to the under-utilisation of funds allocated, the actual expenditure in Medical and Public Health amounted to merely 3.58% and 2.05% of the total ninth and tenth Plan expenditures respectively.

Proposed Scheme Details

- The state needs to allocate up to 7% of its annual budget for health as per the National Health Policy guidelines. By the end of the 11th Plan period (2012), the state budget should be proportionately increased to meet this target. As per the union budget for 2008-09, the central allocation for health has been increased by 15 per cent in the current fiscal year. This will also result in a corresponding increase of the central share in the state's health budget.
- Analysis of sub component-wise outlays and expenditures reveals the need for a review on budgeting patterns. Allocation to sectors of primary, secondary and tertiary must be aligned to the NHP guideline, i.e. 55% to primary, 35% to secondary and 10% to tertiary. The current allocation towards secondary care is much below the norm. There is an urgent need to assess the secondary health sector in terms of IPHS standards and bridge the identified gaps. By conforming to the IPHS standards in terms of infrastructure, manpower and facilities, the secondary level institutes will be better equipped to provide quality services and thereby reduce the pressure on tertiary care units. Moreover, fund allocation to specific schemes should be made according to emerging diseases and disease patterns, revealed through periodic research and surveillance activities.
- Since under-utilisation of funds has been recognised as an important issue for Karnataka, strengthening of the financial management systems is necessary. Regular capacity building needs to be carried out for personnel involved in managing accounts at all levels of service delivery.
- Reviews of state budget allocations has revealed that there is no clear demarcation of funds according to service components, i.e. preventive, curative, promotive and rehabilitative services. Since the country wide thrust in the current plan period is on primary health care activities such as nutrition, rural health and sustainability, it is important to set aside adequate funds for preventive care activities. Budget needs to be earmarked for IEC activities, improving health awareness and inculcating healthier lifestyles, and this should be reviewed periodically for impact on the disease burden. It has been well established that with sustained investments in preventive care, the need for secondary and tertiary care services will gradually reduce.

Institutional Strengthening and Capacity Building Measures

- Training and capacity building for personnel as all levels involved in managing accounts and optimum utilisation of funds allocated
- Delegation of financial powers to the district level
- Ensure timely release of funds to ensure utilisation

Timeline

Activity	Responsible Agency	Time Period
Training and capacity building of personnel in managing accounts	DoHFW	End of FY2010
Delegation of financial powers to district level	DoHFW	End of FY2011
Realign health sector allocation to conform to NHP 2002 guidelines (5% of state budget)	GoK	End of FY2011

Sectoral allocation into Primary, Secondary and Tertiary healthcare sectors to reflect NHP 2002 guidelines	GoK	End of FY2012
Furthur increase health sector allocation to 7% of state budget as per NHP 2002 guidelines	GoK	End of FY2016

Indicative Budget

No budget allocation has been made towards this programme, as all are basic administrative tasks that need to be addressed and completed.

Intervention F: Design and implement a child health and nutrition tracking system

Implementing Agency: Department of Health and Family Welfare; Department of Women and Child Development; Department of Public Instruction

Objective

- To develop an integrated health and nutrition tracking system to cover all children enrolled under ICDS and Suvarna Arogya Chaitanya schemes.
- To monitor and evaluate the health and nutrition indicators against the targets set by the Vision 2020 and to identify existent and emerging challenges with respect to health status of children. The targets related to child and maternal health in the Vision 2020 include achieving 100% child vaccination; reduce the incidence of anaemia among children (6-35 months) from 82.7% to 25%; reduce the incidence of anaemia among women in reproductive age (15-49 years) from 50% to 15%; and increase percentage of births assisted by appropriate health personnel from 71.3% to 100%.

Need/ Justification

Improvements in infant and child health have been in the priority of government policies at the centre and state for almost three decades. Though the state has recorded improvements over the years, analysis shows that children in Karnataka are not in the pink of health. Only 55% of children of 12-24 months were fully immunized in 2005-06 compared with 60% during NFHS II. While urban immunization levels have improved since the second survey, immunization in the rural areas has actually decreased. Moreover, only 34% of children less than 3 years are breastfed within the first hour of birth, resulting in low immunity levels and high rate of contracting infections which is chief cause of neonatal mortality.[11]

The Integrated Child Development Scheme (ICDS) programme targeted towards children in the 6 months to 6 years age group is running in all districts of the state. There are 40,301 anganwadi centres in the state, of which 36,374 are in rural, 1,151 in urban and 2,803 in tribal areas. 27% of the beneficiaries under ICDS belong to SC/ST groups. Since 2002-03 there has been a considerable increase in the amount released by the centre for Karnataka – from Rs. 7,760 lakhs in 2001-02 to Rs. 10,541 lakhs[12] in 2006-07 . While the scheme is running well, there are some inadequacies in its implementation, reflected in the nutrition levels of pregnant women and children. It has been found that almost 41% of children under-3 years are underweight, with rural children being worse off than those in urban areas. Alarmingly, 82% of children of 6-35 months age are anaemic as per NFHS III, with an all-India figure at 79% in 2005-06, and an increase from NFHS I which reported 70 % children as anaemic in the same age group. In the absence of proper monitoring, nutrition of the beneficiaries (pregnant and lactating mother, children of 0-6 years) is affected; the growth charts for children are also not being maintained regularly[13].

With a under-five mortality rate of 74.3 reported in NFHS III, Karnataka lags behind most southern states, thus contributing to a slow pace in the run towards Millennium Development Goal 4 of reducing under five mortality. As per a recent state-wide survey conducted by the Department of Public Instruction on the impact of the mid day meal programme in the state, only 24% of school going children (class I to X) were found to have normal levels of hemoglobin, while a staggering 76% children were found to have some form of anaemia (as per the WHO classification).

[11] National Family Health Survey III 2005-06
[12] Karnataka Development Report 2007
[13] As per opinion of Dr H Sudarshan in his capacity as Vigilance Director of Lokayukta

The importance of good Monitoring and Evaluation (M&E) systems in public services directed towards child nutrition and health has been recognized in the context of the poor health and nutrition status of children as indicated above. Given the substantial scale and importance of the programme to improve the nutritional standards of children in the state, and with vast sums of money being invested, the need for properly categorized data and flow of relevant information for effective decision making and programme monitoring is clearly felt.

One of the key requirements of an M&E system is to generate timely, relevant, accessible and high-quality information, particularly when there are large volumes of data being collected. To manage and sort this glut of data, organisations often maintain a computerised management information system (MIS) which provides information in an easy-to-use format to keep track of project activities, budgets, and personnel. An MIS (Management Information System) is a planned system, generally computerized, for collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management. Information generated from a monitoring system helps to identify the problem areas and helps improve targeting, coverage and implementation.

Proposed Scheme Outline

Under this initiative, the state can develop and maintain a health and nutrition tracking data base for children enrolled to anganwadi centres and all children in government, aided and unaided schools studying in classes 1 to 10 covered under the Suvarna Arogya Chaitanya scheme.

The basic level of data collection will be undertaken at the AWC level by the AWW and teachers at the school level for children enrolled to AWC and government school respectively. They will maintain manual records of these activities in appropriate registers. With respect to the health records of the anganwadi children, the Supervisor will receive the data from the AWWs in the village during monthly meetings and use the assistance of the Nemmadi centres / Common Service Centres (CSCs) to enter the data into the state-wide tracking system. Similarly, the health records of school going children will be provided to these by the respective head teachers for updation on a monthly basis.

The MIS will be designed to generate reports at the subsequent levels for the programme review by the concerned department personnel as well as the health department. The MIS will also facilitate the downward flow of data in the department in the form of feedback/instructions from the state to the district level, and from the district level to the block level.

Proposed Scheme Details

Coverage: The proposed health and nutrition tracking data base will cover all the beneficiaries in the 6 month to 6 years age group enrolled in Anganwadi centres under the ICDS scheme. This translates to covering 54,604 AWCs across the state providing supplementary nutrition (SNP) to over 17.04 lakh children in the 0-3 age group and close to 15.6 lakh children in the 3-6 age group. In addition, the data base will track over 65 lakhs children that have undergone health check-up under the Suvarna Arogya Chaitanya scheme. Under both the schemes, the primary functionary at the service delivery level, i.e., the Anganwadi worker at the AWC and the Medical Officer conducting health check-ups at the school, will record the health status of the child on the respective health charts/ cards.

Constitution of Programme Management Committee for Health and Nutrition tracking system within the DoHFW

DoHFW will constitute a team to assume ownership of this MIS initiative and to build internal capacity in the process. This team would be responsible for the design and implementation of the entire MIS initiative, covering the various activities detailed below..

Defining Functional requirements - Redesigning the formats and registers prior to implementing the MIS

The DoHFW will conduct a detailed assessment of the current processes followed in the data collection and consolidation under various schemes related to child health and nutrition and identify key areas of improvement. This exercise would also need to rationalise the current data collection and processes involved and review / redesign registers and formats if necessary. This would then feed into the design of the proposed system. The exercise would include the identification of key indicators to be tracked at each level, designing of reports and analysis as required by the department and design of dashboards and reporting formats at each level of hierarchy. This will act as an input to the technical design and may also require a change in the reports being supplied to the Anganwadi centres and schools. Best practices from other states also need to be studied. Assistance from a knowledge management partner or MIS specialist may be taken to accomplish this phase.

Technical Design of the MIS

The next step of the MIS implementation Committee would be to get the conceptual design of the MIS system done. The Centre for eGovernance, GoK provides the facilities to get this design activity done. The conceptual design stage will cover the following activities

- Review the functional assessment done above and derive the System Requirement Specification of the applications to be implemented.
- Design of an IT System to enable an efficient administration of the proposed MIS. The IT system shall be designed considering the requirement of integrating it with other similar initiatives and data sets. Design of technical architecture will include application, security, network and deployment architecture.
- Assessment of the current IT infrastructure and IT trained personnel available within the department across various locations and the department requirements, the gaps and the indicative budget and requirements for enhancement of IT hardware and software, and availability of trained personnel
- Selection of technology provider to develop, implement and maintain the IT system for the department and selection of the IT hardware supplier through transparent procurement process

Align the initiative with other e-governance initiative in the state

Given that other e-governance initiatives are existing or are likely to be unveiled in the state under the National e-Governance Plan (NeGP), the IT infrastructure backbone of the state would have to be integrated with the core IT infrastructure projects planned for the state under NeGP. It is, therefore, imperative to align the department's MIS initiative with overall e-governance initiative for the state. For example, the Karnataka State Wide Area Network (KSWAN) could be utilised as the backbone network for this initiative

Selection of technology provider for application software development

A software development firm or a system integration company needs to be selected, depending on approach towards implementation, for development, implementation and maintenance of the various applications required in the MIS. This would be through a transparent bid process and would involve design of Request for Proposals (RfP) including selection criteria and appropriate weightages for technical and financial components, issuing of RfP and invitation of bids, bid processing and selection of technology provider.

Selection of partner for supply of IT infrastructure

Once the MIS system is designed after completion of the process study, the application would be required to be implemented across locations, for which the required hardware must be made available. This also must commence along with the application development, as the two are interlinked. Additional infrastructure would have to be procured through a partner compensated as

per government norms and selected through an objective and transparent bidding process similar to the step above.

Pilot implementation of application software
After development of the application software, the application development partner will have to test the same on the department's IT infrastructure (at select pilot locations) before going live. The department and users need to be extensively involved in this process to ensure ease of operations and transfer of ownership.

Final roll-out of the MIS
Once the MIS system is designed, and tested, all the hardware is made available, and the users have been trained appropriately, the technology developer must install and run the MIS application on a state wide basis.

Institution Strengthening and Capacity Building Measures

- An extensive drive needs to be undertaken by the department to generate awareness amongst the users regarding the e-governance initiative.
- Additionally, arrangements need to be made for imparting basic computer training to the users, which must be done by the technology provider. Appropriate and detailed user manuals need to be prepared for this purpose.

Timeline

Activity	Responsible Agency	Time Period
Constitution of Implementation Committee	DoHFW	End of Month 1
Detailed assessment of current processes followed in data collection and consolidation under various schemes	Implementation Committee	End of Month 5
Selection of technology provider	Implementation Committee	End of Month 5
Technical Design of MIS	Implementation Committee	End of Month 9
Selection of partner for supply of IT infrastructure	Implementation Committee	End of Month 10
Pilot implementation of application software	Implementation Committee	End of Month 11
Final State-wide rollout	Implementation Committee	Mid year 2

Monitoring and Implementation

- The Implementation Committee of the DoHFW should ensure that critical dependencies amongst the departments/agencies (Dept of Education, Dept of Women and Child Development, e-Governance Secretariat) involved are taken care of during the design of the proposed tracking application. This will ensure that requisite infrastructure is available and the responsible functionaries are trained to use the system.
- The status of data entry into the database application needs to be continuously monitored to ensure that up-to-date data is available for any decision support.

Key Performance Indicators

- No. of Anganwadi centres for which data has been entered in the system
- No. of schools for which data has been entered in the system
- No. of children for which health data has been entered in the system

Indicative Budget

Item	Amount
Feasibility study	10,00,000
Design and development of application software	50,00,000
Procurement/ Upgradation of computing and communications hardware	50,00,000
raining of DWCD Supervisors (ICDS) and Medical Officers/ School Teachers (Suvarna Arogya Chaithanya)	50,00,000
Total Amount	1,60,00,000

II. EDUCATION & SKILL DEVELOPMENT

One of the greatest challenges facing the country and the state is the challenge of building capabilities of its population. Educated, skilled, healthy and empowered people are an asset for the state. The challenge is to ensure that every citizen of the state is an asset and can participate productively in the growth process of its economy.

Karnataka has a good education base at the primary level and has almost achieved the targets of universal primary education. The state should now endeavour to universalise secondary education and introduce skill development courses within the secondary curriculum. Improvements in the school curriculum to introduce independent thought, and encourage creativity are deemed necessary for the overall development of children. Schools will be equipped with the requisite resources for enabling them to impart good quality skill training.

A large proportion of the state's workforce continues to remain in traditional and low-productive sectors and this translates into low income and slow reduction in poverty levels. In order that the poor are able to enhance their capability and benefit from emerging opportunities, they will have to possess appropriate skills and competencies. A skilled workforce and higher labour productivity will propel growth rates in respective sectors.

As per the 61st Round of NSSO survey, only 3% of rural population and 16% of the urban population have a degree, diploma or a certification in Karnataka. This means that a large proportion of the state's population has not pursued higher education, nor have they been formally certified for a skill. The state should, therefore, undertake massive efforts for skill development of its workforce through involvement of all sections of the society. The state has already set up a Skill Commission aimed at empowering all individuals through improved skills, knowledge and internationally recognized qualifications to enhance their access to productive employment opportunities.

