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FOREWORD

Even though planning has been a central tenet of our approach to economic development since Independence, it has neither become ideologically rigid nor methodologically stultified. Each of our Plans has reflected the changing imperatives of the times and the theoretical and experiential developments from around the world. Some of the changes have been strikingly bold, while others somewhat modest. But change there has been. Never before has this inherent dynamism of the Indian planning process been more in evidence than in the past decade. The economic reforms that came in the wake of the crisis of 1991, and which have progressed steadily ever since, jettisoned some of the basic premises of our development paradigm and practically all of the instruments traditionally used for implementing our Plans. Nevertheless, the need for planning as a unifying strategic approach continued to be felt.

The Ninth and the Tenth Five Year Plans embody the process of transition from the traditional investment allocation form of planning to planning for a modern market economy. This transition involved not only a complete overhaul of planning methodologies, whereby more or less deterministic planning models had to be replaced by more behavioural systems which could better handle the nuances of

policy change, but also the incorporation of a number of issues which had traditionally never been an integral part of planning. Thus, for example, fiscal issues had to be integrated into the planning framework, as also financial markets and governance. By and large, it would be safe to say that the new planning system had to pay considerably greater attention to sectoral specificities and regional idiosyncracies than was the case earlier.

This shift from a directive to an indicative planning approach also required that the operational modalities of the Planning Commission undergo a radical alteration. In earlier years, it was sufficient for the Planning Commission to interact primarily with the Central Ministries and State Governments, which were responsible for the implementation of the Plan in terms of both investment allocations and projects and programmes. In the new economic environment, however, the Plan had to be communicated to a much wider constituency of stakeholders. Although the regular interaction with the various arms of the government at different levels continued to be of great importance, it was equally important that the other actors in the development process, such as industry, non-governmental organizations, trade unions, academics, etc. be made fully aware of the role that they were expected to play in the growth and development of the nation. Thus, wider consultative and communication processes had to be instituted in the functioning of the Planning Commission.

Much of these momentous changes in the Indian planning system were made under the stewardship of Shri K.C. Pant, who, as Deputy Chairman of the Planning Commission, guided the process for a period of over five years from February 1999 to June 2004. He was not only responsible for designing and piloting the reorientation of the Planning Commission, but was also its most visible public face. Along with his regular interaction with Central Ministries and State Governments, Shri Pant made it a point to participate in conferences, seminars and other functions organized by various stakeholder groups in order to explain the Plan in its many dimensions and to receive feedback. His speeches on these occasions explicate the complexities of planning in

India in terms which are accessible to the lay person. They also provide valuable insights into the analyses and thought processes that underlie our Plans and the manner in which our planning has evolved. The Planning Commission felt that compilation and publication of these speeches would be of immense interest, not only in terms of the issues covered, but also as a chronicle of one of the most dynamic periods of Indian planning.

This compilation is in three volumes, and covers speeches made by Shri Pant from April 1999 to December 2002. The first two volumes deal with a wide spectrum of socio-economic issues. They bring out with great clarity the magnitude and complexity of the problems that exist in Indian development, and which must be factored into our planning. The third volume is devoted to discussion of the annual plans of States and Central Ministries, which provides an insight into the way the government at various levels manages its finances and deploys its resources – material, monetary and human – to further developmental objectives.

This is the first time that the Planning Commission has brought out such a compilation. We hope that it will serve as a rich source of information for students, scholars, researchers, policy makers and the general public on the strategies followed by the governments at the Centre and the States, the problems encountered and constraints faced in the different sectors of the economy, and the remedial measures needed.



(Rajeeva R. Shah)

DEVELOPMENT OF ISLAND REGIONS*

I would like to welcome you all to the 7th meeting of the Standing Committee of the Island Development Authority and wish you a Happy New Year.

It is rather unfortunate that we are meeting after a gap of about four years. However, this is an opportune time to have the meeting so that the deliberations could, hopefully, lead to action-oriented points, which would help in the preparation of the Tenth Five Year Plan for the development of Andaman & Nicobar Islands and Lakshadweep.

The position of the Union Territory of Andaman and Nicobar is better for some of the basic human development indicators than that of the mainland. For instance, literacy levels both in the aggregate and male and female categories are higher than the all-India averages. In terms of birth rate, death rate and infant mortality rate, the UT's achievement is better than the all-India average. As per the latest estimates of poverty calculated according to the expert group methodology for the year 1993-94, the UT has 34.47% of its population below the poverty line as against all-India average of 35.97 per cent.

Similarly, Lakshadweep has a good track record in respect of some of the basic human development indices like literacy, birth rate, death rate and infant mortality rate. As much as 25.04% of the population is below the poverty line.

However, much remains to be done for socio-economic development of A&N Islands. The Islands are beset with some inherent problems like transport and connectivity, limited resource base for industrial development and the primitive tribe groups whose population is on the decline. On the other hand, the Islands could build on the natural advantages they enjoy and exploit them for the development of eco-friendly tourism. Evergreen tropical forests, underwater corals, rare

varieties of marine life, pristine environment and virgin beaches are a veritable tourists' paradise. However, tourism should not be allowed to sow the seeds of its own destruction. It is important to keep environmental concerns in view while promoting tourism. The Islands have abundant fishery resources with 1912 kms. of coastline, 6 lakh square kms. of Exclusive Economic Zone, 618 hectares of brackish water areas and about 600 minor irrigation ponds and reservoirs. Marine fishery offers tremendous scope to expand the fishery industry. At present, the total fish production in the UT is about 27,442 tonnes, which is about 17% of the estimated fishery potential of about 1.6 lakh tonnes. There is potential for small hydroelectric projects and projects based on non-conventional energy.

The issue of carrying capacity of the Islands is of paramount importance in view of the fragile environment of the Islands. I am aware that A&N Administration is facing the problem of influx of people from the mainland. The A&N Administration has chalked out a tentative plan to develop a data bank and issue photo identity cards and to have detailed information about each resident.

It is important to preserve the Islands' unique bio-diversity. It is equally important to preserve the indigenous traditional technical knowledge and culture of the people of these Islands even as steps are taken for socio-economic development of the people of the Islands. It was reported by the IDA Cell after a visit to Lakshadweep in May 1999 that some excavated artefacts from the Buddhist era were lying in a state of neglect. Steps should be taken to preserve such unique remnants of history.

This Committee may like to dwell on the broad contours of the strategy for the development of these Islands as well as of Lakshadweep. Concrete action plans could be drawn up by the respective UT administration in collaboration with the concerned Ministry of the Government of India and the Planning Commission.

We have a long agenda before us even after shortlisting at a meeting taken by Secretary, Planning Commission in July 2000. The MP

representing A&N Islands and the A&N Administration have suggested some additional agenda items a few days back. They have been sent to the concerned Ministries. The concerned Ministries may like to indicate their views and the latest position on the issues during the course of the meeting.

**Opening Remarks at the Seventh Meeting of the Standing Committee of the Island Development Authority (IDA) held on January 4, 2001*

ISSUES IN INCREASING FARM OUTPUT*

It gives me great pleasure to be here among this galaxy of scientists and experts on the occasion of the Symposium on "The Genesis: Crusade for Global Excellence" organised during the 88th Session of the Indian Science Congress.

Of all the achievements recorded in our post-independence history, the one in which we can take the greatest pride is the elimination of the scourge of famine from the face of our country. The role of research and development in agriculture has been laudable in accelerating the growth and achieving self-sufficiency in foodgrains production. Foodgrains production went up from 50.8 million tonnes in 1950-51 to about 206 million tonnes in 1999-2000. Rice production has gone up over four times and wheat production more than eleven times. Oil seeds, cotton and sugarcane have also registered appreciable gains in production and productivity. The country is now the second largest producer of rice, wheat, fruits and vegetables and the largest producer of milk in the world.

While we have every reason to be proud of such significant achievements, there are areas of serious concern. Our self-sufficiency in foodgrains may in fact be less comforting when the depressed demands of millions of poor people are taken into account. Due to the high level of poverty, India has some of the highest levels of malnutrition, especially among women and children, in the world. The National Family Health Survey (NFHS-2) has shown that, overall, 52% of women and 74% of children in the age group of 6-35 months are anaemic. Poverty has affected people's ability to feed themselves properly, thereby leading to malnutrition and related problems. Poor health leads to poor output and thereby lower earning capacity. Thus they are trapped in a vicious cycle of poverty and malnutrition. With reduction in the levels of poverty and malnutrition, the quality of life

of millions of people, especially in the rural areas, can be greatly enhanced. Breaking the vicious cycle of poverty and malnutrition not only involves improvement in agriculture but also overall general development of the economy.

But our agricultural performance has not been adequate for this purpose. While the country's population increased by 272% during the last five decades since 1950-51, the net foodgrains production has increased by 368% during the same period. However, if one takes into account the per capita net availability of foodgrains, it has shown a nominal increase of only 18% during this period. In spite of foodgrain production going up substantially during the 90s, the growth rate in availability of foodgrain per capita has declined as compared to the growth rate of 1.28% per annum during the 1980s. Taking note of the seriousness of the problem, the mid-term appraisal of the Ninth Five Year Plan has suggested that there is a strong case for using the huge public stock of foodgrains for reducing the rampant malnutrition among the vulnerable sections of our society. Some experts are of the opinion that had the agriculture revolution been accompanied by diet revolution, the present level of production and procurement of foodgrains would have appeared far from excessive (Sharad Joshi) and even the estimated production of around 206 million tonnes would not have been enough to meet the country's requirement.

There is considerable supply-demand gap in edible oils too in the country. The figures show that about 45 lakh tonnes of edible oils are being imported currently. This has to be seen in the context of the target of 30 million tonnes of oilseeds production by the end of the Ninth Plan, against which the annual output has fluctuated during the first three years of the Ninth Plan from 21 to 25 million tonnes. The average of the first three years' production during the Ninth Plan is a mere 22.57 million tonnes.

On the pulses front also the situation is no better. We had kept a target of 16.50 million tonnes of production by the end of the current Plan. However, the actual average production during the first three years of the Plan has been only 13.60 million tonnes. There is thus

likely to be a shortfall of a little more than 15% in the achievement of the Plan target. It may be recalled that the Eighth Five Year Plan target for the pulses production was 17 million tonnes. The current per capita availability of pulses is about 38 grams per day only, which is almost the same as it was 20 years ago.

I have dwelt on these issues at some length because the current overflowing stocks of cereals with the public agencies is likely to result in ignoring the mismatch between production, need and economic demand. We may be meeting the economic demand but we are awfully short of the actual need.

As regards foodgrains requirement in the future, Prof. G.S. Bhalla and his associates have, in a recent study, done detailed exercises for the year 2020. Their baseline projection of cereal demand in 2020 for direct human consumption is 246.1 million tonnes. By taking into account the requirement for seed, feed and wastage, the total cereal requirement at the baseline approach works out to 296.191 million tonnes. This is a stupendous task indeed. We have barely crossed the figure of 200 million tonnes in spite of a lucky decade of good monsoons. This may not always remain so and we will have to focus our attention on increasing our agricultural output on a sustained basis in the years to come. There is indeed considerable scope for this.

Our productivity of crops is very low if we compare it with other countries in the world. Against the world average of 3827 kg/ha of paddy the productivity in India is only 2915 kg/ha. This is much lower than the productivity of major paddy producing countries, namely China, where it is 6331 kg/ha, Indonesia 4561 kg/ha, Vietnam 3760 kg/ha, Japan 6416 kg/ha and Egypt where it is as high as 8567 kg/ha. Similarly, our productivity of wheat at 2654 kg/ha, though comparable with the world average of 2686 kg/ha, is lower than the major wheat producing countries like China, where it is 4087 kg/ha, France 6530 kg/ha and UK 7746 kg/ha. The productivity levels of other crops like maize, pulses, groundnut and other oilseeds are also low as compared to the world levels.

Fortunately, the growth rate of population in the country is gradually coming down and at present is below 2 per cent. However, with a

large population base, the absolute increase in population is likely to be large. As the availability of land for agriculture is limited, the additional production, which will be required to meet the need of the increasing population, has to come through increase in productivity levels. The results of frontline demonstrations (FLDs) and experimental stations indicate that there are large gaps between the potential and what is achieved at farm levels. If these gaps are bridged, even the daunting targets can be met.

Out of 142.8 million hectares of net sown area (NSA) about 55 million hectares are irrigated and the remaining area is dependent on the monsoon. However, the productivity of even irrigated land is sub-optimal. The gross cropped area under foodgrains is about 123 million hectares, out of which 53 million hectares are irrigated. Even if we are able to achieve an average of 3.5 tonnes of productivity level, this alone would yield about 185 million tonnes of foodgrains. In the remaining rain-fed area, even with productivity of 1.5 tonnes, the foodgrains output will be about 105 million tonnes. Thus, even with the available technology the total production of foodgrains can be increased to 290 million tonnes against the present level of 206 million tonnes. If we go by the results of field demonstrations and potential of the high-yielding varieties and hybrids developed, there is possibility of achieving much higher production of foodgrains. It needs to be mentioned that the frontline demonstrations have shown a yield gap of 21% in wheat even in Punjab.

Thus, although the technological solutions exist, there are other constraints to agricultural growth that need to be addressed. The policy approach to agriculture, particularly in the 1990s, which has been to secure increased production through subsidised inputs rather than through building new capital assets in irrigation and power, does not seem to have worked particularly well. For example, high subsidies on canal waters, electricity, nitrogenous fertiliser, among others, have induced farmers to overexploit soil and water resources without recognising the dangers inherent in such behaviour. Problems of soil salinity, water logging, declining water table, deteriorating water quality, nutrient mining and acidification of soils are often reported

in those regions, which witnessed the green revolution. This has reduced the pace and pattern of technological changes in agriculture and affected total factor productivity (TFP) adversely. The subsidies also do not necessarily improve income distribution and the demand for labour. The boost in output from the subsidy-stimulated use of fertilisers, pesticides and water may partly be coming at the expense of the deterioration in the aquifers and soils—an environmentally unsustainable approach that may partly explain the rising cost and the slowing growth and productivity in agriculture, notably in the high-productivity green revolution areas. Moreover, the deteriorating State finances have meant that the subsidies have in effect crowded out public investment in agriculture, reduced maintenance of canals and roads and contributed to the low quality of rural power. All of these have retarded agricultural development in these areas. The equity, efficiency and sustainability of the current approach thus become debatable.

On the other hand, the regions, which are still operating at subsistence levels, are experiencing large-scale degradation in the form of soil erosion, nutrient mining, deforestation and desertification due to the low investment capacity of the farming community and less than adequate focus by the Government.

The cumulative effect of degradation of natural resources has led to a deceleration of agricultural growth. Conserving natural resources to meet the current and future requirements of the growing population would be the biggest challenge in the 21st century. Sustainable agricultural production calls for effective planning and environment-friendly technologies and policies.

Besides, the agriculture sector is still constrained by Central and State regulations that limit movement and intra-State trade. Other major factors, which are impeding the growth in agriculture, are inadequate measures for bringing additional area under irrigation, low coverage under high-yielding varieties and low seed replacement rate. All these issues need to be given due consideration for increasing productivity.

In the past, diversification of agriculture was not given due attention. There are ample opportunities for doing so through development of

livestock, horticulture and fisheries. The livestock sector has immense potential for complementing and accelerating the growth of the agriculture sector. The productivity of our livestock sector in terms of milk, meat, wool, and eggs is the lowest in the world. Though we are the largest producers of milk, we are far behind many developed countries in terms of productivity and per capita availability of milk. The fishery sector has remained underdeveloped. There is ample scope to increase inland fish production. We have about 14 lakh hectares of brackish water area suitable for production of shrimps. Hardly 10% of this area had been utilised for production purposes. These sectors would have to grow in the 21st century and contribute significantly to the economic growth of the nation. These sectors can also provide considerable employment opportunities, especially to small and marginal farmers and landless labourers. Our planning process should take greater cognisance of these sectors for achieving value-addition, thereby raising incomes and generating employment opportunities in the rural areas. Each of these areas of opportunity, however, requires considerable technological intervention, which needs to be given greater focus.