Intervention A: Providing good quality training for teachers in schools (primary and high-schools).

Implementing Agency: Department of Education, Department of State Educational Research and Training

Objective

- The aim of this initiative is to ensure provision of appropriate training to teachers of primary and high schools so that they are updated with the knowledge of their subject, newer methods of teaching and basic life skills. This initiative looks at reforming both the content of the teacher training programmes as well as the existing systems of delivery.
- By improving the quality of teachers in primary and secondary schools, the state aims to achieve the targets set in the Vision 2020 including achieving 100% Gross Enrolment Ratio in secondary education; zero drop-out rate during transition from class I to X; and achieve minimum education attainment level of 80% as per KSQAO

Existing Delivery System

Currently, the system of delivering training to the teachers is a 'cascade' model (DSERT-DIET-BRC) of training. The Department of State Educational Research and Training (DSERT) formulates plans and coordinates the implementation of various teacher training programmes at the state level. DIETs at the district level, Block Resource Centers (BRCs) at the block level and Cluster Resource Centers (CRCs) at the cluster level are used to conduct various training programmes for school teachers. At present, this system has an element of transmission loss[14], which is believed to dilute the impact of such training programmes. Since the train-the-trainer method is used at the DSERT for the DIETs and then the DIETs use this method to train the BRPs (Block Resource Person), and finally the BRP trains the teachers, during which the information has passed through 3-4 channels before reaching its final destination, a lot of information or nuances envisaged at the time of designing the course is lost or diluted. Further, given the varied capacity needs of the teachers, there is a need to shift from this purely 'supply' mode to a partly 'demand' mode and exploit the advances in technology to its best. Providing training to teachers who demand for training has been found to be more beneficial to the teacher.

Teacher training in the state is presently largely supply-driven and is based on standard modules most of which may not be regularly updated) developed by the DSERT and DIETs. The information collected from teacher training attendance sheets is not utilized for a constructive capacity building plan. In addition, there is an absence of a training needs assessment as well as a lack of monitoring and impact assessment of existing training programmes.

Need / Justification

Currently there is a pre-service training and an in-service training that the school teachers receive.

- Pre-service training is provided for elementary school teachers through the State's 134 teacher training institutions providing the Diploma in Education Course (D.Ed), which has duration of 2 years. Under the D.Ed. course, training on all subjects is provided at a macro-level, however, no specific provision of specializing in a particular subject is allowed. High school teachers need a B.Ed qualification.
- Currently in-service training for teacher is provided by the District Institute of Education & Training (DIET) with focus more on organizational skills and subject knowledge. There are a list of 20 courses that are offered by the Department of State Educational Research and Training (DSERT) in their in-service training program. Though a number of training

[14] As-is report – PwC & GoK

programmes are being conducted by the government agencies, the quality of teachers, both in terms of their subject knowledge and their behaviour with the students, needs significant improvements.

In the pre-service and in-service trainings there is a lot of focus on the organizational skills (training in preparation of question papers and evaluation schemes, content based methodology etc.), and subject knowledge for the teachers, but there is lack of emphasis on developing the interpersonal/life skills (socio-emotional and moral development) of the teachers, which is also an essential part of elementary and high school education. In addition to the interpersonal skills, there is a need for pedagogical (learning environment- subject matter & teaching methods) competence by the teachers.

In elementary and high schools, interpersonal competence will ensure that the teachers create a pleasant teaching and working environment for their class groups. Competent teachers on this skill can provide good leadership to their students. They can create a friendly and cooperative atmosphere and stimulate a more open communication from the students. They can also encourage the students' autonomy and, in their interaction, seek a right balance between guidance and counseling, steering and following, confrontation and reconciliation, corrective measure and stimulation[15].

A good teacher should help the students become independent and responsible citizens. In order to be able to fully take this responsibility the teacher must be competent in various basic life skills and moral values. This component will sensitize the teachers in aspects of psychological and physical development in children. Teachers trained appropriately in interpersonal & life skills competence can ensure that they create a safe learning environment in their classroom to ensure that the students know that they belong and that they are welcome, treat each other with respect, are challenged to take responsibility for each other and are able to take initiatives and work autonomously.

Teachers should be strong in their knowledge of subject matter and teaching methods to be able to create a good learning environment in the classrooms. An array of teaching strategies that support intellectual engagement, connectedness to the wider world, supportive classroom environments, and recognition of difference, should be implemented across all key learning and subject areas. Effective pedagogical practice promotes the wellbeing of students, teachers and the school community - it improves students' and teachers' confidence and contributes to their sense of purpose for being at school; it builds community confidence in the quality of learning and teaching in the school.

Proposed Scheme Details

The existing system of teacher training in the state needs to focus more on developing a system or database to track the trainings received by teachers. It can also include an elective component where the teachers are able to choose the courses they would find relevant to their contexts. This can be largely utilized for interpersonal and teaching methods based courses, while the existing supply based approach can continue to be used mainly for administration and subject based courses.

Teachers can indicate their preference for the modules they are interested in, which the BRC can utilize to come up with a quarterly training calendar. This can be circulated at the beginning of a quarter and interested teachers can attend the courses that they need. The BRP can use the existing BRC infrastructure in addition to a broadband connection and an EduSat linkage to conduct the modules. A one-day introduction-cum-orientation module can be conducted every quarter, which can assist the teachers in identifying the modules most relevant for their specific needs.

[15] Association for the Professional Quality of Teachers,- Danish Government

Training Needs Assessment

- Currently DSERT is in-charge of the teacher training needs; however this needs to be strengthened.
- DSERT should utilize the already existing infrastructure of the DIETs, BRCs and CRCs to gather the training needs of the teachers.
- Training Needs Assessment (TNA) should be made an annual process and each supervisor (appraising authority) should be made responsible for identifying the developmental and training need for his/her subordinates.
- A structured tool/questionnaire can be used to identify the training needs of different categories of teaching and non-teaching staff. On the job observation could also contribute to identification of training needs.
- In future, this should also come out of the Annual Appraisal process and Individual Development Plans.

Consolidation of Course Material

- DSERT, in coordination with a panel of leading education experts should review the existing courses being offered in the pre-service and in-service training modules and re-design or improve upon these courses to include relevant modules.
- Currently there are about 20 courses that are being provided to the teachers through DSERT. These courses should be consolidated wherever possible and a concise set of training courses should be made available.
- If required, some of the existing courses can be consolidated to avoid overlaps and repetition.

Design of new Training Material

The new Interpersonal and Pedagogical modules should be designed around an activity based learning methodology.

- To develop interpersonal skills the modules should focus on experiential learning. This will foster personal exploration, active participation, and empowerment of the teachers. Interpersonal training should increase self awareness, sensitivity towards others, and enhance self-esteem and self-acceptance. The modules on interpersonal skill development should also develop the teachers' listening skills, and improve their body language. Some indicative programs that could be explored have been listed below[16].
    - Developing skills and accepting feelings
    - Scales for the measurement of interpersonal processes
    - Accepting student ideas
    - Increasing praise
- To develop pedagogical competence the modules should focus on awareness of the socio-cultural environment around, the socio-emotional and moral development of children, and the development and educational theories of young and older children.

Since the delivery of interpersonal and pedagogical training material should be given by a master trainer or a person with substantial experience in this field, videotaping the sessions and using

[16] Interpersonal skills training for teachers. National Consortium for Humanizing Education. National Institute of Mental Health USA

EduSat or broadband connectivity at the BRC, CRC or DIETs to deliver these modules will ensure better training effectiveness and less transmission loss.

Infrastructure Needs Assessment (for availability of appropriate training infrastructure in DSERT, DIETs and BRCs)

- DSERT can have a portal with all the training material uploaded. The DIETs, BRCs and CRCs can access these training materials through a broadband connectivity or through EduSat. DIETs, BRCs and CRCs can then just play the module for the teachers receiving the training. A schedule of the programmes being broadcasted on EduSat should be delivered to all the training centers, which will make it easier for the teachers to select the elective courses they would like to attend.

- DIETs, BRCs and CRCs will need to be connected either through a broadband connectivity or through EduSat. Broadband connectivity is relatively easy now days as a USB modem can be used even in remote villages for connectivity. Satellite Receiving Stations (in KU band) currently links all of the BRCs which was paid for by the XI & XII Finance Commission, SSA and the State - this needs to be expanded to include all the CRCs and DIETs as well.

Delivery Structure

DSERT will ensure that there are 2 set of training modules - compulsory modules that will cover subject knowledge and administration issues, as well as elective based modules that will cover competencies on interpersonal and teaching methods. DSERT can use the existing system of training to ensure delivery of the compulsory modules. For the elective modules, a mandatory introductory course will need to be conducted to the teachers by the BRP, after which the teachers can nominate themselves for the courses that they want to attend. DSERT will come out with an annual training calendar for the compulsory modules, which it will broadcast to the Satellite Receiving Stations, or the BRCs can log onto the DSERT website, using their broadband connections and utilize the online material. The teachers will then attend the elective courses that they want at the BRCs; the BRP will conduct the course utilizing the existing BRC infrastructure in addition to the recommended broadband connection and appropriate projection equipment.

DSERT in collaboration with the DIETs will have to design a system where they can track the training received by the teachers to ensure there are no overlap or redundancies. DIETs should be appropriately strengthened to ensure that the training received by the BRP, CRP and teachers is being implemented in the way it was intended. Random checks at schools, BRC, and CRC should be conducted by the DIET personnel. DSERT will also need to conduct annual needs assessment for the training the teachers receive. DIETs could bring out a quarterly newsletter highlighting innovative teaching methods followed by teachers within their district. This can be a token form of recognition of good teachers. The innovating teaching methods can also be utilized to augment relevant course modules by the DIETs.

Training Calendar

The compulsory courses can be handled by the CRP in the usual manner. The DSERT will send out the annual calendar with the trainings that need to be conducted. The calendar will have a list of both the compulsory and the elective courses. It should also have the time at which the elective courses will be aired through the Satellite Receiving Stations, and how long the modules will be available on their online portal. The DIETS, BRC, and CRC will inform the teachers of this training calendar, and conduct the trainings on the scheduled time and date. Any changes in the calendar needs to be informed to the teachers and a subsequent future training date and time needs to be corresponded. DSERT, DIETs, BRC, and CRC should ensure that as far as possible, these trainings do not interfere with classroom teaching activities.

Training of DIET faculty, BRP and CRP
The elective courses need highly competent trainers and, therefore, the material needs to be developed by DSERT and video lessons prepared by DSERT's trained script writers. The DIET faculty, BRPs and CRPs will need to be made familiar with the course material through an initial training, since they will have to administer the training to school teachers. DIETs should also be involved in gathering information for the teacher training database for the trainings the teachers receive. The training needs assessment can be a report generated from the teacher training database application.

Number of training days
The SSA norms envisage 20 days of training to every elementary teacher each year. This will need to be adjusted according to the experience of the teachers and the previous training that a teacher has already attended. Further, appropriate usage of ICTs could enable flexi-timings of the training programmes, as the teachers have the free-will to schedule their convenient hours to access the portal.

Programme Implementation

Agency Involved	Roles & Responsibilities	Timeline
Design/Planning		
Re-design of the training modules for school teachers.	DSERT, Department of Education	Short Term
Design a system that will collect and retain histories of various trainings received by teachers	DSERT	Short Term
Design of the needs assessment questionnaire	DSERT	Short Term
Design the new course material	DSERT, Department of Education	Medium Term
Train the BRPs and CRPs in the new modules.	DSERT	Medium Term
Ensure that the DIETs, BRCs and CRCs have the proper training equipment/ infrastructure	DSERT	Medium Term
Develop and publish annual training calendar	DSERT	Medium Term
Implementation		
Carryout training needs assessment	DSERT	Continuous (annual consolidation)
Ensure proper infrastructure for teachers to take the online or video training modules.	DIET	Medium Term
Help in collecting information for the teacher training system	DIET	Continuous
Deliver the training modules to the school teachers	CRC & BRC	Medium Term
Monitoring and Evaluation		
Monitor the needs assessment	DSERT	Continuous
Monitor the CRCs and BRCs	DIET	Continuous

Agency Involved	Roles & Responsibilities	Timeline
Monitor the teacher training system	DSERT	Continuous

Programme Monitoring

DSERT will monitor and evaluate the progress of the introduction and the delivery of the new modules into the teacher training curriculum. The needs assessment will help in the revision and introduction of new course material. The teacher training database will also help the DSERT monitor the training provided to the teachers and recommend appropriate corrective measures.

The teachers should be given training evaluation forms that will facilitate feedback on the effectiveness of the contents and delivery methods. These evaluation forms can be used by DSERT to help re-structure or expand the module accordingly in future.

DIETs should check if the training received by the teachers is being implemented in the classrooms; random checks should be done to ensure that the training is being utilized and to ascertain the modifications needed in the design to ensure more effective utilization.

Key Performance Indicators

- Number of teachers trained per month/year
- Average number of training days per teacher per year
- Number of training days provided through DIETs, BRCs and CRCs
- Number of EduSat hours used for teacher training
- Modules that the teachers have demanded the most
- Training courses that received 75% and above satisfaction levels from participants
- No. of teachers (and %) through the needs assessment demanding training in certain fields

Indicative Budget

Particulars	Unit cost (Rs)	Number	Total (Rs.)
Development of new course material (both paper and digital versions)	2,50,000	20	50,00,000
Development of instruction material for trainers (both paper and digital versions)	2,50,000	20	50,00,000
Administration cost (printing of training manuals, CDs etc.)	150	2,50,000	3,75,00,000
Projection system at the BRCs	25,000	210	52,50,000
Training of BRPs	500	210	1,05,000
Broadband USB modems	3000	210	6,30,000
Annual connectivity charges	12,000	210	25,20,000
Teacher Training System	50,00,000	1	50,00,000
Total			6,10,05,000

Intervention B: Capacity building of School Development and Management Committees (SDMCs)

Implementing Agency: Department of School Education / Public Instruction

Objective

- To increase the active management capacities of SDMCs and to create a sense of ownership of the school by the committee.
- Through the active participation and monitoring of SDMC and community members, the state aims to achieve the targets set in the Vision 2020 including achieving 100% GER in secondary education; zero drop-out rate during transition from class I to X; and achieve minimum education attainment level of 80% as per KSQAO.

Need/ Justification

School Development and Management Committees (SDMC) were constituted for the first time in each school during 2001 (and later reconstituted after the expiry of its elected-term), to empower the local community in playing an active role in the development of schools and shouldering the responsibilities of its management and oversight. A SDMC comprises of members of the panchayat, parents of the school children, the head teacher of the school and student representatives.