Effective technology transfer is one of the important areas, which could help in increasing productivity levels, diversifying agriculture and raising the income of the farmers. For this, the extension system needs to be overhauled and re-vitalised, making full use of vibrant systems and modern modes like print and electronic media. In future, extension services have to be responsive to changing agriculture scenario resulting from economic liberalisation. Research and extension would need to be focused and risk-prone areas such as dryland rain-fed farming would require much greater attention from extension workers. We also have to think of alternative methodologies. Successful models have to be replicated. I have been told that in one project area the yield of tomatoes has gone up to 52 tonnes per hectare from just 16 tonnes per hectare a few years back. This has meant involving the development of viable technology and effective transfer through technical back-up with the supply of inputs and machinery. The Department of Agriculture and Cooperation has come out with the proposal to establish agri-clinics

and agri-business centres by agricultural graduates to supplement the efforts of the States in transfer of technology and providing information on appropriate package of practices, inputs availability, their prices and also services for testing soil, water, fertilisers etc.

The domestic and international economic environment is changing rapidly since the early 1990s. As a member of the WTO, we have to remove the quantitative restrictions and reduce the tariff rates. The import regime will also not be the same. The new trade regime may also affect our natural resource base. These issues need careful and objective assessment. The emerging trade environment calls for appropriate planning for those regions and groups, which, we expect, will be adversely affected. The growth and development of our agricultural sector will depend on our clear-sighted pursuit of national interests and our ability to respond swiftly to a rapidly changing international economic environment.

Globalisation, however, is not just a threat. It also throws up a number of opportunities. We are richly endowed with natural resources and climatic variety. We have one of the largest reservoirs and potential for bio-diversity in the world. There is hardly any crop that cannot be grown in our country. The implementation of WTO agreements is expected to increase our access to the world market. Currently, our share in world export is less than one per cent. We need to identify commodities in which we have a comparative advantage in the global market. We need to improve our quality standards if we have to compete in the world market. We have the advantage of availability of a relatively cheap and extremely hard-working labour force. We need to assess how this important resource can be utilised more productively to promote labour-intensive activities for competing in the global market.

In the agriculture sector it is high time that India takes stock of all available technologies and devises ways of using them for foodgrain and other crop production. This not only calls for extensive exploration of alternative possibilities but also requires an immediate long-term technology plan for Indian agriculture. In this direction, the frontier technologies, including biotechnology, should be included in the

overall work programme so as to get viable solutions to the productivity-related problems. Some of these technologies are capital-intensive. In their case one may consider co-operation between industry and Government to exploit economies of scale and overcome capital and infrastructure deficiencies.

We also have among us some of the best agricultural brains in the world, which have always risen to the occasion in the past. I have no doubt that these scientists will again take up the challenge and come up with innovative solutions. Our hopes rest on them and I am certain that we will not be disappointed. Thank you.

Inaugural Address at a Symposium on "The Genesis: Crusade for Global Excellence" during the 88th Session of Indian Science Congress on January 5, 2001 in New Delhi

ENERGY SCENARIO*

I am very glad to be with you all at this valedictory session of PETROTECH-2001. The theme of the Conference "Hydrocarbons – Knowledge Partnership for a Green Planet" is an appropriate one in view of the increasing share of fossil fuels in the pattern of energy consumption. This brings to focus many ecological and environmental issues, which have serious long-term implications.

The world is going through a period of transition, the directions and outcome of which are not entirely clear. All one can say at this stage is that only if human actions are guided by a certain level of enlightenment we would be able to successfully negotiate the challenges of the future. But if we remain tied to narrow dogma and pursuit of selfish and self-defeating interests, we would only be inviting a bleak future.

People, the world over, have, of late, seen the common challenges facing them in their true perspective and started working together to meet them. There is today a growing concern for restoring and preserving the health of this planet and for adoption of appropriate energy policies, lifestyles and economic activities, which would be sustainable in nature. What we have to look for now is new paradigms of growth and economic development, which rest on minimising the environmental pollution and reducing the threat to the health and well-being of life on this planet. In other words, the process of development requires reversal of the policies and practices in several countries, mostly developed, which are primarily responsible for polluting the global environment. The developing countries should learn from the experience of these countries and follow sustainable development policies and plans.

The World Energy Outlook 2000 indicates that by 2020 the world is projected to consume three times the amount of energy it used 30 years ago. The total world energy demand is expected to grow at an

annual rate of 2.3% between 1995 and 2020. It assumes a rate of world economic growth of 3.1% per annum, close to the actual rate since 1971. Two-third of the increase in energy demand over the period 1995-2020 is expected to come from China, India and other developing countries. Fossil fuels are expected to meet 95% of the additional energy demand.

Current developments indicate that hydrocarbons would continue to occupy a dominant role in the world energy scenario at least for another two decades. The share of oil in the total energy consumption is expected to decline slightly from 39% in 1997 to 38% in 2020, as countries in many parts of the world switch over to natural gas and other fuels, particularly for power generation. Natural gas remains the fastest growing component of primary world energy consumption. Its share in the total energy consumption is expected to increase from 22% in 1997 to 29% in 2020.

In the industrialised countries, most of the growth of oil use is projected for the transportation sector in the next two decades. In the developing countries, the transportation sector also shows the fastest projected growth in oil use. In addition, the oil use for other purposes is expected to grow at 42% of the total increase in petroleum consumption in developing countries. The current share of oil and gas in the industrialised countries is 64%, which is expected to rise to 69% by 2020, whereas the share of oil and natural gas in the developing countries, including those of the Middle East, is likely to increase from the level of 55% to 60% in the same period.

Oil movements to industrialised countries in 1997 represented almost two-third of the total petroleum exported by OPEC member-nations. Despite substantial increase in the quantity of oil exported to developed countries, the projected share of total petroleum exports in 2020 that goes to the industrialised nations will be about 56 per cent. The significant shift in the balance of OPEC exports share between the industrialised and the non-industrialised nations is a direct result of the robust economic growth anticipated for the developing nations of the world, specifically those of Asia. More than half the increase in

OPEC oil exports will be to developing countries in Asia.

I shall now turn to the Indian scenario. At the turn of the new millennium we can look back with pride at some of our achievements over the past 50 years since Independence. India has succeeded in building up considerable economic strength in a framework of democracy. The 1990s saw a number of new initiatives in the economic policy of the Government of India in the areas of deregulation, trade liberalisation, opening up to private and foreign investment and beginning with public sector reforms and gradual process of financial sector reforms. On the economic front, India's GDP grew at nearly 7% during the Eighth Plan period against 5.8% during the Seventh Plan. The Ninth Plan is expected to achieve a growth rate of 6.5 per cent. This makes India one of the fastest growing economies in the world.

Even though India has sizeable energy resources in terms of coal, hydro-electricity and nuclear energy, the domestic hydrocarbon resources, as of now, are not sufficient to sustain the increasing demand for energy and India may have to depend on energy imports, making it vulnerable to international oil price fluctuations.

Recognising the need to attract larger investment in the energy sector as a part of the economic reform programme initiated in 1991, India gradually opened up the energy sector to private investment. The reforms have removed the policy distortions and hurdles and improved access to factors of production such as technology and capital. The measures taken by the Government include a series of tax and other concessions and simplification of regulations and procedures. Deregulation has also made possible the introduction of competition, thereby promoting improvement in efficiency and service quality.

India's energy policy till the end of the 1980s was mainly based on the availability of indigenous resources. Coal was by far the largest source of energy. Things have changed since then. Coal's share in the primary energy-mix has today come down to 56 per cent. In contrast, the share of oil and natural gas has gone up to 42% in 1999-2000 against 34% in 1973-74. Concerted efforts made in the exploration

and development of hydrocarbons had led to significant step-up in the production of oil and natural gas in the country. However, in recent years the production of crude oil has been stagnating but its demand continues to grow apace. As a result, India today meets 25% of its total energy needs through imports and only 30% of petroleum is indigenously produced.

The net imports of crude oil and petroleum products in India increased from 12.44 million tonnes in 1970-71 to 57.16 million tonnes in 1999-2000, i.e. almost five-fold. The import of crude oil would continue to increase substantially in absolute terms, involving a larger import bill. The developed countries took initiatives after the first oil shock of 1973 to contain the demand of petroleum products. These initiatives included, mainly, energy efficiency measures, demand-side management and substitution by alternative fuels. However, the efforts made in India in this direction have not been to the desired level. Self-sufficiency in oil has come down from as high as 70% to nearly 30 per cent. There is, therefore, an urgent need to reduce energy requirements by demand-side management and by adopting more efficient technologies in all sectors.

In view of the increasing import of oil and the volatility in its price in the international market, there is a need to develop alternative fuels. The technology for conversion of coal to oil through Fischer-Tropsch process, blending of ethanol and oil from *Jatropha Quercas* seeds into gasoline and diesel, di-methyl-ether (DME) etc., are already available and have been tried on pilot scale. I understand that a pilot project on ethanol has been conceived in Maharashtra and UP to examine all aspects related to usage of this fuel. Further, a techno-economic feasibility of use of DME is under progress. The use of *Jatropha-Quercas* seed has also been demonstrated by the Indian Institute of Petroleum, Dehradun. However, there is a need to upscale these proven technologies through R&D under mission mode.

As the energy needs of the country are going to increase at a rapid rate in the coming decades, it is imperative to take steps to increase the

proven energy resources available indigenously. There is an urgent need to step up exploration for coal as well as for oil and natural gas. There is also an urgent need to take up exploration of on-shore and offshore hydrocarbon basins and of the deep-sea with greater vigour.

In the hydrocarbon sector, several steps have been initiated, such as the New Exploration Licensing Policy leading to opening of exploration to foreign and domestic private sector investors, phased opening of the refining sector to private investors, dismantling of administered pricing mechanism with the goal of total dismantling by April 2002 and the proposal for new regulatory mechanisms for the oil sector, both upstream and downstream. Twenty-five blocks are being thrown open under the second round of bidding under NELP. The Road Show for the second round bidding has been launched two days back. Initiatives such as NELP and opening of the oil sector are expected to bring in the latest technologies in these areas.

You might recall that, at Petrotech-1999 the Prime Minister had announced the preparation of the India Hydrocarbon Vision 2025. The vision document has since been published. The guiding policy framework for the sector in the long term is energy security by achieving self-reliance through increased indigenous production, improving product standards to ensure a cleaner and greener India, developing the hydrocarbon sector as a globally competitive industry through technology upgradation and capacity building and a free market to promote healthy competition and improvement in customer service.

I am sure the various facets of the theme of the Conference have been discussed in depth during the last few days. I would be looking forward to the publication of the main conclusions of the deliberations with the hope that they can help us to harmonise the needs of economic growth and social development with the realisation of the dream of the Green Planet.

**Valedictory Speech at the 4th International Petroleum Conference and Exhibition – PETROTECH 2001 on "Hydrocarbons – Knowledge Partnership for a Green Planet" on January 12, 2001 in New Delhi*

DIMENSIONS OF KNOWLEDGE ECONOMY*

Dr. Mashelkar, Professor Parthasarathi, Mr. Gopinath, distinguished invitees to this Inaugural Session of the Fourth National Consultancy Congress, participants in this Congress, ladies and gentlemen, I am very happy to have this opportunity to share some thoughts with you on a subject of great topical importance. In this age of rapid change, forward-looking countries recognise the need to nurture their consultancy capabilities. This is your fourth national Congress and the fact that you have chosen "Consultancy in the Knowledge Economy" as the focal theme for this Congress shows that you are in step with the present and in tune with the future. Apart from the intrinsic importance of the theme, it so happens that I chair a Task Force on "Making India a Knowledge Super Power", a concept the Prime Minister first launched in his address at the annual general meeting of the ASSOCHAM early last year. Dr. Abdul Kalam, Dr. Mashelkar and Professor Parthasarathi are members of the Task Force and have been making important contributions to its deliberations and its report.

In one sense the concept of a "knowledge economy" is not a totally new phenomenon because the entire post-1945 world has been one characterised by a process of generation and application of knowledge. I refer, in particular, to scientific and technological knowledge on a scale and of a scope unprecedented in human history. It was the social scientist Derek de Solla Price of the USA who first drew attention, as far back as 1960, to the fact that scientific and technological knowledge was doubling every 10 years and that 90% of all the scientists who have ever lived were alive in that year. The scientific discoveries in semiconductor physics, which led to the Transistor and later the Micro Chip, in coherent optics, which led to the Laser and in synthetic chemistry, which led to Antibiotics fore-fronted by Penicillin by the mid 50s were truly remarkable. This led to the Scientific Policy

Resolution passed by Parliament in 1958 declaring that "the future belongs to science and those who make friends with science". This R&D Revolution of 1945-1975 also led to the Nobel Prize winning economist of the USA, Robert Solow, and the distinguished US economist, Richard Nelson, drawing attention in the late 1960s to the fact that 60% of all economic growth, which had occurred in the highly industrialised countries since 1945, was due to the so-called "Residual Factor" of R&D and technological innovation.

But over the last 15-20 years R&D and R&D-based innovation has come to be one manifestation of the much wider concept of "knowledge-based invention and innovation". I am here using the definition of "knowledge" as "expertise gained through research and cumulative experience". Defined in this way "knowledge" includes, 'know why', i.e. scientific knowledge of the principles and laws of nature, 'know how', i.e. skills or the capability to do something, and 'know-who' i.e. information about who knows what and how to do what.

This led in turn to the definition of "knowledge economy" as an economy, which revolves around creating, sharing and using knowledge and information to create wealth and improve the quality of life. Such an economy is populated by "knowledge workers" in the form of persons who provide economic value by generating, sharing and applying ideas of all kinds. The knowledge worker could be an eminent scientist, skilled craftsman or even a receptionist with an expert knowledge of who-is-who in the organisation in which he or she works and where the really useful information is located. Another important facet of the knowledge economy is knowledge extension, particularly in areas like agriculture, health, education and similar services. It also became clear as the knowledge revolution snowballed, over the last decade in particular, that knowledge differs from other resources in that each new discovery or invention provides a launch pad for further discoveries and inventions.

A knowledge economy or society has two key components. One is driven by societal transformation and the other by wealth generation. Societal transformation is generally centred on agriculture, education,

healthcare and governance. The challenge is to realise these core elements in terms of content, methodologies and institutions. Wealth generation is a very important task for any nation. But it has to be woven around a range of national competencies, many of which are knowledge-based. There are a few core areas that will spearhead our march towards a wealth-generating knowledge society. These include information technology, biotechnology, consultancy, meteorology, oceanography, disaster management, tele-medicine and tele-education, technologies to produce traditional knowledge-based products, particularly medicines, and infotainment, which is an emerging area resulting from the convergence of information and entertainment. The IT plays an integrating role interweaving these core technologies.

Our nation has several comparative advantages in the knowledge-based creation of wealth. These include our intellectual infrastructure and several natural endowments. What is needed is to leverage and harness them for national prosperity. For instance, tomorrow's drugs are going to be genotyped and so pharmacogenomics is going to be the new R&D focus. Development of any personalised medicine based on genomic knowledge will need clinical trials. Due to its vast genetic diversity, extensive clinical research potential and comparative cost advantage, India is uniquely placed to take up major initiatives in this highly capital-intensive area. Similarly, industries such as microelectronics and designer-made materials are major growing knowledge industries, which stimulate other industries in turn to become knowledge-based. For example, new knowledge embedded in three-dimensional acoustical sounding, horizontal drilling and deep offshore drilling is turning even the hitherto conventional oil industry into a knowledge industry. However, such knowledge industries have to operate in a highly competitive environment with great emphasis on the speed of response under dynamic market conditions.