It has been found that many members of SDMCs have low educational attainment levels, which make it difficult for them to understand school performance reports or interpret the results of KSQAO etc. without adequate training. Capacity building of SDMC members is essential to enhance their ability to influence the quality of education provided. This capacity building of SDMC members was not anticipated and incorporated in the SDMC bye-laws. Strengthening a SDMC through appropriate capacity building of its members will ensure increased participation, responsibility and ownership towards school development; it will also improve effectiveness of community monitoring.

It should be the responsibility of the SDMC to provide information to both the government and citizens about any shortages in their school, benchmarked against set norms and standards. Once information is received, the government/ private sector organizations/ NGOs could address this shortage within a specified timeframe. The minimum standards for a school are a right for all citizens and can be legally enforced if the shortages are not met within a specified timeframe.

Currently, personnel from the BRC periodically visit schools to monitor their performance. These reports are not utilized by the SDMCs to the fullest extent to help them monitor school performance.

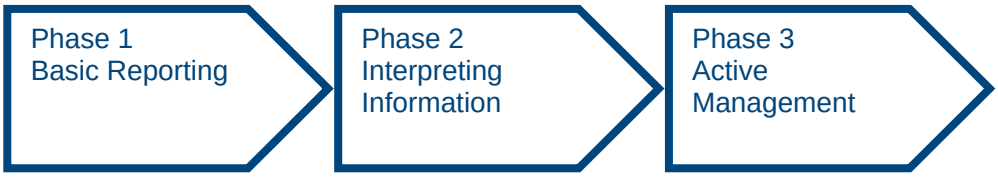
Proposed Programme Details

Capacity Building of the SDMCs

The Education Department should prepare a detailed capacity building plan for SDMC members, and members of the PRIs on effective school management. Currently DSERT has Spandana and Sankalpa programmes where they train SDMC members on the following aspects:

- To make SDMC members take active participation in the improvement of school education in the local situation
- To bring an awareness regarding their role and responsibilities towards the school

With the current information in Spandana, and Sankalpa we suggest that responsibilities of SDMCs be entrusted to them in three phases as depicted below. Each phase is expected to last for 2 years after which all SDMCs should be in a position to independently handle the responsibilities.



Phase 1: Basic reporting
Competencies to be developed during this phase are:
- Understanding of minimum standards for a school
- Preparation of the annual school plan.
- Report 'status' of school vis-à-vis minimum standards.

Phase 2: Interpreting information
Competencies expected at the end of this phase are:
- Interpretation of child attainments: scholastic as well as life skills
- Understanding of the teaching- learning process
- Contributing in the learning process by facilitating interactions of children with local professionals
- Actively involve community in issues affecting the school such as awareness campaigns to encourage girls to attend school
- Interpreting the BRP's school reports.
- Create an identity for the school and insist that the school is accredited

Phase 3: Active management
This is a phase where SDMCs are fully aware of their responsibilities. They are expected to whole-heartedly contribute to the management of the school.

Competencies expected at the end of this phase are:
- Organise survey of households in the neighborhood to track out-of-school children. A list of disabled children should also be prepared.
- School reports generated by the BRP during their visits to the schools, the SDMC should use this list to monitor the action items flagged by the BRP. These action items might need extra attention, therefore, the SDMC during their regular meetings should discuss and ensure that the areas under which the school lags behind is brought up to the desired level.
- SDMC should be involved in the appraisal of teachers.

Programme Delivery

- Design of training material:
    - DSERT with inputs from the Department of Education will design the material. DSERT should keep in mind the low educational attainment of a majority of the SDMC members, and develop training material accordingly. The training material should not have a lot of textual content, but more visual aids and dramatization should be used.
    - DSERT should develop 3 modules that will be taught to the SDMC members in a phased manner.
        - Module 1: Basic reporting
            - Minimum standards for a school
            - How to prepare an annual school plan
        - Module 2: Interpreting information
            - Ability to understand and interpret child attainments: scholastic as well as life skills
            - Understand basic teaching and learning process
            - Interpret the future course of the educational paths of the students
            - Work with the community to increase female enrollment

        - Module 3: Active Management
            - Recruitment of teachers
            - Long term school planning
            - Appraisal of teachers
            - Data management
    - The DSERT will also develop the training calendar for the training of trainers (personnel at the DIETs, CRC and BRC) and of the SDMC members.
- DSERT will train the personnel at the BRCs, CRCs, local NGOs and DIETs with the skills to provide the training to the SDMC members. DSERT should train the trainers with special tools necessary to train SDMC members with little or no educational attainment.
- The BRPs will conduct/facilitate the training at their centers, using the existing infrastructure according to the training calendar. More than one SDMC can be clubbed together for this training with a maximum of 45-50 people per training.
- The BRPs should also keep in mind the training needs of the SDMCs and update the DIETs on the needs of the SDMCs. DIETs should accommodate the training demands of the SDMCs.

Programme Implementation

Roles & Responsibilities	Agency Involved	Timelines
Constitute a team of experts to develop training material for SDMCs	Department of Education and DSERT	Short term
Research and develop training material for SDMCs on Basic Reporting, Interpreting information and Active Management	Department of Education, DSERT, Education Experts	Short Term
Train the DIETs, BRP, CRP to deliver effective training to the SDMC members	Department of Education and DSERT	Medium Term
Annually review the training needs of SDMCs	DIET, BRC and CRC	Medium Term
Train the SDMC members on Basic Reporting	DIET, BRC and CRC	Medium Term
Train the SDMCs on Interpreting information	DIET, BRC and CRC	Long Term
Train the SDMCs on Active Management	DIET, BRC and CRC	Long Term

Programme Monitoring

- Feedback from the SDMC trainings should be evaluated and necessary action should be taken
- The feedback results from the SDMC trainings should form inputs to the DSERT to make any changes to already existing training manuals.
- Action taken by the SDMCs on the reports provided by the BRP on the status of their school.
- SDMC should report on receiving the designed training by the DIETs, BRP and CRP at the scheduled time and place.

Key Performance Indicators

- Number of SDMC members trained.
- Quality of data collected by SDMCs
- Information provided by SDMCs utilized for decision making
- Number of action items on the monitoring list by the BRP given to the SDMC

Indicative Budget

Particulars	Unit cost (Rs.)	Number	Total (Rs.)
Content Development (3 modules)	5,00,000	3	15,00,000
Developing training manuals	5,00,000	3	15,00,000
Printing training manuals	200	50,000	1,00,00,000
Training of trainers in DIET, BRC, CRC	500	500	2,50,000
Cost of conducting training	150	10,000	15,00,000
Payment to SDMC members for lost wages	200	4,50,000	9,00,00,000
Transportation charges for SDMC members	50	4,50,000	2,25,00,000
Total			12,72,50,000

Intervention C: Re-orient school curriculum to improve contextual relevance of content

Implementing Agency: Department of School Education / Public Instruction

Objective

- Re-orient school curriculum to improve the overall development of children and their readiness to integrate into the society as productive adults.
- A more relevant and interesting curriculum will also help in reducing drop-out rates and achieve zero drop-out rate during transition from class I to X
- Re-orientation of school curriculum will also help achieve the Vision 2020 goals of 100% GER in secondary education and 25% GER in Higher Education, and achieve minimum education attainment level of 80% as per KSQAO

Need/ Justification

School is a microcosm of a larger society and our future is mirrored in today's classrooms. Karnataka has already taken necessary steps to ensure physical access to elementary schools. Given the demographic transition underway in the state, the focus now has to be more on improving the quality of education. An appropriate curricular design at the school level is an important determinant of this quality, as it will ensure early exposure of children to diverse bodies of knowledge and basic life skills including health and hygiene, agriculture and industries, crafts and cultures etc. This will further lay the foundation for greater dissemination and application of knowledge across various sections of the state's society.

Currently, the learning process seems to be more aligned to rote learning and maximization of the marks scored by a child and there is little focus on the learning achievement of the child. The pressure to compete with peers removes the joy of learning. There is hardly any room to express one's creativity. The perception of academic burden is tied to incomprehension, a problem which can be addressed by modifying the curriculum development goals, and by improving the school environment through provision of mandated infrastructure. Changes have to be made to the curriculum on a regular basis to adjust to local needs, and other socio-cultural requirements. Constructing a child centric learning process and ensuring that a child transits from being a 'receiver' of information to a situation where he/she can 'construct' knowledge' should be considered.

Proposed Intervention Details

The expressed vision for school education includes the 'process' of delivering education as a key component in the quality of education. The National Curriculum Framework (NCF) 2005 expresses concern with the present method of treating examination results as the sole criterion for judging quality. Instead, it recommends a shift from the existing system where the child is perceived as a 'receiver' of information to one where he/ she can be a part in constructing knowledge.

Some of the key elements that can transform school curriculum are:

- Activity based learning where a child learns through applying concepts that he/she is taught
- Curriculum should be carefully designed not to reinforce social inequities of gender and caste
- Curriculum should facilitate discussions on local issues
- Curriculum should introduce skill orientation courses that will enable the students appreciate their importance
- Physical education, nutrition, hygiene, arts and crafts could be non-evaluatory but key components of the curriculum at the elementary level

Karnataka has been a pioneer in introducing an activity based learning system called Nali Kali way back in 1995. 'Nali Kali' started over a decade ago and now covers classes I and II in about 14,000 schools across the state.

Delivery Mechanism

- Administrative
    - Change the existing definition of attainment of learning levels, which measures only scholastic achievement. The Education Department should also include physical fitness and development of creative abilities in the definition of educational attainment.
    - Undertake a comprehensive assessment/evaluation of whether 'Nali Kali' is leading to better attainment of learning levels for children. The Education Department should be advised to take this up on priority.
- Curriculum
    - Curriculum designed by the DSERT should mandate field visits for reinforcing conceptual understanding through practical exposure.
        - School administration should involve the community in the education process. One way is to schedule regular sessions where local people from different professions share their experiences with the children.
        - Encourage local NGOs and local industries to participate in the design and training of life-skill courses. The Education Department should encourage NGO participation to bring in systemic innovations in the teaching-learning process. NGOs can take up pilot projects in schools. After independent evaluation of outcomes, successful innovations can be replicated in all the schools. The mechanism for facilitating this participation is explained later.
- Infrastructure
    - Given the lack of basic infrastructure such as water supply and toilets in schools, priority should be accorded to address these shortages.
    - Classrooms should be given the teaching and learning aids necessary for the newly developed curriculum
    - Provisions should be in place for field trips and local people to come and interact with the children.

Programme Implementation

Roles & Responsibilities	Agencies Involved	Timelines
Impact Assessment of "Nali Kali"	Department of Education	Short term
Re-design of curriculum to make it more activity-oriented and in-line with changing requirements identified above	DSERT	Short term
Evaluate and develop locally relevant components of the curriculum, through interactions with industry organizations, CBOs and SDMCs	DIET, BRP, CRP	Medium term
Design basic skill courses for high school students	DIET, Local NGO and CBOs, Local Industry	Medium term
Research and pilot alternate systems of 'competency-based' testing, successful models, after independent evaluation, can be introduced in all schools.	DSERT	Medium term
Provide learning aids to all schools	DSERT, Department of Education, DSERT	Medium term

Roles & Responsibilities	Agencies Involved	Timelines
Training of DIET teachers (on construction of standard/ subject/ unit specific objective tests etc.)	DSERT	Continuous
Recognition to teachers who have introduced innovative ideas in the class room	Department of Education	

Programme Monitoring

- DSERT should periodically update the school curriculum in keeping up with changing socio-economic requirements
- DSERT should monitor the design of local component of school curriculum at the DIETs
- DSERT should give inputs to DSERT on the teacher training needs on the changes introduced in the curriculum
- SDMCs should monitor the learning levels of the children in their schools.
- SDMCs should monitor the drop-out rates

Key Performance Indicators

- Number of drop-outs at upper primary and high school levels
- Number of new innovative teaching methods introduced in class rooms
- Number of skill development courses offered in schools
- Number of field visits organized
- Number of sessions taken by local experts
- Number of new modules introduced at district level in schools

Indicative Budget

Particulars	Unit cost (Rs)	Number	Total (Rs.)
Impact assessment of “Nali Kali”	60,00,000	1	60,00,000
Design of curriculum and teaching and learning aids	10,00,000	1	10,00,000
Teaching and Learning Material for all schools (the complete set of TLM this can be provided to schools in phases; an allocation of 2000 per year can be made per school under this head)	2000	50,000	10,00,00,000
Field Trips (2-3 trips per year per school)	2500	50,000	12,50,00,000
Honorarium to local experts (2-3 experts visiting a school per year)	1000	50,000	5,00,00,000
Total			28,20,00,000

Intervention D: Bridging the gender gap in education

Implementing Agency: Department of School Education / Public Instruction

Objective

Encouraging girls to remain in school and reducing girl drop-outs by:

- Improving existing school infrastructure and ensuring functional girls toilets in each school. This would help in achieving the Vision 2020 goal of having all 8 basic infrastructure facilities in 100% schools in the state.
- Review and provision of gender sensitive curriculum
- Ensuring appointment of female teachers in all schools
- Provision of support systems for girls through contracting expert child counselor in high schools and designating teacher-counselor for girls in all schools
- Providing additional girls-only schools
- Gender sensitization would feed into achieving a number of Vision 2020 goals including 100% GER in secondary education; 25% GER in Higher Education; and zero drop-out rate during transition from class I to X.

Need/ Justification

According to the United Nations - education is a fundamental human right: Every child is entitled to it. It is critical to our development as individuals and as societies, and it helps pave the way to a successful and productive future. Karnataka will find it hard to meet the MDGs unless it makes significant progress in the area of girls' education.

Currently, gender disparities in literacy, though declining, are still prevalent in the state. GPI[17] of Karnataka, in 2001, at 0.75 improved substantially from 0.38 in 1961. Karnataka fairs poorly in literacy of SC and ST communities. Census 2001 shows SC literacy to be 52.9% while ST literacy was 48.3%18. Gender disparity within SC, ST and Minority communities was high, with GPI for SC being 0.65 and ST being 0.61. The low GPIs for the backward communities in 2001 suggest that, in terms of gender disparity in literacy, these communities lag behind the general population by at least a decade.

Karnataka has made good strides in enrolling girls children into schools in the last 3 decades. GPI for enrolments at LPS and UPS were 0.98 and 0.95 respectively as of 2001. However, the Mean Years of Schooling of children aged 7-16 years (2001) is very low in the state at just 4.46 years for all children; even here girls fare worse than boys at just 4.29 years compared to 4.62 years for boys.