A particularly distinctive feature of the knowledge economy is that technologies and management structures will have to be woven together to form a seamless web. It has to be recognised that the difference between an IT-driven society and a knowledge-driven society is the role of multiple technology growth engines. Using IT, the great

integrator of technologies, these multiple technologies can be interwoven to realise a knowledge-propelled society. With India carving a niche for itself in IT, it is uniquely placed to fully capitalise on the emerging opportunities to quickly transform itself into a knowledge society.

Such technical strategy issues apart, there is a need for a particular kind of empowerment to usher in a knowledge society. Evolution of innovative administrative procedures and policies, changes in regulatory methods, identification of partners and, most importantly, creation of young and dynamic leaders are some of the essential components of such empowerment. Concurrently, the wealth generation component of the knowledge society will require the simultaneous realisation of a citizen-centric approach to business policy, user-driven technology generation and intensified industry-laboratory-academia linkages.

While a knowledge society has a two-dimensional objective of societal transformation and wealth generation, a third dimension emerges if India has to transform itself into a major knowledge-based economy and society. Protection of knowledge, which has the potential to create wealth and social good, is critical for the nation. This knowledge protection adds the third dimension to the objective. It brings in its wake a tremendous responsibility to strengthen intellectual property rights and protect our vast biological and microbial resources in particular. This challenge will be faced in every endeavour. Take, for instance, India's emerging opportunities in genomic research, thanks to the knowledge of the human genome coming into the public domain. Here, we must not undertake genotype drug discovery trials without adequate prior intellectual property rights (IPR) protection. Otherwise, the people of India will not benefit from the new human genome-based knowledge despite having contributed to world-level advances in all the three component areas involved – IT solutions, genetic material and pharamacogenomics. We need to achieve value addition to generate IPR in these areas and not encash tomorrow's wealth today by providing low-cost services at the present time.

Our ancient knowledge and culture should also be protected from the multiple attacks launched through business, culture or media. Concurrently, institutional support needs to be provided to the creators and possessors of traditional knowledge so that they have the necessary incentives to continue with their knowledge generation activities on a sustainable basis and improve their quality of life.

One of the concerns we face in this connection is that the process of globalisation is threatening the appropriation of elements of this collective knowledge of societies and presenting it as proprietary knowledge for the commercial profit of a few. Therefore, it should be our endeavour to see that globalisation has to be India-centered, in which innovation, enterprise and investments are linked and used for the national good.

A major knowledge power needs to focus on the twin objectives of economic prosperity and national security. Towards this end, our electronic communication networks and information generators need to be protected from electronic attacks, including in cyberspace, through surveillance and monitoring systems and building up communication technologies that are immune to such threats. Thus the core requirements for knowledge protection are two-fold. There should be a focussed approach to intellectual property rights protection and related issues and major initiatives launched in the areas of R&D and technology generation for information protection.

It is against the above background that one has to consider the role of consultancy in the knowledge economy. There is little doubt that the content of consultancy services is highly knowledge-intensive. Whether it be the preparation of a feasibility report or a project report or the undertaking of basic and detailed engineering based on a process design or provision of specialised technological services to undertake project management and supervise erection, testing and commissioning of plants, they are all knowledge-intensive in character. However, consultancy also has the characteristic of being a critical activity for converting new knowledge, created through R&D, into operating

plants and facilities. It also has an important role to play in unpacking a foreign technology package into its various components so as to maximise the generation and utilisation of the elements of that package, which can be locally sourced and to adapt those elements to meet our local conditions.

As in other areas of the knowledge economy, there is a symbiotic relationship between information technology (IT) and consultancy. While on the one hand IT provides powerful tools for the design and engineering of industrial plants and complex technical facilities and systems and for monitoring the progress of the building of such plants and systems, the companies specialising in the area of IT themselves provide consultancy services in the IT sector for a range of applications. Computer-aided design (CAD) is now a well-established set of techniques in the engineering industry. So also are the computer-based process and engineering simulation and optimisation of complete plants, thereby saving cost and time and avoiding expensive mistakes. However, consultancy also has an important role to play in other areas of the knowledge economy such as biotechnology and renewable energy. The consultancy capabilities needed in these fields, in contrast to those in the more traditional industrial fields, are of a different kind, though no less important. Perhaps, because of the fledgling nature of these industries, the consultancy focus on them is not as well developed as in the more conventional areas. I am happy to note therefore, that the programme of this Congress includes a session on "Synergies and Opportunities in Knowledge Consultancy: Focus on Critical Sectors" and I hope these newer areas will receive the attention they deserve. I am aware that the CDC has organised interaction meetings on areas such as biotechnology and energy efficiency. I now look forward to the CDC expanding its activities to other areas of the knowledge economy also.

This overview of the role of consultancy in the knowledge economy would give you an idea of the enormous potential, which exists for the development and growth of consultancy in the knowledge economy. However, to tap that potential the consultants have to re-define their

professional roles from the mere providers of technical and management services to knowledge workers in an economy with very different characteristics from that, which exists today. They need to acquire the ability to blend domain knowledge in many new areas e.g. biotechnology and renewable energy with the powerful tools and techniques of IT.

I look forward to the CDC taking the lead in bringing about such a transformation in consultants, consultancy companies and the consultancy sector as a whole. The Government on its part must evolve and put in place policies and practices, which would give national consultants a preferential role in accessing and undertaking projects in the new areas of the knowledge economy. Such a partnership will provide the key to success in this critical area. Thank you.

** Inaugural Address at the Fourth National Consultancy Congress on "Consultancy in the Knowledge Economy – Prospects & Profits" held on January 15, 2001*

INFORMATION TECHNOLOGY IN TRANSPORTATION*

It gives me great pleasure to be here at the inaugural session of the 7th International Conference on IT and Transportation. The theme of the Conference deals with a topic of great interest, importance and relevance to us and I hope your discussions will help us to utilise our strength in IT to bolster the transportation sector. Today, as a nation, we are committed to build on our capabilities in the field of information technology. Many developed nations look to India as a major source of IT-related human resources and recognise its potential in the IT Sector. However, at the same time, we suffer from inadequate transport infrastructure, deficient power and low penetration of the telecommunication network. Transport, power and telecommunication are three wings of a nation's infrastructure, which drive the performance of the entire social and economic structures of a nation. These truly form the backbone of the economy. Indeed, our performance in practically every field, which determines the quality of life of our citizens, depend on the state of the infrastructure.

The transport sector has undoubtedly expanded manifold in the first 50 years after Independence, both in terms of spread and capacity. Along with this increase in quantity there are several welcome developments of a qualitative nature, such as the emergence of a multi-modal system in the form of container transport, improvement in the self-financing capacity of the sector and establishment of new centres of excellence for manpower development.

Impressive as this progress is, the condition of the country's transport system is far from satisfactory in relation to the ever-growing needs and suffers from a number of deficiencies. The quality and productivity of the transport network and resources need to be improved dramatically to bridge the gap. Both the rail and road links of the transport system of the country are currently saturated and these

capacity shortages can become a serious constraint on overall economic growth. At the present stage of development, accessibility as well as mobility need to be tackled simultaneously. Not only does the existing capacity of the network need to be improved, it is also necessary to improve accessibility, particularly when about 40% of our villages are yet to be linked by all-weather roads and a large segment of our population finds it difficult to access the market and social services.

With a view to removing deficiencies in the high-density corridors of the national highway network, the National Highway Development Project, which consists of the Golden Quadrangle and the North-South and East-West Corridors, having an aggregate length of over 13000 kms. is being executed by the National Highway Authority of India at an estimated cost of over Rs. 50,000 crore. We have also launched simultaneously a rural roads programme, known as the Pradhan Mantri Gram Sadak Yojana, which aims at improving the connectivity of villages.

On the railways front we have a huge network of over 60,000 kilometres of track that carries nearly 14 million passengers and 1.5 million tonnes of freight every day. Even so, the penetration and adequacy of the rail network are sought to be extended by various demands from different parts of the country. The capacity of the existing railway network also needs to be augmented, besides improving the reliability of the assets for providing safe and reliable rail services. In this context, the huge arrears of track renewal also require urgent attention.

The other modes of transport, like shipping and civil aviation, too require huge investment. In order to improve our international competitiveness, it is essential that our ports and airports become more efficient and indeed of world class.

The coming years will, therefore, require huge investment in almost all modes of transport. Apart from the magnitude of these investments and the fact that most transport infrastructure projects have long gestation periods, the immediate needs require us to consider the possibility of developing a synergistic plan that maximises the returns

on investments already made. It is here that I see an immense role for information technology. We need to develop the capability to visualise the future transport demand patterns over the next ten to fifteen years and formulate an investment plan to meet this demand at the minimum cost to the economy. The IT-based decision-support systems have been found to greatly assist in optimising the utilisation of the transport infrastructure. They are also useful for selecting an optimum investment set for the transport sector, in identifying projects for rail and road and in helping to determine the key inputs necessary for meeting different transportation requirements. Such IT-based solutions would also help in understanding the dynamics of the transportation industry and in analysing the impact of factors such as transit time, reliability and availability on the modal choice behaviour of the customer.

I understand that Indian Railways has successfully developed an IT-based Long Range Decision Support System for investment planning. Using sophisticated tools such as Geographical Information Systems (GIS), network analysis and simulation modelling, the Railways will be able to analyse the future demand forecasts over the entire rail network and the locations and areas in which the existing network needs to be strengthened with additional investments.

At the logistics and tactical level, the role of IT in the transportation process itself is quite crucial. Today our international traffic is handicapped due to the delays in the processing of documents. This delay can be entirely avoided once we implement EDI (electronic data interchange), which would make most of the paperwork redundant and bring our procedures on par with those of the developed world. This would permit advance transmission of data and speed up cargo movement.

Even in domestic transportation the role of IT is crucial at the customer interface and within the transport organisations at the interfaces between organisations. At the customer interface, IT helps in providing information—both fixed, such as train schedules and fares, as well as dynamic, such as the reservation status or train running positions. It

also makes the transactions much simpler as a customer can make his reservations sitting at home over the Internet or at best through a nearby terminal or Internet Kiosk. In an ideal case, he should also be able to compare all the different services and modal alternatives and finalise his bookings without physically moving a step. It would then become possible to make reservations on line from anywhere in the world, which would be a most welcome facility for NRIs as well as other international visitors to India and should thereby boost our tourism efforts. In the case of freight traffic also, the customer should be able to make his bookings without having to go to any freight terminal and should then be able to trace his consignments over the web. This indeed is the requirement of modern industry today.

The role of IT in the organisational process itself is extremely important since it permits more efficient monitoring as well as better asset utilisation. For instance, a fleet owner is able to monitor the performance of vehicles and reduce vehicle downtime by better maintenance planning. In addition, it is possible for him to keep track of the movement of all his vehicles using technologies based on Global Positioning System (GPS). With this a customer would know where his cargo is at any point of time. The freight operations information system (FOIS) of the Railways, for instance, would help improve the wagon turnaround, reduce claims, improve service reliability and help in achieving higher levels of customer satisfaction. This improvement in reliability directly translates into economic benefits as it allows better planning right through the production chain and allows the use of systems like "just in time manufacturing". Once fully implemented, the FOIS system should also have a significant impact on overall freight performance of the Railways. Similar initiatives are the need of the hour in other transport organisations.

Adoption of common identification codes is another area requiring attention as this makes the track and trace systems of different organisations compatible and allows end-to-end tracking of consignments. This is of specific utility in the case of multi-modal transport where each transport agency has its own numbering system, whereby the customer cannot trace the package once it moves from

the booking agency on to another agency. International studies have shown that savings of the order of billions of dollars have been realised in individual industry segments due to the reduction in the in-process inventories right through the supply chain by the adoption of common identification systems.

I have only briefly touched upon some of the existing IT applications in the Indian transport sector. I am certain that there are many more, which could improve our transport efficiency considerably. I am confident that the deliberations in this Seminar will help in focussing attention on these and other major issues and help in furthering the development of IT in the transportation industry. With these words, I have great pleasure in inaugurating this Seminar. Thank you.

** Inaugural Address on the occasion of the 7th CIT-International Conference on "Information Technology in Transportation" organised by Chartered Institute of Transport-India on January 18, 2001*

ENSURING PEACE & STABILITY IN ASIA*

Excellencies, ladies and gentlemen, it gives me great pleasure to address this 3rd Asian Security Conference. You have spent three days in intensive discussions and exchange of views. I am told that these deliberations were extremely stimulating and have greatly helped to enhance mutual understanding for our common goal of strengthening peace and prosperity for our people in the new millennium.

The 20th century, as the Director of IDSA stated, has been the most violent century in human history. Two long and highly destructive world wars capped by the nuclear bombings of cities, long bitter wars in Korea, Vietnam, Iran-Iraq and hundreds of other wars are the grim reminders of the violence and conflict where the military-to-civil ratio of casualties was completely reversed. We need to reflect on the causes and course of these wars and violence.

But as we stand on the threshold of the new century we will need to take note of the trends. The most important of these is the issue of changing equations among nations and their capabilities. The last half-century has witnessed the end of colonialism and emergence of over 100 sovereign nation-states, which have entered the UN as new members. The last decade of the 20th century has witnessed the fragmentation of many nations with nearly a dozen emerging as new nations. There are pressures of separatism in other countries pursued either through consultation and accommodation, like in Canada, or through violence as in Sri Lanka. The UN Secretary General, Boutros Boutros Ghali, in his "Agenda for Peace" had cautioned in the early 1990s that the world cannot afford further fragmentation of sovereign states, especially those brought about by armed violence and narrow sectarian nationalism. Most countries of Asia are multi-cultural, multi-ethnic and even multi-religious. Any idea or action that seeks to break up states on the basis of ethnicity or religion increases the challenges to peace and reconciliation among people and states. Unfortunately

for humanity, religious extremism has been used by some people to prop up a dogma adopted by radical violent groups for holding the civil society and the democratic principles to ransom. This cancer will have to be removed if the goals of peace and prosperity are to be pursued seriously.

Most countries of Asia have emerged from varying periods of colonial rule and imperial domination and they are still deeply engaged in nation-state building tasks. On the other hand there are new concepts that sovereignty is neither relevant nor important in a world that is increasingly globalising. This requires serious reflection because sovereignty was never absolute and the issue is whether a country makes the choices in policy as part of its sovereign right and through peaceful means or is it imposed on it through various instruments. The case of Western Europe is instructive. The European Union is evolving into a supra-national entity as a result of sovereign choices being made by individual sovereign countries. And the fact that the states perceive advantages in such a union is itself encouraging pressures for expansion of the membership. Sovereignty continues to remain the central principle of organisation for a state. It is not surprising, therefore, that some of the most powerful countries of the world remain highly sensitive about their sovereign rights!

What is important is not merely the expression of an abstract principle that all states have an equal sovereign right but the implementation of the concept of sovereign equality of all states. This requires the promotion of the democratic principle and norms both at the national as well as international level. This is the essential lesson of globalisation, which itself has many dimensions. While the developed world is keen to expand globalisation of markets and trade, there is strong resistance to globalisation of labour. Such dichotomies will continue to generate tensions and inequity unless it is recognised that the development of the developing world is in the interest of the developed world. And the reverse would be equally true except that the developing countries have far less capacity to promote this concept. But this must be recognised as the central principle of globalisation and international relations.

We need to reflect on these and many other issues that are emerging. All indications today point to the 21st century being an "Asian Century", Asia being the region from the Suez Canal to Japan and not as some believe to cover only the area east of India. The United States remains deeply engaged in Asia and, in fact, with its new fleet and stationing of forces in the Persian Gulf, the US can be said to have shifted forward strategically from the Pacific Ocean into the Indian Ocean. The most dramatic and high economic growth rates are taking place in Asia. This is also the continent where the most far-reaching and crucial social and political changes are being witnessed. India's economy, for example, has been growing at an average rate of 6.6% during the last decade of the 20th century; not as dramatic as the sustained growth of China but one that has weathered the storm of the East Asian crisis and the economic sanctions after May 1998.