The state has not yet succeeded in retaining all its girl students in school. The girl drop-out in high school is indicated by the significant difference of 27% in enrolment figures (DISE 2008-09) between 7th std (4,78,812) and 10th std (3,50,381) in the state. Girl students face additional constraints over general issues faced by students. Parents of girl students are particularly concerned about the safety, transport and other basic facilities such as availability of functional toilets for girls in school, more so in high schools. Currently, DISE data reports that only 47.2% schools have girl's toilets. Moreover, presence of female teachers in schools is essential to address concerns of parents. Only 19.8% of schools in the state have more than 1 female teacher in schools. Faced with manifold difficulties and challenges, many girls are forced to cease their schooling.

Girls who are denied or forego education are more vulnerable to poverty, hunger, violence, abuse, exploitation, trafficking and maternal mortality. When they become mothers, there is a greater chance that they will bequeath illiteracy and poverty to the next generation. Educated women are

[17] Gender Parity Index (GPI) is a ratio of Census defined literacy of females to literacy of males.
[18] GoI, "Selected Educational Statistics 2004-05"

found to be less likely to die in childbirth; more likely to have healthy babies; more likely to send their children to school; they are better able to protect their children and themselves from various diseases. Gender parity in education will lead to gender equality in society. Educating girls is a means to an end. Quality education is the gateway to equal access to information, opportunity, self-determination, and economic, political and social empowerment of women in society.

Administration Action

- Improvements to existing infrastructure and curriculum
    - Education Department should include a functional girl's toilet in minimum standards for a school and ensure that all schools conform to it within the next three years. It should explore using funds from SSA, Total Sanitation and other PRI schemes.
    - DSERT, during the design of the curriculum, should take care not to reinforce the existing social stereotypes of women. The curriculum should include active teaching methods that can improve the girls' confidence levels, communication skills, and interpersonal skills allowing them to lead a self-assured and productive life.
    - DSERT designed curriculum for teacher training should also include a component to sensitize teachers about gender issues. NGOs and other women organizations can also be approached to provide necessary training.
- Instilling pride and confidence among girl students
    - The SDMCs, NGOs, and Panchayats should encourage parents/ guardians to send their girls to school.
    - Every School management/ SDMC should celebrate International Women's Day on March 8th in all schools of Karnataka. During the celebration, the theme of activities such as plays, stories, skits, exhibitions should be highlighting successful women in various walks of life and women's contributions in history.
    - The School management/ SDMC, with the support of local NGOs if possible, should use this opportunity to invite mothers / family members of the students to these celebrations and conduct an awareness campaign on women empowerment.
    - A sum of Rs 500 per school may be disbursed each year to the SDMC of all government schools in the state for meeting the expenses relating to the above activities
- Provide female teachers and guides in all schools and expert child counselor in high schools
    - Government/ School management should appoint/ transfer teachers to make available at least two female teachers in each high school within the next two years.
    - It should also be mandated that every co-educational/ girls high school appoints at least one external expert child counselor (female) to address gender-specific issues and other problems faced by girl students. This counselor should be available for half a day at a fixed time in school at least once every month to meet those students individually who wish to meet her. Each counselor could be assigned around 50 high schools each and paid around Rs. 250 per school visit. This initiative must be started on a pilot basis with at least one counselor contracted in any one block in each district. The efficacy of this initiative must be assessed after a year and the pilot may be extended gradually to the rest of the high schools in the state in subsequent years.
    - In addition, at least one female teacher of all schools must be designated as "mitr"/guide to girl students who the girls can approach any time for assistance/ help.
- Provision of additional girls-only schools
    - Utilising the opportunity provided by the new Rastriya Madhyamik Shiksha Abhiyan (RMSA) which focuses on universalisation of secondary education, the state government should be proactive and identify the requirements of new girl-only high schools through a thorough study and analysis. This initiative should concentrate on provision of new girl high schools in areas/ blocks having:

        - Low female literacy, high gender gap in literacy or large share of female dropouts
        - Urban slums with poor access to local government high school
        - High proportion of SC, ST and Minorities
    - The assessment should prepare a district-wise list of locations/ schools which need to be built/ expanded to meet the demand, and assign priorities (schools to be taken up in short and medium term) so that the action plan would be ready to utilize the RMSA funds as and when they are available.
    - In addition, in the areas/ blocks identified above where establishing new high school is a difficult option due to low number of students, the study must identify specific interventions on improving transport facilities and better connectivity at convenient timings to improve enrollment/ attendance of girls and ensure their safety.
    - Expand setting up of Kasturba Gandhi Balika Vidyalayas for upper primary education being run by Mahila Samakhya/ SSA society from current 64 taluks in state to cover all taluks where there are a minimum of 50 girls predominantly from SC, ST and Minority communities available to study in the upper primary school. The pattern of financing is 50:50 between central and state governments, and implementation agencies are the SSA society and Mahila Samakhya society of the state. The unit cost of each school is around Rs 26.25 lakhs and the running operating cost per school having 100 girls is Rs 19.05 lakhs

Programme Implementation

Activity	Responsible agency	Timelines
Action plan for provision of functional girls toilets in all schools	SSA Society	Apr – Jun 2010
Construction of functional girls toilets in all high schools	Department of Education	Apr 10 – Mar 13
Review of student and teacher training curriculum to strengthen gender sensitization and not reinforce existing stereotypes of women.	DSERT	Apr 10 – Mar 11
Celebrate International Women's Day on March 8th in all schools through plays, skits, exhibitions etc	SDMC, School HM	Ongoing – annual activity
Review and make available at least two female teachers in each high school through transfer/ appointment	Department of Education	Apr 10 – Mar 12
Appoint one external expert child counselor (female) – in one block per district on pilot basis to provide counseling services in all high schools of the block	Department of Education	Apr 10 – Mar 11
Appoint a senior female teacher as a guide/ support system for all girl students in the school	Department of Education	Apr 10 – Mar 11
Contract external agency to conduct six month assessment study to identify areas/ blocks having requirement of girls only high schools in preparation of RMSA.	Department of Education	Apr 10 – Sep 10
Expand Kasturba Gandhi Balika Vidyalayas to cover all taluks	SSA/ Mahila Samkhya Society	Apr 10 – Mar 13

Monitoring and Evaluation

- The Department of Education needs to constantly monitor the enrolments of girls in schools and track their performance throughout their school going years.

- SDMCs need to monitor the attendance of the girls going to their schools, and if there are issues regarding girls' a drop in attendance the issue needs to address it immediately.

Key Performance Indicators

- Number of girls finishing upper primary and high schools
- Number of female drop outs at every level (LP to UP, UP to High School)
- Number of girls only high schools and capacity
- Number and enrolment in Kasturba Gandhi Balika Vidyalayas
- Number of schools without functional girl toilets
- Number of schools without at least one female teacher

Indicative Budget

Activity	2010-11 (Rs. Lakhs)	2011-12 (Rs. Lakhs)	2012-13 (Rs. Lakhs)
Provision of functional girls toilets in high schools * @Rs 40,000 per school	320	320	320
Celebrate International Women's Day function in all schools @Rs 500 per school	150	150	150
Appoint one external expert child counselor (female) for high schools – in one block per district and expanded each year	50	100	150
Curriculum re-orientation Cost	50		
Assessment study to prepare action plan for RMSA	50		
Construction of Kasturba Gandhi Balika Vidyalaya school with hostel for 100 girls – 111 schools built over three years to cover all taluks – (50% is the states contribution)	500	500	500
Total (Rs. Lakhs)	1120	1070	1120

* For LPS and UPS, existing SSA funds may be used

Intervention E: Developing Open Resource Centers in rural areas.

Implementing Agency: Department of School Education / Public Instruction

Objective

- Providing practical / activity-based science, maths, and language education (through Open Resource Centers) will encourage children to transition from the existing system of education where a child is perceived as a 'receiver' of information to one where the child can also 'construct' knowledge. Open Resource Centers will help encourage children to be more inquisitive and stimulate their interest in learning.
- This initiative will be instrumental in achieving some of the Vision 2020 goals including 100% GER in secondary education; 25% GER in higher Education; zero drop-out rate during transition from class I to X; and achieve minimum education attainment level of 80% as per KSQAO

Need/ Justification

Karnataka will have to create, disseminate, and use knowledge to enhance its growth and development and move towards a knowledge society. In order to create knowledge, the state has to encourage innovation and research through investing in developing a new generation of young, dynamic, and curious workforce. In order for the state to develop this kind of workforce, it needs to encourage children to take an active interest in science and technology, mathematics and languages.

Schools should provide an environment where students can experiment and are encouraged to be active learners. Many government schools in the state, however, are still in the process of acquiring basic amenities such as a permanent building, drinking water, toilets, power, appropriately trained teachers etc. The infrastructure deficit at a school level can be overcome by providing science/math/language labs at the taluk level where school students can visit and augment their skills on a periodic basis.

In 1998-99, Karnataka established 224 science centers throughout the state, one in every assembly constituency. These science centers were housed in centrally located government secondary schools in each assembly constituency and were equipped with latest scientific and audio – visual equipment. The science centers have in place science teachers from the local high school where the science center is placed. The science teacher is supposed to receive periodic training. The activities conducted by these science centers include orientation of science teachers from other schools, training in handling scientific equipment, arranging field trips for students, conducting science exhibitions, science competitions, science quiz and science fairs which reach out to the community. The students can experiment and play with models, and engage in various other activity based games, which will not only reinforce the lessons taught in class but also fascinate them and increase their joy in learning and their absorptive capacities. These science centres have, however in the recent years almost become non-functional due to the lack of funding by the state.

Introducing Open Resource Centres (ORC) at schools can provide first-hand experience and an opportunity to develop intuitions about the natural world, improve language and analytical skills . In ORCs, students can feel infrared radiation, experience angular momentum, and improve listening comprehension, —so when they encounter these concepts in other settings, it will be easier for them to comprehend. That is why schools around the world rely on such centres for memorable field trips and auditorium programs, hands-on curriculum, science/maths/language kits, and even training for teachers. Such centres are also found to encourage curiosity. Exhibits that are beautiful or surprising—or even funny—can encourage children to approach new phenomena and ideas. For some, the interests awakened by such experiences have turned into a passion for academics, and the beginning of a lifetime devoted to teaching or research.

Proposed Intervention Details

- The Department of Education should survey the taluks, and pick about 10 taluks where a pilot for introducing the ORCs can be taken up.
- These centers should be housed in either the BRC/high schools in a block level. There should be no new construction. The center should be placed in a high school or BRC having an appropriate space of about 500-600 sqft.
- The BRC can act as the administrative office for a ORC.
    - The BRC can make a visiting calendar and the schools in the taluk can visit the center according to the days allotted to them.
    - The State should post a competent teacher and a helper to man the Open Resource enter.
    - The BRP can train the already existing science center teacher with the latest material to help with the running of these centers.
    - The BRC should orient the high school headmaster and SDMC members on the benefits of the Open Resource Centers..
    - Evaluation forms can be handed out to the students and teachers after the visit. These evaluation forms can be used to improve the centers.
- Ministry of Science and Technology, Govt. of India, Indian Institute of Science, Department of Science and Technology India (DST), ISRO, National Council for Science & Technology Communication (NCSTC), Vikram A Sarabhai Community Science Centre (VASCSC) and other reputed science institutions, both in the public and private sector in the state can be approached for innovative ideas and development of appropriate material through partnership / collaboration arrangements. The material should reinforce what the children are being taught in class.
- The centers should have 5-6 modules that include physics, chemistry, life/social sciences, mathematics, languages, geography, etc.
- Each center should have a good projection facility, where children can watch informative video clippings/films.
- District and state-level learning fairs should be encouraged where students can compete with each other in model building, science quizzes and other competitions.
- The center should have interactive material in both Kannada and English.
- Reputed and willing community organizations and individuals could be involved in operating these centres. Opportunities for involving them in providing funds, infrastructure and equipment for the ORCs should also be explored.

Programme Implementation

Roles & Responsibilities	Agencies Involved	Timelines
Engage reputed S&T organizations like ISRO, Biocon, IISc, Science Institutions, etc. to conceptualize / design the contents in the Open Resource Centers.	Department of Education and Department of IT, BT and S&T	Short Term
Identify the pilot science centres to be introduced; Allocate administrative responsibility of the centers to the respective BRCs.	Department of Education	Short Term
Develop instruction / display material for the pilot science centers	Department of Education and DSERT	Medium Term
Provision of adequate infrastructure and equipment for the pilot Open Resource Centers.	Department of Education and Department of IT, BT and S&T	Medium Term
Make a calendar of annual school visits in the Open Resource Centers.	BRC	Medium Term

Train DIETs, BRP, CRP on the contents of the Open Resource Centers. in Kannada and English	DSERT	Continuous
Train centre guides/teachers	BRC	Continuous

Programme Monitoring

The monitoring of the centres should be done by the local BRC office, with guidance from the DIETs. The teacher in-charge should send a monthly report to the BRC on the status of the material, and the most visited sections of the centre.
The BRCs can consolidate the reports sent by the teachers, and send a summarized version to the DSERT on the content usage at these open resource centres. Accordingly, changes to the information can be made by DSERT.

Key Performance Indicators

- Number of private and public institutions who are working in collaboration with the Department of Education
- Number of schools that visit the centers each year
- Feedback forms that the center receives from the students and teachers
- Increase in enrolment in science courses at the higher education level

Indicative Budget

Budget Head	Number	Unit Cost (Rs.)	Total Cost (Rs.)
Design of display material for the centres	1	10,00,000	10,00,000
Open Resource Centers – infrastructure and equipment	10	25,00,000	2,50,00,000
Training of teachers and BRCs	20	2500	50,000
Open Resource Centers – fairs and competitions			50,00,000
Total			3,10,50,000

Intervention F: Enhance the nutritional content of Mid-day Meal being provided in schools

Implementing Agency: Department of Public Instruction

Objectives

- Improve children's health through provision of nutritious mid day meal
- Improve community ownership of the mid day meal scheme through effective awareness campaigns
- Improved nutritional content of the mid day meal served at schools will help reduce the incidence of malnutrition and anaemia among children

Need/ Justification

Karnataka introduced the 'in-school feeding' programme, wherein school children were provided hot cooked lunch in schools, in 2002 and extended this Mid-day Meal (MDM) scheme to cover all students in government and government aided schools in the state from classes I to X in 2007. Under this scheme, mid day meals are being provided to over 76 lakh students across the state. In 2009, almost 90% schools (54,793 schools) are preparing lunch within the school premises; others are being served from centralised kitchens and by NGOs (5,764 schools).

As per the findings of a recent state-wide study on mid-day meals in Karnataka (2008-09) the nutrition levels among children continue to remain low despite nutrition interventions, with at least one third of the students surveyed performing poorly on one or more anthropometric measures. 38% of the 25,000 school going children surveyed across the state were found to be moderately or severely underweight. Similarly, 37% of the children surveyed were moderately or severely stunted (low height for age) and 28% of the children surveyed were moderately or severely thin (low weight for height). In addition, at least 56% of the students surveyed had some form of anaemia as per IAP standards. This figure is much higher at 76%, when compared with WHO standards.