Very soon four of the five largest economies of the world will be Asian countries. The largest reserves and supplies of hydrocarbons, the only strategic resource base critical to both the developing as well as the developed world, come from Asia; and so are the demands and vulnerabilities of countries to future energy needs the highest in Asia. China became a net importer of energy after 1992. Japan invested heavily in nuclear power after the oil shock of the early 1970s to reduce its vulnerabilities. India's import dependency in regard to crude oil is likely to increase from 30% in the early 1990s to as high as over 90% by the end of this decade. Disruption in oil supplies or prices have caused serious setback to economic and human development in the past and we need to co-operate with each other in evolving policies that benefit the suppliers and consumers in an equitable and fair manner. A new mutually beneficial paradigm of co-operation between the producers and consumers will need to be evolved.

Asia was the battleground for most of the long bitter wars of the last century. It is a sobering thought that there are still over 6 million men under arms in the countries of Asia. Six out of eight nuclear weapon states are in Asia. Afghanistan continues to remain a battleground now for a quarter century. A human tragedy continues to affect the people of Iraq. On the other end of the continent, tension

on the Korean peninsula remains worrisome in spite of the progress made in recent times. We sincerely hope that Indonesia will soon overcome the difficulties it has faced since the economic crisis of the late 1990s. The future has enormous uncertainties to which we have to find the right solutions. The greatest challenge that the countries of Asia face in the new century is how to ensure that peace and stability are strengthened and made durable so that human development can be pursued without distraction and disruption. But that peace cannot be found by an approach that is based on exclusivity or a "balance of power" approach.

The challenge at the first level is an intellectual one. We have to believe in the need for understanding each other and the over-riding need to ensure that durable peace and stability in Asia become the norm in the coming decades. We in India clearly require a prolonged period of peace and stability to implement our agenda for the betterment of human life and its quality. This requires international co-operation. You might recall that India had called the first Asian Relations Conference in New Delhi four months before her Independence in which Jawaharlal Nehru had declared that "Ours is the great design of promoting peace and progress all over the world." This continues to be our goal. But we will have to share our perceptions, needs and aspirations so that space is created for mutual adjustments for our common goal.

I thank and congratulate all of you for joining us in our endeavour to strengthen peace and co-operation. We will no doubt all reflect on the issues raised during the past three days. And we look forward to the process being taken forward.

** Valedictory Address at the 3rd International Conference on "Asian Security in the 21st Century" organised by the Institute for Defence Studies and Analysis on January 29, 2001 in New Delhi*

RELEVANCE OF PLANNING IN MARKET ECONOMY*

It gives me great pleasure to be here with you at the inauguration of this National Seminar on Planning in India. It is entirely appropriate that at this juncture of our history we take stock of our experience with planning and reflect upon its continuing utility in the future. Since Independence more than 50 years ago, India has followed a path of planned development. However, its continuance should not be based on mere inertia but on a realistic assessment of its relevance in the future.

Today, therefore, I would like to start by taking this opportunity to briefly reflect upon the shifts that have taken place in our development strategy and in our attitudes and approaches towards growth and development over the years. There has been a tendency in recent years to treat the development strategy followed by India for the first forty odd years after Independence as an undifferentiated continuum, with little substantive variation from Plan to Plan. Nothing could be further from the truth. Indian development strategies have evolved from one Plan to another in response to the objective conditions of the economy and to the challenges of the moment. Some of these changes have been strikingly bold and original and others more modest. But change has been there.

The Second Five Year Plan, which more than any other bore the imprimatur of Prof. Mahalanobis, set the stage of our essential development strategy during the early years. The emphasis on the establishment of heavy industries, both as a means of rapid industrialisation and for raising the low savings rate of the economy, was certainly original in its conception and reflected the tremendous confidence that our political and economic leadership had in its analysis and judgement. The Third Plan, conceived during a period of serious balance of payments problems and falling international prices of

primary products, introduced the concept of import substitution as a strategy for industrialisation. Whatever be the merits of this strategy in hindsight, it received considerable attention, and even acclaim, from academics and practising policy-makers and was widely emulated by other developing countries.

The Fourth Plan came after one of the most difficult periods of Indian economic history. The two-year period 1965 to 1967 witnessed the worst drought in recent memory and consequent famines in large parts of north India. At the same time, all aid, including food aid, to India was cut by the donor countries on account of the Indo-Pakistan war of 1965. This traumatic experience brought food security into the forefront of our policy imperatives. This was further buttressed by the observation that sustained industrialisation was not possible without adequate provision of wage-goods. This Plan was also characterised by the introduction of another concept, which has only recently become popular in the international discourse, namely, environmental sustainability.

The Fifth Plan too was path breaking in that it recognised that growth and industrialisation would not necessarily improve the living conditions of the people, particularly the poor—a recognition, which only now finds echo in the position being taken by the World Bank. The concepts of minimum needs and directed anti-poverty programmes were innovations of this Plan.

The Sixth Plan, for the first time, recognised that the success of the Mahalanobis' heavy industrialisation strategy in raising the savings rate of the country had created a situation in which the savings constraint was no longer binding and indeed excess capacities were becoming evident in certain industries. A shift in the pattern of industrialisation, with lesser emphasis on heavy industries and more on infrastructure, begins here. The Seventh Plan represents the culmination of this shift in perspective and may justifiably be termed as the 'Infrastructure Plan'. It was also during this period that a reappraisal of the import substitution strategy and a shift towards a more liberal trading regime begins.

The Eighth Plan was overtaken by the crisis of 1991 and the economic reforms that came in its wake. The dramatic events and policy initiatives of the two-year Plan holiday between 1990 and 1992 demanded a full reappraisal of the planning methodology and the Eighth Plan represented the first efforts at planning for a market-oriented economy. The Ninth Plan carries forward this shift in perspective and represents the first real effort at "planning for policy", which recognises that private behaviour can no longer be affected by fiat but through policy signals.

Thus, whatever be the criticism of Indian planning, it cannot be accused of being either static or unimaginative. By and large, the track record too has not been bad. We have managed to decisively reverse the trend of falling per capita incomes that had characterised the first 50 years of this century and have steadily accelerated our growth rates from an average of 3.5% per year during the 30-year period from 1950 to 1980 to 5.5% during the 1980s and further to 6.5% during the 1990s. Food security too is no longer a matter of pressing concern and the scourge of famines seems to have been decisively eliminated from the country. The incidence of poverty has also been brought down, although not as fast as we would have liked. Social indicators have shown significant improvement from the abysmally low levels that existed at the time of Independence.

Despite these achievements, however, in recent years Indian planning has come under attack from a number of quarters both within and outside the country. It sometimes comes as a surprise to people abroad that India continues to preserve planning as a central pillar of its development strategy despite having had a vibrant market economy for many years now. I would like to submit to you that there is no contradiction at all and planning has just as important a role to play in a market economy as it did in a controlled one.

Within the country, dissatisfaction with planning emanates from two main directions. First, there is a view that planning is almost synonymous with statism and is symptomatic of a desire of the government to intervene excessively in economic matters. Secondly, the fact that a number of developing countries have performed better

than India by following different growth strategies is laid at the door of planning. Much of the criticism, I believe, is misinformed, since it represents not a criticism of planning *per se* but of either its ideological underpinning or the success it has achieved in India.

In so far as the first criticism is concerned, it relates to a particular form of planning, namely, investment planning, whereby the government determines the quantum of investment that will go into any sector or even industry. The argument appears to be that the central planners are less competent to take and direct investment decisions than entrepreneurs operating under the discipline of market forces. While this view is certainly true at the present stage of development of the Indian economy, there are two points that need to be made to place the issue in perspective.