Given this state of affairs, the nutritional content of the food being served at schools needs to be enhanced to meet the nutritional needs of children in the state. Given the high levels of anaemia in the state, there is an urgent need to meet the recommended nutritional norms of 490 calories and 12 grams of protein for primary and 700 calories and 18 grams for higher primary students. The inclusion of locally available seasonal vegetables, peanuts and soya products can greatly help improve the nutritional and calorific content of the mid day meals with minimal cost implications. The current allocations towards cooking costs in Karnataka are Rs.2.37 for primary, Rs.2.57 for upper primary and Rs.3.71 for higher secondary. The Cabinet Committee on Economic Affairs has recently approved a revision of MDM norms in schools[19]. As per the report,

- Food norm for upper primary children has been revised to increase the quantity of pulses from 25 to 30 grams, vegetables from 65 to 75 grams and to decrease the quantity of oil and fat from 10 to 7.5 grams.
- The cooking cost (excluding the labour and administrative charges) has been revised to Rs.2.50 for primary and Rs.3.75 for upper primary children with effect from 01.12.2009 and to further revise it by 7.5% on 1.4.2010 and again on 01.04.2011. The cooking cost will be shared between the centre and the NER States on 90:10 basis and with other States / UTs on 75:25 basis.

Interactions with stakeholders also indicated to the dissatisfaction/ inadequacy regarding the quality levels of inputs provided as well as the funds allocated for the mid day meal. Some stakeholders also indicated the need to both educate and train the cooks on nutritional aspects and healthy cooking methods. Enhancing the nutritional content of the meal would involve incorporating food items which provide carbohydrates, proteins, vitamins and minerals to the children. This would be

[19] Press Bureau of India, GoI (Friday, 27 November 2009)

possible by enhancing the allocation for vegetables and at the same time, allowance for greater scope for variation in the menu according to local tastes and resources.

Scheme Outline

Under this initiative, the state will endeavour to enhance the nutritional aspect of the MDM served in schools across the state. This would serve as an important intervention in addressing the chronic problems of malnutrition and anaemia among children. The initiative will adopt a multi-dimensional approach that would include increasing the allocations per child, greater flexibility to schools to procure food supplements locally and design the menu accordingly, and design of training modules on nutrition by qualified nutritionist and imparting this training on a regular basis to ground level personnel. A special focus should also be given on interventions to encourage community participation in the initiative through promotional and educational programmes in rural areas.

Proposed Scheme Details

Under the proposed initiative, the following activities need to be initiated:

- **Increase allocation towards purchase of vegetables by Re. 1 per child per day:** Increased vegetable content in cooked food is a source of vitamins, iron and other minerals and dietary fiber, which, apart from providing much needed nutrition will also help improve digestion and reduce incidence of anaemia. The current allocation for vegetables of Rs.0.50 per day per child may be increased so that schools are able to purchase sufficient quantity of vegetables to be included in the cooked meal. It is proposed that in addition to what has been recently suggested by the Cabinet Committee on Economic Affairs, the state shall allocated an additional Re1 per child per day towards provision of vegetables in the mid day meal served at schools. It has been estimated that if the allocation to buy vegetables is increased by Re. 1 per child per day, the increased expenditure on vegetables would be approximately Rs.131 crore per annum for the state.
- **Increasing share of untied funds** to schools enabling them greater flexibility to procure food supplements locally. It is proposed to provide additional untied funds amounting to Re. 1 for primary and Rs. 2 for UPS and High School per child per day through this initiative. These funds may be transferred directly to the school via the SDMC account and may be used by the school to procure locally available and acceptable food supplements such as peanuts, soya based products, milk products, sweets, fruits, eggs etc. for inclusion in the mid day meal. However, this needs to be necessarily accompanied with suitable guidelines issued to schools providing a list of possible food items along with their respective nutritional values for reference. The department may study the decentralisation of untied funds present in the ICDS programme where the procurement of local food material is done through a transparent tendering process. Under ICDS, food items such as avalakki, groundnut, green gram, jaggery etc. are procured locally. Local food procurement funds are disbursed through TP funds.
- This initiative will aim to **improve the performance of delivery of nutrition supplements** (tablets), both in terms of quality and regularity. Studies have shown that the intake of IFA tablets have been irregular and not met prescribed guidelines. Given that these supplements are effective only when taken on a consistent and regular basis and in conjunction with nutritious food, it is extremely vital to ensure that the supplements are supplied in time to the schools, and that students consume these tablets as per the norms.
- **Design training modules on cooking practices and nutritional value of food** in consultation with qualified nutritionist: based on the MDM guidelines on cooking practices. The department may prepare a pamphlet on cooking practices and nutritional value of foods which can be distributed to all schools at the beginning of the academic year. Laminated posters outlining best practices and cooking norms could also be displayed in school kitchens. Teachers could monitor the cooks on adherence to good cooking practices.

- **Nutrition and health based education campaign:** an effective and sustained solution to the problem of malnutrition and anaemia among children is to create awareness and educate all key stakeholders on various aspects of nutrition and hygiene. Through this initiative, it is proposed that the department along with the Health Department design and implement a state-wide nutrition and health based education campaign targeted at all stakeholders including students, parents, community members and school functionaries with an aim to enhance effectiveness of the mid day meal. Pamphlets, booklets and posters with pictorial representation of simple aspects of cleanliness, hygiene and nutrition aspects can be handed over to the teachers so that students, cooks, SDMC members can benefit. In addition, MDM notice boards may be introduced in schools to display messages to enhance stakeholder involvement and community ownership of the initiative for successful running of the initiative. The campaign may introduce novel ways in which the community may contribute, in case or kind, towards the initiative. The department may also consider the use of street plays to communicate the importance of nutrition and hygiene among community members.
- **Adopt a school campaign:** the state will engage corporate organisations to come forth and adopt schools for the government run MDM programme which can be integrated into their Corporate Social Responsibility activities. A policy for attracting Public Private Partnership in the programme is currently present in Rajasthan and it has been successful in attracting private players. The Government of Karnataka has already taken a proactive step in encouraging partnership from private players, individuals and trusts/NGOs for 'School Nurturing Programme' which is a flexible programme to choose the school and type of donation. The benefits provided for the contributor are exemption from income tax and recognition and acknowledgement for the nurturer. Even the nurturer's name is to be displayed on the board in the school premises and on the school information wall. The Government needs to aggressively pursue this in order to make this programme a success.

Institution Strengthening and Capacity Building Measures

- Design training and communication campaign on nutrition and hygiene for key stakeholders
- Compulsory periodic training for cooks and teachers on nutrition and cooking practices
- Develop and train personnel to carry out IEC activities

Timeline

Activity	Responsible Agency	Time Period
Recruitment of nutritionist within the department	Dept of Public Instruction	End of Month 2
Design of guidelines to be issued to schools regarding possible food options that may be purchased with untied funds	Dept of Public Instruction	End of Month 4
Design/ update training modules on cooking practices and nutrition	Dept of Public Instruction	End of Month 6
Design and printing of IEC campaign material (pamphlets, booklets, posters etc)	Dept of Public Instruction	End of Month 9
Engage corporate organisations in adopt a school campaign	Dept of Public Instruction	End of Month 10

Programme Monitoring

- Periodic independent state-wide surveys to appraise performance of the scheme against key scheme goals
- Strengthen inspections and reporting at the taluk level
- Awareness campaign to educate all stakeholders on the existing complaint mechanism and at the same time, ensure that all schools have a complaint box.

- Design and implementation of a structured methodology for monitoring of NGO catered schools
- Initiate web based MIS systems for monitoring mid day meals through the proposed Hobli level Nemmadi Centres and Village level Common Service Centres (CSC). This system can make available data on monthly allocation of food grains to schools, calculation of cooking cost, stock entry, school wise class wise gender wise feeding details etc. online. The data from this system may be used to support decision making and planning on various aspects of the programme. This system can be used to develop school level indices to enable inter-school/ taluk level comparisons to identify both best practices and chronic and systemic problem areas.
- Periodic proximate nutritional analysis of mid day meals served to assess, including both kitchen centre and NGO catered schools. It would be important to select the sample carefully to cover all districts and both rural and urban schools to provide a reliable estimate of the nutritional content of the MDM.

Key Performance Indicators

- Recruitment of nutritionist
- Issuance of guidelines regarding possible additional food options for mid day meals
- Percentage schools covered where training modules on nutrition and cooking practices for school functionaries has been conducted
- Design of IEC material
- Number of villages where IEC activities have been carried out
- Number of school adopted by corporate organisations for provision of mid day meals

Indicative Budget (Rs.Lakh)

Particulars	Amount (Rs. Lakh)
Increased allocation for vegetables by Re.1 per child per meal in addition to increments suggested by Cabinet Committee	13098.00
Allocation of untied funds to schools (Re.1 for Primary and Rs.2 for UPS and HS per day)	18473.77
Cost of IEC campaign	35.50
Adopt a school campaign	10.00
Total Additional Cost	31617.47

Intervention G: Augmentation of the existing system of skill development in the state

Implementing Agency: Directorate of Employment and Training

Objective

- Strengthen the entire system of skill development in the state - faculty, curriculum, and infrastructure of the ITIs and related institutions.
- Augmentation of the existing system of skill development in the state will be instrumental in achieving the Vision 2020 goals of increasing the proportion of receiving skill training through ITI/ Polytechnics, VET and Modular Employable Skills from 8-10% to 45%; ensuring 100% access to skill training institutions; and increasing the number of skill training institutions from about 1500 to 2700.

Need/ Justification

Demand

A large proportion of the State's workforce continues to remain in traditional and low-productive sectors and this translates into low income and slow reduction in poverty levels. In order that the poor are able to enhance their capability and benefit from emerging opportunities, they need to possess appropriate skills and competencies. A skilled workforce and higher labour productivity will propel growth rates in respective sectors.

As per 61st Round of NSSO survey, only 3% of rural population and 16% of the urban population have a degree, diploma or a skill certification in Karnataka. This means that large proportion of the state's population has not pursued higher education, nor have they been formally certified for a skill. The state will, therefore, be required to undertake massive efforts for skill development of its workforce through involvement of all sections of the society.

The change in Karnataka's demographic profile will lead to an increase of around 45 lakh people in the workforce in twelve years from 2008 to 2020. This increase in workforce will require creation of substantial employment opportunities in the more productive sectors of industry and services to reduce the dependency on agriculture.

Supply

Vocational Training in Karnataka, is primarily provided by Industrial Training Institutes/ Centres and is supervised by the Directorate of Employment and Training (DGET). The DGET Annual Report 2009, estimates that there are 1,052 ITI/ITCs with a capacity of 91,872 seats. There are 149 government ITIs and 903 private ITCs.

Quality

Quality of vocational training through ITIs/ ITCs has been found to be inadequate. A World Bank study in 2002 of employer perceptions of ITIs in Karnataka found that employers were not satisfied with the quality of persons certified in various skills and trades, through the State ITIs. The study revealed that employers felt that ITIs produce graduates who are not aligned to industry needs and who lack basic scientific/ technical understanding of their trades.

Policy and Legislation

To enhance incomes of people, it is essential that every desiring person should be trained for at least the basic skill competencies for reasonable employment. In a sense, development of basic skill competencies is as important as elementary education. Every citizen should have the right to be trained in the basic competencies of a skill of his/ her choice. The proposed delivery mechanism is listed below

- The state should come out with a policy for skill development of the workforce.
- The said policy should contain provisions for:
  - Norms for access to a skill development institution
  - Basic infrastructure required in every skill development institution
- The mandate should also be to draw up a list of skill training courses that will be covered.
- Where norms for access are not met, government should encourage private investment through incentives such as free land or contribution to capital investments, etc. A PPP draft regulation should be developed, to encourage private players. However, where private players do not show interest, government should build adequate number of centres for basic skill courses.
- Skill training for all mandated skills should be conducted at district-levels and below. A list of skill training courses available in all institutions in each taluk should be documented and made available for reference for people at the taluk level.
- A qualification framework for skills should be developed.
  - The Directorate of Employment & Training (DET) should constitute an Advisory Board for preparation of a Qualification Framework. The advisory board should contain representation from industries across sectors. The board should define skill courses under the purview of DET and review the same after every 5 years.
  - The qualification framework would segregate competency levels of skills. For instance, a Certificate 1 can imply basic skills while a Certificate 4 would mean more complex skills.
  - Suggested characteristics of a competency can include:
    - Breadth, depth and complexity of knowledge and skills
    - Ability to apply the skills in a work-environment
- Single body for administration of skill development: Skill courses are presently under the purview of two departments: vocational education is under the Department of Education while vocational training is the responsibility of the Department of Labour. With a dual responsibility for skill development, it is difficult to administer responsibility to a single department. Programmes such as the National Skill Development Mission (NSDM) require implementation assigned to a single agency. Directorate of Employment & Training (DET), Karnataka could be the single body responsible for skill development (vocational education and training) in the state.

Administration Actions

Improving the overall skill development infrastructure in the state

Infrastructure

- An institutional mechanism to determine the skill demand and their absorption into local industries should be created. Objective of skill development is to prepare individuals for employment. Hence, it is essential to ensure that skill courses offered are tuned to meet local employment opportunities. Since, the industry is a key stakeholder in the skill development process, there should be a mechanism to facilitate industry participation at every point of the skill development process.
  - DET should conduct a taluk-wise survey to ascertain the skills needed for employment in the local industry over the next 5 years. Such a survey should be repeated every 5 years. The DET should have an institutionalized mechanism for local firms to input their human resource demand that can then be used to plan expansions or introduction of new courses.
  - On the basis of the survey results, DET should prepare a list of recommended new courses for every taluk. All government institutions should select skill courses from this list.
- Currently, diploma holders can opt for a bridge program that allows them to move into degree courses. This facility is, however, not available for ITI students to shift into diploma

courses; this bridge should be developed and students should be encouraged to pursue diploma courses and further enhance their skills.
- Refresher courses and new applications should be taught to already trained ITI personnel, this will increase their marketability, and keep them up to date on all the new developments in their field.

Curriculum

- The state should research and start offering orientation to various skills even in high-schools. This will ensure that the students are better informed about the choices available to them after school.
- DET should constitute Industry Skill Councils (ISCs) with representation from a few companies representing a particular industry. Each industry should have an independent skill council.
    - Mandate of the Industry Councils (ISCs) could be:
        - To provide projections on potential employment opportunities in the state. This could be in the form of an Employment Report with projections for the next 5 years.
        - To assist DET in preparation of course curriculum and teaching methodology for skill courses.
        - To impart internship training to skill trainees. Since skill courses can be of varied duration, the internship period for each course should be decided by the respective ISCs. The number of interns to be trained by a company could depend on the size of the company. For instance, one may use a thumb rule that a company should train interns numbering 1% of company employees. Companies should pay a stipend to interns during the duration of the internship.
        - ISCs would be represented in the Advisory Board preparing the Qualification Framework.
        - DET should conduct an employment ‘mela’ / job fairs in different regions of Karnataka annually. Representatives of the industry councils can recruit individuals with skill certification.

Increased focus on women and under-served areas

Setting up new ITI and skill centres in backward areas

- According to the Karnataka Vision 2020, the state needs 2,700 skill training institutes in 2020 compared to about 1,100 currently available. The state should first do a skill assessment study of the skills required in these areas and then proceed to set up new ITIs..
    - ITI & skill centres should be set up in only the under-served block areas (backward taluks, minority concentrated areas, border area taluks, SC/ST concentrated areas, naxal affected areas, hilly/difficult areas, and other unserved areas)
    - New ITI and skill centres should be set up in conjunction with the schemes of the Department of Women & Child Development (DWCD), and Department of Minorities/ Social Welfare.
- The GTTC model should be expanded to cover all districts. Currently there are no GTTC in 11 districts of the State. A one-time capital grant of Rs.12.5 crores (6 crores for buildings & 6 crores for machinery) per GTTC could be provided. GTTC would be able to generate enough revenue to bear the subsequent operational expenses.
- Private sector and NGOs should be encouraged to set up or adopt ITI and skill centres with minimum or no support from the government. The private firms should also be encouraged to hire the students after their training. The Government of India is currently giving out interest free loans to private institutions to set up / manage ITI and skill centres. A PPP system of financing should be researched where the students pay a user fee, with contributions from

both the government and private sector. The private sector will be more willing to pay when they realize that the graduates are productive workers.

- Construction or leasing of hostel facilities for both men and women will also increase the enrollment in these courses. Other options such as providing transportation facilities can also be explored for certain far away locations.

Programme Implementation

Roles & Responsibilities	Agency Involved	Timelines
Designate the Directorate of Employment & Training (DET) as the Nodal Agency for skill development in the state and finalization of its responsibilities	State Government	Short term
Develop a framework and timeline for infrastructure expansion Map relevant skill training programs to the area where the skill is required Develop hostel or transport facilities where required (special attention to women, minorities and backward classes) Include private players in expansion plans	DET, DWCD & DoM	Short Term
Skill forecast and industry mapping for each taluk, keeping in mind women, minorities and backward classes. Recommend course listing for each taluk	DET, DWCD & DoM	Medium Term
Facilitate the formation of Industry Skill Councils (ISC)	DET	Medium Term
Construct new ITIs in unserviced regions	DET	150 each year for the next ten years.
Work with the advisory board of DET to formulate a qualification framework	ISC	Medium Term
Assistance to DET in preparation of course curriculum and teaching pedagogy for skill courses	ISC	Medium Term
Develop skill demand reports (employment reports) through private sector inputs	ISC	Medium term (continuous)
Develop an internship program in coordination with private firms	DET / ISC	Medium Term
Conduct employment ‘melas’ in each taluk so trainees can meet prospective employers.	DET / KVTSDC	Continuous

Programme Monitoring

- Communication between the DET, DWCD, and DoM/ DoSW is necessary to ensure that proper targeting of beneficiaries.
- DET should liaison with the various private players and ensure long lasting mutually beneficial relationships.
- DET should get annual reports with the enrolments in each of the ITI and skill centers which help them with future expansion planning.

Key Performance Indicators

- Number of applications received for seats at the ITI/ITC for males and females
- Number of students on the waiting list to gain admission into the ITI/ITC (males and females)
- Dropout rate from the ITI/ITC for males and females
- Time lag between pass out from the local ITI/ITC and job for males and females
- Average salary after the course for males and females
- Number of women, backward classes, and minorities enrolled in ITI/ITC for males and females
- Number of private firms involved in the course design and internship programs for males and females

Indicative Budget

Particulars	Unit cost (Rs)
Assessment study	50,00,000
Fixed Cost for building ITI/skill development centres	6,00,00,000
Annual recurring cost for running ITI/skill development centres	1,20,00,000
GTTC (One time capital grant for building and machinery)	12,50,00,000

Intervention H: Enhance flexibility in the academic process for higher education courses

Implementing Agency: Department of Higher Education

Objective

- Enhancing flexibility in the academic process will ensure better learning opportunities, easy inter-institution transferability of students, improve educational quality and excellence and the ability to match students' scholastic needs and aspirations.
- This would help achieve the Vision 2020 goal of achieving 25% GER in Higher Education.

Need/ Justification

It is essential that students in universities get exposed to various fields of study. This can provide to them new perspectives and influence the way they perceive socio-economic and political issues. For instance, students of medicine should be exposed to courses in humanities; it could be useful for students of engineering to take up a short course in project management. However, even with the availability of different courses of study, there would be little cross learning if not facilitated by the structure of programmes offered by the universities.

To facilitate cross learning, universities should shift from the existing 'plate-meal' approach, where courses for each programme are fixed, to a 'cafeteria' approach, where students have the opportunity to choose from a variety of courses under some broad set of guidelines. Europe, for instance, has introduced the European Credit Transfer and Accumulation System (ECTS) to facilitate student mobility across universities.

A credit based system has the following unique features:

- Enhanced learning opportunities
- Ability to match students scholastic needs and aspirations
- Inter-institution transferability of students (following the completion of a semester),
- Part-completion of an academic programme in the institution of enrolment and part-completion in a specialized institution
- Improvement in educational quality and excellence
- Flexibility for working students to complete the programme over an extended period of time
- Standardization and comparability of educational programs across the state.

The credit based system imminently fits into the emerging socio-economic milieu, and could effectively respond to the educational and occupational aspirations of the upcoming generations. Aided by modern communication and information technology, the credit based system has a high probability to be operationalised efficiently and effectively - elevating students, institutions, and higher education system in the state to newer heights.

Proposed Intervention Details

For long, educational institutions have had the format of academic session spread over a 10- 12 month period. This format suffers from several limitations, which is why most institutions of higher education in Western Europe, North America and even reputed national institutes in India follow a semester- based system. The semester-system goes far beyond being a 'time-format'. It enlarges curricular space, and encourages and supports accelerated learning opportunities for all concerned. Further, it has the ability to accommodate diverse choices that dynamic and motivated students may like to have.

For greater flexibility in the academic process, a semester-system will have to be combined with a credit-based system. A large number of institutions around the country already have their

undergraduate and postgraduate papers subdivided into units and sub-units. In a generalized manner, the sequence of the credit based system would be as follows

Paper ⟶ Unit ⟶ Sub-unit ⟶ Credits

The implementation of a semester/credit system calls for several interconnected and coordinated steps that will have to be undertaken by the state's universities and colleges. These are as follows:

- Deliberation and resolution on the semester system in appropriate academic bodies of the institution at different levels like the Karnataka State Inter-university Board, Academic Councils and Board of Studies of Universities, and other related departments to develop an acceptable timeline.
- Re-configuration and revision of curricula (while the quantum of instructional work of faculty members remains about the same, the number of papers or credits could be at least twice as many). Review of curricular contents (study papers, term papers, 'assignments', workshop-assignments, experiments etc.) of certificate, diploma, undergraduate, postgraduate, M.Phil, and Ph.D programmes.
- Decision on the number of student-faculty contact hours during a semester in different programmes - certificate, diploma, undergraduate, postgraduate and doctoral.
- Determining the amount of work to be completed (or credit points to be earned) by students in undergraduate, postgraduate, M.Phil, and Ph.D programmes.
- Decision on the time-distribution on class room-work, field-work, laboratory- work, workshop practice and/or other curricular work. Distribution could vary from subject to subject.
- For the sake of clarity of faculty, students, and examiners, all the curricular contents should be specified and sub-divided into units, and if need be into sub-units, which are subsequently assigned numerical values and appropriate credits.
- Every department can decide on the number of core-credits (mandatory courses) and elective or optional credits for different levels of its academic programmes.
- Decision on the 'total' credits to be earned (or completed) by students undergoing certificate, diploma, undergraduate, postgraduate, M.Phil or Ph.D programmes.
    - Generally, core-credits would be unique to the programme, and earning core-credits would be essential for the completion of the programme and eventual certification.
    - On the other hand, elective-credits are likely to overlap with other programmes or disciplines of study (for example, languages, statistics, computer applications, etc).
- Students enrolled for a particular programme or course would be free to opt and earn elective-credits prescribed under the programme, or under other programmes within the department and university or even outside in another recognized university/institution of higher education.
- The Karnataka State Inter-university Board needs to deliberate on an acceptable system where all the Universities transition to a credit system. The students wanting to apply to a new university needs to approach the new campus with all the previous academic work completed. The new campus will evaluate the completed academic work against their course listing. Upon being admitted to the new campus the student will receive a credit evaluation showing how transferred courses equate to courses at the new campus.

Programme Implementation

Roles & Responsibilities	Agencies Involved	Timelines
Design of an appropriate semester system after deliberation and consultation with various stakeholders	Directorate of Collegiate Education, Karnataka State Inter-University Board and Universities	Short term
Design of the credit-based system (number of credits for both core courses and electives, required for various academic programmes; faculty-contact hours;	Academic Councils and Board of Studies of various Universities	Medium term

Roles & Responsibilities	Agencies Involved	Timelines
distribution of class room, field-work, lab/workshop etc.)		
Rationalization of credits in various academic programmes of various Universities; design of criteria for transfer of credits amongst Universities	Karnataka State Inter-University Board and Department of Collegiate Education	Medium term

Indicative Budget

No budget allocation has been made towards this programme, as all are basic administrative tasks that need to be addressed and completed.

Intervention I: Create mechanisms for effective industry–university interaction

Implementing Agency: Department of Higher Education

Objective

To establish a platform where industries and universities can interact, collaborate, and share experiences, resources, and knowledge in a mutually beneficial relationship.

Need/ Justification

Graduates of higher education seek employment in the industry. It is thus imperative that universities develop linkages with the industry to receive their feedback on the quality of graduates and to keep abreast of the employment opportunities available and accordingly align their curricular structures.

Administration Actions

To facilitate interface with the industry, there should first be a structural interface between the university and the industry. Such a structure should specify the roles that industry bodies should play to align the higher education system to the employment opportunities available. An industry-interface structure should include incentives for companies to participate.

- The Higher Education Department should constitute Industry Councils (IC) as an interface between universities and respective industries / industry bodies. If required, the Karnataka State Universities Act can be amended to bring in more private participation and reduce government intervention in the functioning of universities.
- Each IC should comprise representatives of companies from a specific industry. For instance, councils for the IT industry, BPO industry, Bio-Technology, Manufacturing industry, Automobile Industry, Mining industry, etc can be formed.
- An IC should be formed with a well-defined mandate. Suggested components of this mandate could be:
    - ICs can be permitted to design short-term courses to train graduates.
    - Where universities do not have faculty qualified in the subject, a reputed company can depute qualified experts as visiting faculty to teach the course.
    - Industries doing cutting-edge research can be represented in the Research Council in universities to decide allocations for public funded research.
    - All member companies of ICs should impart internship training. The number of interns to be trained by a company can be a function of the company size. It is suggested that a company should train interns to the extent of at least 1-5% of total employees in the business unit.
- Member companies of ICs should be eligible for some benefits. For instance, a university can give priority to ICs in the recruitment process of graduates.

Programme Implementation

Roles & Responsibilities	Agencies Involved	Timelines
Constitute industry councils (IC)	Department of Higher Education	Short Term
Design short-term courses to train graduates	IC	Long Term
Impart internship training	IC	Medium Term
Private firms and universities work together for grants from public funded research	Department of Higher Education Research Councils and Private firms	Long Term

Key Performance Indicators

- Number of Industry Councils set up
- Number of courses designed by the IC
- Number of students offered internships
- Number of students
- Number of private firms and higher education research councils collaborating

Indicative Budget

No budget allocation has been made towards this programme, as all are basic administrative tasks that need to be addressed and completed.

Annexure

Annexure A: Mission Group Formation GO

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ: ವಿಷನ್ ಗುಂಪು ಕರ್ನಾಟಕ 2020ಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಮಿಷನ್ ಗುಂಪುಗಳ ರಚನೆ ಬಗ್ಗೆ.

ಓದಲಾಗಿದೆ:

1. ದಿನಾಂಕ:10.10.2008ರ ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ : ಪಿಡಿ 59 ಎಸ್‌ಪಿಬಿ 2008.
2. ದಿನಾಂಕ:20.07.2009ರ ಟಿಪ್ಪಣಿ ಸಂಖ್ಯೆ : ಪಿಡಿ 71 ಎಸ್‌ಪಿಬಿ 2009ರಲ್ಲಿ ಹೊರಡಿಸಲಾಗಿರುವ ದಿನಾಂಕ:24.06.2009 ರಂದು ನಡೆದ ಕರ್ನಾಟಕ 2020 ರ ವಿಷನ್ ಗುಂಪಿನ ಸಭೆಯ ನಡವಳಿಗಳು.

ಪ್ರಸ್ತಾವನೆ:

"ಕರ್ನಾಟದ ಅಭಿವೃದ್ಧಿಯ ಒಂದು ದೂರದೃಷ್ಟಿ - ದೂರದೃಷ್ಟಿ 2020" ಎಂಬ ನಾಮಾಂಕಿತವುಳ್ಳ ರಾಜ್ಯದ ದಾಖಲೆಯನ್ನು ಅಂತಿಮಗೊಳಿಸಲಾಗಿದ್ದು, ಅದನ್ನು ಸಚಿವ ಸಂಪುಟವು ಅನುಮೋದಿಸಿದೆ. ಬಡತನ ನಿವಾರಣೆ, ಅಸಮಾನತೆ ನಿವಾರಣೆ, ಮೂಲಭೂತ ಸೌಕರ್ಯಗಳನ್ನು ಮೇಲ್ದರ್ಜೆಗೇರಿಸುವಿಕೆ ಮತ್ತು ಸಾಮಾಜಿಕ ಹಾಗೂ ಆರ್ಥಿಕ ಸಮಾನತೆಯ ವೃದ್ಧಿಸುವಿಕೆಯ ಸಲುವಾಗಿ ಈ ದಾಖಲೆಯು ಒಂದು ಕಾಲಬದ್ಧ ಕಾರ್ಯತಂತ್ರವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತದೆ. ಈ ದೂರದೃಷ್ಟಿ ದಾಖಲೆಯಲ್ಲಿ ಶಿಫಾರಸ್ಸು ಮಾಡಲಾಗಿರುವ ಅಳೆಯಬಹುದಾದ ಮತ್ತು ಭೌತಿಕ ಗುರಿಗಳನ್ನು ಸಾಧಿಸುವ ಸಲುವಾಗಿ ನಕ್ಷೆ ತಯಾರಿಕೆ ಮತ್ತು ಕಾರ್ಯತಂತ್ರಗಳ ಅನುಷ್ಠಾನ ಇದೀಗ ಅವಶ್ಯವಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ (ಉಲ್ಲೇಖ 1) ರ ಅನ್ವಯ **"ವಿಷನ್ ಗುಂಪು ಕರ್ನಾಟಕ 2020"** ಇದನ್ನು ರಚಿಸಲಾಗಿದ್ದು, ದಿನಾಂಕ:24.06.2009 ರಂದು ಮಾನ್ಯ ಮುಖ್ಯಮಂತ್ರಿಗಳ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ನಡೆದ ಅದರ ಎರಡನೇ ಸಭೆಯಲ್ಲಿ ದೂರದೃಷ್ಟಿ ದಾಖಲೆಯಲ್ಲಿ ಶಿಫಾರಸ್ಸು ಮಾಡಲಾಗಿರುವ ಪರಿವರ್ತನೆಗಳಿಗಾಗಿ ಅನುಷ್ಠಾನ ಕಾರ್ಯತಂತ್ರ ಕಾರ್ಯ ರೀತಿಯನ್ನು ರೂಪಿಸಲು ಹಿರು ಮಿಷನ್ ಗುಂಪುಗಳನ್ನು ರಚಿಸಲು ನಿರ್ಣಯಿಸಲಾಗಿದೆ.

ಆದುದರಿಂದ ಈ ಆದೇಶ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ಪಿಡಿ 71 ಎಸ್‌ಪಿಬಿ 2009, ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 25.07.2009

ದಿನಾಂಕ:24.06.2009 ರಂದು ನಡೆದ ವಿಷನ್ ಗುಂಪಿನ ಸಭೆಯಲ್ಲಿ ನಿರ್ಣಯಿಸಿದಂತೆ ಹಿರು ಮಿಷನ್ ಗುಂಪುಗಳನ್ನು ಈ ಕೆಳಗೆ ಕಾಣಿಸಿದ ಉಲ್ಲೇಖ ನಿಬಂಧನೆಗಳೊಂದಿಗೆ ರಚಿಸಲಾಗಿದೆ.

ಕ್ರಮ ಸಂಖ್ಯೆ.	ಮಿಷನ್ ಗುಂಪು	ಅಧ್ಯಕ್ಷರು/ಸದಸ್ಯರು	ಸಂಬಂಧಿತ ಇಲಾಖೆಗಳು
೧.	ಮಾನವ ಅಭಿವೃದ್ಧಿ	ಡಾ: ಹೆಚ್. ಸುದರ್ಶನ್ - ಅಧ್ಯಕ್ಷರು ಡಾ: ಬಿ.ಎಸ್. ಅಜಯ್ ಕುಮಾರ್ - ಸದಸ್ಯರು ಶ್ರೀ ಎಂ.ಪಿ. ಕುಮಾರ್ - ಸದಸ್ಯರು ಡಾ: ಗೋವಿಂದ ರಾವ್ - ಸದಸ್ಯರು ಡಾ: ಕಸ್ತೂರಿರಂಗನ್ - ಸದಸ್ಯರು ಡಾ: ಹಿರ್. ಬಾಲಸುಬ್ರಹ್ಮಣ್ಯಂ - ಸದಸ್ಯರು	ಹಿರೋಗ್ಯ, ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ, ಉನ್ನತ ಶಿಕ್ಷಣ, ಕಾರ್ಮಿಕ, ಕೈಗಾರಿಕೆ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್, ಕೃಷಿ

೨.	ಸಾಮಾಜಿಕ ಸಬಲೀಕರಣ (Social empowerment)	ಡಾ:ಬಿ.ಎಸ್. ಅಜಯ್ ಕುಮಾರ್ - ಅಧ್ಯಕ್ಷರು ಡಾ: ಹೆಚ್. ಸುದರ್ಶನ್ - ಸದಸ್ಯರು ಶ್ರೀ ಬಸವರಾಜ್ ಪಾಟೀಲ್ ಸೇಡಂ- ಸದಸ್ಯರು ಡಾ: ಐರ್. ಬಾಲಸುಬ್ರಹ್ಮಣ್ಯಂ - ಸದಸ್ಯರು	ಸಮಾಜ ಕಲ್ಯಾಣ, ಮಹಿಳಾ ಮತ್ತು ಮಕ್ಕಳ ಕಲ್ಯಾಣ, ಆಹಾರ ಮತ್ತು ನಾಗರೀಕ ಸರಬರಾಜು, ಶಿಕ್ಷಣ, ಆರೋಗ್ಯ, ಕಾರ್ಮಿಕ, ಪೋಲೀಸ್ (ಒಳಾಡಳಿತ)
೩.	ಗ್ರಾಮೀಣ ಆರ್ಥಿಕ ಅಭಿವೃದ್ಧಿ	ಪ್ರೊ.ಐರ್.ಎಸ್. ದೇಶಪಾಂಡೆ - ಅಧ್ಯಕ್ಷರು ಶ್ರೀ ಯಲ್ಲಪ್ಪ ರೆಡ್ಡಿ - ಸದಸ್ಯರು ಶ್ರೀ ವಿನಯ್ ಹೆಗ್ಡೆ - ಸದಸ್ಯರು	ಕೃಷಿ, ತೋಟಗಾರಿಕೆ, ಕೃಷಿ ಮಾರುಕಟ್ಟೆ, ಮೀನುಗಾರಿಕೆ, ಪಶುಸಂಗೋಪನೆ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್. ರಾಜ್, ಅರಣ್ಯ, ಪರಿಸರ ಮತ್ತು ಜೀವಿಶಾಸ್ತ್ರ, ನೀರಾವರಿ, ಕಾರ್ಮಿಕ, ಗಣಿಗಾರಿಕೆ
೪.	ಮೂಲಭೂತ ಸೌಲಭ್ಯ ಮತ್ತು ಕೈಗಾರಿಕಾ ಅಭಿವೃದ್ಧಿ	ಕ್ಯಾಪ್ಟನ್ ಜಿ.ಐರ್. ಗೋಪಿನಾಥ್ - ಅಧ್ಯಕ್ಷರು ಶ್ರೀ ಟಿ.ವಿ. ಮೋಹನದಾಸ್ ಪೈ - ಸದಸ್ಯರು ಶ್ರೀ ನಂದನ್ ನಿಲೇಕಣಿ - ಸದಸ್ಯರು ಶ್ರೀ ಪಂಕಜಚಂದ್ರ - ಸದಸ್ಯರು ಶ್ರೀ ವಿಜಯ ಸಂಕೇಶ್ವರ್ - ಸದಸ್ಯರು	ನಗರಾಭಿವೃದ್ಧಿ, ಕೈಗಾರಿಕೆ, ಇಂಧನ, ಲೋಕೋಪಯೋಗಿ, ಮೂಲಭೂತ ಸೌಲಭ್ಯಗಳ ಅಭಿವೃದ್ಧಿ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್, ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣ.
೫.	ವಿಕೇಂದ್ರೀಕರಣ ಮತ್ತು ಆಡಳಿತ	ಡಾ: ಗೋವಿಂದರಾವ್ - ಅಧ್ಯಕ್ಷರು ಪ್ರೊ. ಐರ್.ಎಸ್. ದೇಶಪಾಂಡೆ - ಸದಸ್ಯರು ಡಾ: ಹೆಚ್. ಸುದರ್ಶನ್ - ಸದಸ್ಯರು ಡಾ: ಸಾಮ್ಯುಯಲ್ [ಪೌಲ್ - ಸದಸ್ಯರು	ಯೋಜನೆ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್. ರಾಜ್, ನಗರಾಭಿವೃದ್ಧಿ, ಇ-ಆಡಳಿತ, ಆರ್ಥಿಕ
೬.	ಕರ್ನಾಟಕ ಪರಂಪರೆ	ಶ್ರೀ ಯಲ್ಲಪ್ಪರೆಡ್ಡಿ - ಅಧ್ಯಕ್ಷರು ಶ್ರೀ ಎಂ.ಪಿ. ಕುಮಾರ್ - ಸದಸ್ಯರು	ಕನ್ನಡ ಮತ್ತು ಸಂಸ್ಕೃತಿ, ಪ್ರವಾಸೋದ್ಯಮ, ರೇಷ್ಮೆ, ಕೈಮಗ್ಗ ಮತ್ತು ನೇಯ್ಗೆ, ಕ್ರೀಡೆ ಮತ್ತು ಯುವಜನ ಸೇವೆಗಳು, ಕೈಗಾರಿಕೆ,

(2) ಪ್ರತಿಯೊಂದು ಮಿಷನ್ ಗುಂಪು ಸಂಬಂಧಿತ ಇಲಾಖೆಗಳ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು/ಕಾರ್ಯದರ್ಶಿಗಳು ಮತ್ತು ಇಲಾಖಾ ಮುಖ್ಯಸ್ಥರನ್ನು ಸದಸ್ಯರನ್ನಾಗಿಯೂ ಸಹ ನೇಮಕ ಮಾಡಿಕೊಂಡಿರಬೇಕು. ಸಭೆಗಳಲ್ಲಿ ಚರ್ಚೆಯ ವಿಷಯದ ಅವಲಂಬನೆಯ ಮೇಲೆ, ಪ್ರತಿಯೊಂದು ಮಿಷನ್ ಗುಂಪು ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ/ಕಾರ್ಯದರ್ಶಿಯವರನ್ನು ಆ ಗುಂಪಿನ ಸಹ-ಅಧ್ಯಕ್ಷರನ್ನಾಗಿ ಸಹ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಬೇಕು.

(3) ಪ್ರತಿಯೊಂದು ಮಿಷನ್ ಗುಂಪೂ ಸಹ ವಿಷಯ ತಜ್ಞರು ಮತ್ತು ವೃತ್ತಿದಾರರನ್ನು ಸದಸ್ಯರಂತೆ ಸಹ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಬಹುದು.

(4) ವಿಷನ್ ದಾಖಲೆಯಲ್ಲಿ ಪ್ರತಿಯೊಂದು ವಲಯಗಳದಿಯಲ್ಲಿ ಶಿಫಾರಸ್ಸು ಮಾಡಿರುವ ಗುರಿಗಳು/ಫಲಿತಾಂಶಗಳನ್ನು ಡಿಸೆಂಬರ್, 2009 ರೊಳಗಾಗಿ ಸಾಧಿಸಲು ಅಲ್ಪಾವಧಿ (ಒಂದು ವರ್ಷ), ಮಧ್ಯಮಾವಧಿ (ಮೂರು ವರ್ಷಗಳು) ಮತ್ತು ದೀರ್ಘಾವಧಿ (ಮೂರು ವರ್ಷಗಳನ್ನು ಮೀರಿ) ಇವುಗಳಿಗೆ ಕ್ರಿಯಾ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸುವ ಜವಾಬ್ದಾರಿ ಮಿಷನ್ ಗುಂಪುಗಳದ್ದಾಗಿರುತ್ತದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ,
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

(ಉಷಾಬಾಯಿ)
ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ-3
ಯೋಜನೆ, ಕಾರ್ಯಕ್ರಮ ಸಂಯೋಜನೆ
ಮತ್ತು ಸಾಂಖ್ಯಿಕ ಇಲಾಖೆ.

ಇವರಿಗೆ:

1. ಮಹಾಲೇಖಪಾಲರು, ಕರ್ನಾಟಕ, ಬೆಂಗಳೂರು
2. ಮಾನ್ಯ ಮುಖ್ಯಮಂತ್ರಿಗಳ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕರ್ನಾಟಕ ಸರ್ಕಾರ, ಬೆಂಗಳೂರು
3. ಮಾನ್ಯ ಉಪಾಧ್ಯಕ್ಷರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ರಾಜ್ಯ ಯೋಜನಾ ಮಂಡಳಿ, ವಿಕಾಸ ಸೌಧ, ಬೆಂಗಳೂರು
4. ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಯವರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ವಿಧಾನ ಸೌಧ, ಬೆಂಗಳೂರು.
5. ಆಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು ಮತ್ತು ಅಭಿವೃದ್ಧಿ ಆಯುಕ್ತರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕರ್ನಾಟಕ ಸರ್ಕಾರ, ಬೆಂಗಳೂರು
6. ವಿಷನ್ ಗುಂಪಿನ ಎಲ್ಲಾ ಸದಸ್ಯರು.
7. ಎಲ್ಲಾ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು/ಕಾರ್ಯದರ್ಶಿಗಳು, ಕರ್ನಾಟಕ ಸರ್ಕಾರ, ಬೆಂಗಳೂರು.
8. ಮಾನ್ಯ ಮುಖ್ಯಮಂತ್ರಿಗಳ ಆರ್ಥಿಕ ಸಲಹೆಗಾರರು, ವಿಧಾನ ಸೌಧ, ಬೆಂಗಳೂರು.
9. ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ಯೋಜನೆ, ಕಾರ್ಯಕ್ರಮ ಸಂಯೋಜನೆ ಮತ್ತು ಸಾಂಖ್ಯಿಕ ಇಲಾಖೆ, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಬೆಂಗಳೂರು.
10. ವಿಶೇಷಾಧಿಕಾರಿ, ಆರ್ಥಿಕ ಇಲಾಖೆ(ಜಿ.ಪಂ), ವಿಧಾನ ಸೌಧ, ಬೆಂಗಳೂರು.
11. ಜಂಟಿ ನಿರ್ದೇಶಕರು, ರಾಜ್ಯ ಹುಜೂರು ಖಜಾನೆ, ಬೆಂಗಳೂರು.
12. ಸಹಾಯಕ ಖಜಾನಾಧಿಕಾರಿ, ರಾಜ್ಯ ಯೋಜನಾ ಮಂಡಳಿ.
13. ಹೆಚ್ಚುವರಿ ಪ್ರತಿಗಳು/ಶಾಖಾ ರಕ್ಷಾ ಕಡತ

Annexure B: Mapping of proposed initiatives to Mission Group proceedings and Vision 2020

1. Healthcare

Intervention Area	Initiatives being suggested in the Report of the Mission Group	Proceedings of Mission Group	Strategies from Vision Document
Strengthening of Primary and Secondary Healthcare	1. A. Strengthening Primary Healthcare System – Physical Infrastructure 1. B. Strengthening Primary Healthcare System – Human Resources 2. Design and implement a child health and nutrition tracking system	• Establish 22 new PHCs in North Karnataka region. • By 2020 all PHCs, CHCs and district hospitals of the State to attained IPH standards and all CHCs should to be upgraded to FRUs with 5 specialist doctors • By 2020, all urban areas should be covered by PHCs and maintained by the Corporation and ULB • Establish coordination of mobile health units with PHCs for effective healthcare services. • By 2020, at least 10% of PHCs should be under PPP	• Strengthen primary health centers and first referral units • Targeted interventions for the backward and vulnerable populations • Use of technology to improve accessibility and availability of health services • Partnerships with non-public entities for delivery & monitoring of services
Health Insurance	3. Provision of a Comprehensive Health Insurance Scheme	An insurance mechanism for catastrophical illness for all urban and rural poor	Explore health insurance models as a means to finance high-end curative care
Budgetary Allocation	4. Align Budgetary Allocations for the Health Sector to NHP Guidelines	Total budget for the health sector should be at least increased to 7% of the total budget of the State.	Increase share of public funding for health and allocate resources to sectors according to NHP guidelines
Restructuring of Health Department	5. Restructuring of the Health Department to create a Public Health cadre 6. Human Resource Management Unit for DoHFW	Human resource planning to identify year-wise need for doctors, nurses etc Overall increase of pay scales to attract human resources	Institutional restructuring of the state health department Impetus to the public health field

2. Education

Intervention Area	Initiatives to be covered under Draft Report for Mission Group	Proceedings of Mission Group	Strategies from Vision Document
Skill Development and Higher Education	1. Augmentation of the existing system of skill development in the state 2. Create mechanisms for effective industry–university interaction	• Disbanding Vocational Education Division of the Education Department and courses to be "parceled" to concerned departments. • Explore possibility of introducing PPPs in education. • Upgrade ITIs into "Centres of Excellence" to provide meaningful services and training. Perhaps there could be an integration of services of ITI s with GTTC through lateral entries of those who pass out from ITIs to GTTCs for diploma courses. The polytechnics and ITIs could adopt the GTTC model.	• The State to undertake massive efforts for skill development of its workforce through involvement of all sections of the society. • State to follow contours set by the National Skill Development Mission, which aims at expanding public sector infrastructure for skill development and its concomitant utilisation, by exploring possibilities of partnering with private agencies for ITIs, polytechnics and vocational training centres. • Set up new polytechnics, ITIs and vocational education institutes in the State and capacity augmentation of existing institutes.
Higher Education	2. Enhance flexibility in the academic process for higher education courses		• Encourage universities to shift from existing 'plate-meal' approach where courses for each programme are fixed to a 'cafeteria' approach where students have opportunities to choose from a variety of courses under broad guidelines.
School Education – Teacher Training	3. Providing good quality training for teachers in schools (primary and high-schools)	• Minimum qualification for teacher's up to 5th standard to be PUC and TCH. For all teachers teaching students from 6th standard onwards need to be graduates. Provision for existing teachers to pursue graduation on the job. • Strong strategies needed to reduce drop out from school, especially in regions like Gulbarga and Belgaum where drop-out rates are higher than in other regions of the State.	• Teacher training systems will be strengthened by capacity creation in the DIETs and use of Information and Communication technologies.
School Education –	4. Capacity building of School Development and	• It was required to strengthen the SDMCs for	• Focus will be on improving the quality of school

Intervention Area	Initiatives to be covered under Draft Report for Mission Group	Proceedings of Mission Group	Strategies from Vision Document
Infrastructure	Management Committees (SDMCs)	increasing efficiency in school management. • Environment around schools should be improved, if the approach and surroundings of the school are congested and unclean.	infrastructure through involvement of private and community organizations.
School Education – Enrolment of Girls in High Schools	5. Bridging the gender gap in education	• The drop-out rate of children is more region specific – i.e. in Gulbarga and Belgaum drop-out rates are higher than in other regions of the State. Strong strategies are therefore needed to ensure that there are no children who drop out from school.	• Education department should include a girl's toilet in minimum standards for a school. It should also be mandated that every school has at least one female teacher. • School management should appoint a senior female teacher as a guide for all girl students in the school. • SCERT, during the design of the curriculum, should take care not to reinforce the existing social stereotypes of women. • SCERT designed curriculum for teacher training should also include a component to sensitise teachers on gender issues.
School Education – Curriculum Improvements	6. Re-orient school curriculum to improve contextual relevance of content	• Strong strategies to reduce drop out from school. • Preparation of a status note on vocational education being offered which are "life skill education" and in what ways could they be improved. • To determine the right age at which vocational training may be imparted, counselling of students and attitude testing are very important.	• The State will work towards augmenting and orienting the existing curriculum, pedagogy and evaluation methods in its schools. • Curriculum to be aligned with the requirements of industries. • A relevant curricular design at the school level will lay the foundation for greater dissemination and application of knowledge across various sections of the State's society.
School Education – Popularizing Science	7. Developing Open Resource Centres in rural areas		• Improvement in the standards of teaching and learning particularly with regard to Kannada, English, Maths and Science subjects will be emphasised.

Intervention Area	Initiatives to be covered under Draft Report for Mission Group	Proceedings of Mission Group	Strategies from Vision Document
School Education – Mid-day Meal (MDM) Programme	8. Enhance the nutritional content of mid-day meals being provided in schools	• As regards MDM, the cost per child may be increased to provide substantial nutrition. This is to be worked out by the Education Department. • Schools are to decide the menu and one teacher or headmaster to be trained in nutrition, to keep a check on the nutritional value of the food served. • Further, since the Education Department was implementing the MDM programme which is a nutrition programme, a nutritionist needs to be posted in the Department.	

Annexure C: Comparison of Health Insurance Schemes

Parameter	Yeshaswini	RSBY	Suvarna Arogya Chaitanya	Suvarna Arogya Suraksha*	Modified Suvarna Arogya Suraksha*
Cost per family	Rs.1250	Rs.457.28	Rs.10 per child	Rs.300	Rs.300
Beneficiary contribution per year	Rs.600	Rs.30	None	None	None
Govt contribution (per year)	Rs.650	Centre State	Rs. 10 per child	Rs.300	Rs.300
Sum insured	Rs.2 lakh per person	Rs.30000 on family floater	As per Yeshaswini norms	Rs.1.5 lakh on family floater	Rs. 2 lakh on family floater
Disease/ procedures covered	1600 surgical procedures	729 medical and surgical procedures	As per Yeshaswini norms + Renal Transplant/ Cochlear Implants	Limited list of catastrophic illnesses costing more than Rs.30,000	350 procedures under Raja Arogyasri (not covered under RSBY) plus one yearly routine check-up for all beneficiaries above 50 years
Geographic coverage	Rural cooperative members (both APL and BPL)	Rural population (pilot in 5)	All school going children (govt. and pvt. schools)	All BPL families as per food ration card	Anthyodaya card holders in six C category districts during pilot
Fraud control mechanism	Moderate		Moderate	Use of ICT (as per Yeshaswini)	Use of biometric cards (as in Raja Arogyasri) and DRG
Underwriting of insurance	Trust (partially govt.)	Insurance Company	Government	Government	Insurance Company
Cost model in long term	Actual cost of model (claims + admn)	Cost plus model (claims+ admn + profit margin for Insurance Co.)	Actual cost model (claims + admn)	Actual cost model (claims + admn)	Cost plus model (claims+ admn + profit margin for Insurance Co.)

Annexure D: Summary table of proposed Interventions with objectives, implementation agency and consolidated budget

No	Intervention	Objective	Implementing Agency	Budget (in Rupees lakh)
I. Healthcare				
A1	Strengthening primary healthcare system – physical infrastructure	• To provide comprehensive primary health care to both rural and urban poor • To make the services more responsive, effective and sensitive to the needs of the community. • To achieve and maintain an acceptable standard of quality of care by ensuring conformity to Indian Public Health Standards (IPHS) with respect to infrastructure and equipment requirements • Strengthen extension services provided by Medical Officers at PHCs through provision of appropriate form of mobility • Extend the coverage of Arogya Kavacha scheme to the entire state • Special attention to Primary Health Centers (PHCs) and First Referral Units (FRUs) in North Karnataka to bring them up to requisite standards • Provide specials attention for infrastructure strengthening to address maternal and child health related challenges and reduce MMR and IMR levels	Department of Health and Family Welfare	Year 1: 8,157.15 Year 2: 8,542.65 Year 3: 7,542.65
A2	Strengthening primary healthcare system – human resources	• To provide comprehensive primary health care to the community through 24x7 PHCs and fully-functional FRUs with an aim to reduce health indicators like MMR and IMR • To make the services more responsive, effective and sensitive to the needs of the community. • To achieve and maintain an acceptable standard of quality of care by ensuring conformity to Indian Public Health Standards (IPHS) with respect to manpower requirements • Develop a cadre of appropriately trained paramedical staff to serve in rural areas and ensure adequately trained paramedical staff in all sub centres and PHCs in	Department of Health and Family Welfare, Department of Medical Education, Department of AYUSH	Short term (Year 1 – 2) : 332 Medium Term (Year 3 – 5) : 4024.73

No	Intervention	Objective	Implementing Agency	Budget (in Rupees lakh)
		the state by 2020 • Provide medical practitioners that are closely knit with the local community to minimise quackery in villages • Mainstreaming of AYUSH into the healthcare delivery system in Karnataka		
B	Restructuring of the Health Department to create a Public Health cadre	• Revive and recognise the emphasis on Public Health Services • Develop separate cadres for Public Health and Medical Services within the state health department • Reorganisation of the divisions on the basis of integrated responsibilities and current needs	Department of Health and Family welfare	44.40
C	Human Resource Management Unit for DoHFW	Immediate objectives • Initiate HR reforms for the identified critical areas in consultation with top leadership of DoHFW • Set directions and policies for the HR initiatives • Monitor and supervise implementation of HR initiatives • Initiate effective communication strategy • Recruitment of personnel at high and strategic level for supporting the reforms agenda Long-term Objectives • Imbibing professional culture in DoHFW • To continuously monitor the ongoing initiatives and rolling out new initiatives • Evolving HR functions to the professional level through benchmark and best practices • Working closely with experts for improving HR functions and building capacity of HR employees	Department of Health and Family welfare	Year 1 (one-time): 1,279.55 Annual recurring expenses: 1,055.55
D	Provision of a comprehensive health insurance scheme	• Enhance access to quality healthcare of BPL families by providing cashless treatment of diseases involving hospitalization, surgery and treatment through a network of government and private healthcare providers.	Department of Health and Family Welfare, Department of Labour and Employment	Year 1: 4,596.80 Year 2: 7,809.22 Year 3: 11,429.06

No	Intervention	Objective	Implementing Agency	Budget (in Rupees lakh)
E	Align budgetary allocations for the health sector to NHP guidelines	• Align share of state sector spending on health from 3.6% in year 2007-08 to 5% by 2010 and to 8% by 2015 • Ensure the recommended proportions of budgetary allocations for primary, secondary and tertiary care (at 55%, 35% and 10% respectively) and also across rural and urban areas.	Department of Health and Family Welfare	No budgetary allocations proposed
F	Design and implement a child health and nutrition tracking system	• Develop an integrated health and nutrition tracking MIS system to cover all children enrolled to ICDS and Suvarna Arogya Chaitanya scheme. • Monitor and evaluate the health outcomes to identify emerging challenges and recognize significant achievements with respect to health status of children	Department of Health and Family Welfare, Department of Women and Child Development, Department of Public Instruction	Short-term (Year 1-2): 160
II. Education and Skill Development				
A	Providing good quality training for teachers in schools (primary and high-schools).	The aim of this initiative is to ensure provision of appropriate training to teachers of primary and high schools so that they are updated in knowledge of their subject, newer methods of teaching and basic life skills. This initiative looks at reforming both the content of the teacher training programmes as well as the systems of delivery.	Department of Education, Department of State Educational Research and Training	Short-term (Year 1-2): 610.05
B	Capacity building of School Development and Management Committees (SDMCs).	To increase the active management capacities of SDMC's and to create a sense of ownership of the school by the committee.	Department of Public Instruction	Short-term (Year 1-2): 1,272.50
C	Re-orient school curriculum to improve contextual relevance of content	Re-orient school curriculum to improve the overall development of children and their readiness to integrate into the society as productive adults. A more relevant and interesting curriculum will also help in reducing drop-out rates.	Department of Public Instruction	Short-term (Year 1-2): 1,070 Annual recurring expenses: 1,750
D	Bridging the gender gap in education	Encouraging girls to remain in school and reducing drop-out by: • Improving existing school infrastructure and ensuring functional girls toilets in each school	Department of Public Instruction	Year 1: 1120 Year 2: 1070 Year 3: 1120

No	Intervention	Objective	Implementing Agency	Budget (in Rupees lakh)
		• Review and provision of gender sensitive curriculum • Instilling pride and confidence among girl students through celebration of women's day in all schools • Ensuring appointment of female teachers in all schools • Provision of support systems for girls through contracting expert child counsellor in high schools and designating teacher-counsellor for girls in all schools • Providing additional girls-only schools		
E	Developing Open Resource Centers in rural areas	Encouraging practical / activity-based science, math, and language education (through Open Resource Centers) will encourage children to transition from the existing system of education where a child is perceived as a 'receiver' of information to one where the child can 'construct' knowledge. These Open Resource centres will help encourage children to be inquisitive and stimulate their interest in academics.	Department of Public Instruction	Short-term (Year 1-2): 260 Annual recurring expenses: 50.50
F	Enhance the nutritional content of mid-day meals being provided in schools	Improve children's health through provision of nutritious mid day meal Improve community ownership of the mid day meal scheme through effective awareness campaign	Department of Public Instruction	Annual recurring expenses: 316,17.47
G	Augmentation of the existing system of skill development in the state	Strengthen the entire system of skill development in the state - faculty, curriculum, and infrastructure of the ITIs and related institutions.	Directorate of Employment and Training	Year 1 (Assessment study): 50 Capital expenses for setting up new ITI: 600; Annual recurring expenses per ITI: 120
H	Enhance flexibility in the academic process for higher education courses	Enhancing flexibility in the academic process will ensure better learning opportunities, easy inter-institution transferability of students, improve educational quality and excellence and the ability to match students' scholastic needs and aspirations.	Department of Higher Education	No budgetary allocations proposed
I	Create mechanisms for effective industry–	To establish a platform where industries and universities can interact, collaborate, and share experiences, resources, and	Department of Higher Education	No budgetary allocations proposed

No	Intervention	Objective	Implementing Agency	Budget (in Rupees lakh)
	university interaction	knowledge in a mutually beneficial relationship.		

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