First, it needs to be realised that investment planning in its pristine sense has not existed in India at least for the last fifteen years when the dilution, and eventual dismantling, of the industrial licensing regime was initiated. Secondly, investment planning in the sense of working out the investment requirements of different sectors of the economy in order to ensure inter-sectoral consistency continues to be valid and will be so until such time as India becomes a capital surplus country and the importance of public investment diminishes significantly. Interestingly enough the Indian corporate sector appears to share this view. Our experience at the Planning Commission indicates that the single largest user of the Plan projections is in fact the private corporate sector, which recognises the value of sector-wise forecasts made in a consistent, economy-wide framework for its own investment decisions.

The second stream of criticism is even less valid, at least as far as the manner in which it is usually couched. The first major error that is commonly made is to base the criticism on inter-country comparisons and not on the basis of counter-factual simulations for India. The simple fact is that development experiences will differ between countries for a host of reasons, of which the approach taken towards development strategy is only one. Political, social and cultural factors are just as

important and it is difficult to make allowances for these in a cross-country context. The second error lies in assuming that the countries with which India is being compared do not have planning as well. This is generally simply not correct.

All this is not to say, however, that the planning methodology should not change so as to reflect the new economic realities and the emerging requirements. It must and it will. A significant beginning has been made in the Ninth Five Year Plan itself. In sharp contrast to the past, the Ninth Plan does not lay down investment patterns in a deterministic manner. It indicates the sector-wise investment requirements, the investment that is likely to occur and thereby the areas, which may receive excessive or insufficient resources. Such an analysis focuses attention on the sectors, which require policy change in order to achieve the desired targets. This approach to my mind is what policy planning is all about. You will have noticed the startling similarity between this form of national planning with the corporate plans made by large corporate houses. No economic entity, which has a long-term perspective, can operate effectively in the absence of a mechanism by which future scenarios are generated, opportunities and threats are analysed and a consistent strategy evolved. In future years this approach will need to be strengthened and made more precise and accurate.

The process of reorientation of the Planning Commission has already begun. Not only are we reviewing our planning methodologies but also the organisational structure and the skill requirements. This is not a trivial task and no process of radical change is. We have therefore sought the assistance of a professional consultancy agency to aid us in designing and managing this transition. I am confident that very soon you will see a revamped and revitalised Planning Commission, which will have all the attributes necessary to cope with the demands of planning for an open, market-oriented economy.

One of the principal functions of planning in a federal system is to evolve a shared vision of, and a shared commitment to, national objectives and development strategy, not only in the government at

all levels but also among all other economic agents. No development strategy can be successful unless each component of the economy works towards a common purpose with the full realisation of the role that it has to play within an overall structure of responsibilities. For this to happen, the vision and the strategy have to be clearly articulated in a formal document, which is readily available to all the players in the national economy. This function will always remain valid and its proof is that there is no country in the world, which does not have such a vision articulated at the highest level of government.

The federal nature of our political system sometimes has the effect that inter-state linkages and synergies are lost sight of and an excessively narrow and fragmented view is taken of economic interests. In an age, in which countries are scrambling to create wider economic spaces through free trade and investment arrangements, common economic zones and the like, we are fortunately placed as a political and economic entity of continental dimension. We must nurture and build upon this national advantage. Viewed in the national perspective, a state may gain as much from the development of its neighbours as from its own performance.

The third function of planning, which needs to be recognised, is that in a dynamically evolving world the conditions change continuously and the development strategy also has to evolve in a consistent and proactive manner. This can only be done through a system, which tracks the emerging trends both in the international and the domestic economies, analyses the opportunities and dangers and indicates the direction for policy change.

Another area, in which planning will remain relevant, is in coordinating the economic activities of the Central and State Governments and among the Central ministries. There is no other agency that is better equipped to play this role. As you are aware, India is a federal country in which the authority and responsibility for handling various public activities are vested in different tiers of government by our Constitution. Coherent policy-making, however, requires that some agency should ensure that these different and autonomous tiers do not work at cross-

purpose. For this, it is essential to have an institution, which has an economy-wide mandate. Thus, planning will be essential for national objectives of poverty alleviation, population control, employment generation and balanced regional development in a holistic manner. Leaving these issues to the sector-wise ministries runs the danger of the inter-linkages and synergies being overlooked.

This coordination function will become increasingly more important in the future as the process of globalisation continues. Under the Constitution, the authority to enter into international treaties and arrangements vest only in the Central Government. Thus, there is always the possibility that the developmental responsibilities, which are vested in the State Governments, may come in conflict with international obligations unless there is a coordinating mechanism, which can ensure convergence.

The process of globalisation is throwing up new challenges, one of which is the integration of the domestic financial system with the international. The developments in the western countries are such that the number of people dependent upon past savings will be going up rapidly in these countries. As a result, the availability of investible capital will far exceed the ability of these economies to absorb them productively. Such resources will have to find productive use in developing countries, which would have a higher proportion of younger people. In other words, the North will have to buy into the growth of the South. This process has already begun and the emerging markets have become the new frontier for Western capital.

This has two dimensions, which I would like to bring to your notice. First, there will be an increasing tendency for the developed country multinational corporations to aggressively target capacities in the developing countries. Secondly, the financial systems in the developing and emerging economies will have to reorient themselves to the new reality of volatile international capital flows. As the Indian financial sector becomes more integrated with the global system, the pressures on the system are likely to increase. Therefore, although there will be vast opportunities in terms of availability of external capital, there

will also be serious threats to the stability of the financial system. The dangers that are present can be seen from the disruptions that have taken place in East Asia during the last three years and the changes in the ownership patterns that it has engendered. This is but a precursor to what we can expect. It would not be wise to treat this issue as one relating only to the financial sector. Our strategic position will have to have an economy-wide base, since the pressures will come through a number of different fora such as the WTO.

It may therefore be appreciated that the coming years hold several challenges, which we will have to meet through suitable evolution of our development strategy. Such an evolution is unlikely to happen by itself and would require a strong and technically competent planning system, which can look at the issues in an integrated manner.

I am confident that when you think about these issues, you will come to realise the wisdom of planning in a market environment. To my mind, the only question is whether we will be able to sufficiently strengthen our planning system to cope with these challenges. Thank you.

** Inaugural Address at the National Seminar on "Planning in India: Retrospect and Prospect" organised by the Institute of Public Enterprises & Public Administration, Chennai on February 3, 2001*

ACCELERATING POWER REFORMS*

I am glad to be here on the occasion of the State Chief Ministers and Power Ministers Conference, which was inaugurated by Hon. Prime Minister this morning. Inauguration of the Conference by the Prime Minister underlines its importance.

We are at the crossroads of the development of the power sector in our country. Despite the fact that tremendous strides have been made in this sector since Independence, much more remains to be done. Power has been one of the main drivers of the growth of our economy. We have now to ensure that lack of power does not become a drag on the accelerated growth of our economy, which we are aiming at. The estimated capacity addition of 100000 MW during the Tenth Plan and the Eleventh Plan will need periodic review so that it is in line with the projected GDP growth rate at 9% per annum during the Tenth Plan and the explosion of growth in the IT sector. Supply and demand gap is likely to widen unless capacity addition is more than double in each of the next two Five Year Plan periods compared to the Ninth and the Eighth Plans.

It is obvious that funds of the required magnitude cannot come from the budgetary allocation alone. Though public sector utilities have played a predominant role in the power sector so far, the private sector has to play a much more crucial role in the years to come than hitherto. Only 5000 MW of capacity addition is expected from the private sector during the Ninth Plan against the target of 17,588 MW, though private sector projects with an aggregate capacity of 57,000 MW have been given techno-economic clearance by the CEA. The lack of enthusiasm on the part of the independent power producers (IPPs) is attributed mainly to want of credibility and lack of progress in the power sector reforms in a majority of the States. The financial health of the SEBs has been deteriorating over the years. The commercial

losses of SEBs have jumped from Rs. 1,235 crore in 1984-85 to Rs. 24,920 crore in 1999-2000.

It is well known that the domestic sector is partially subsidised and the agriculture sector is highly subsidised. The total subsidy on sale of power in domestic and agricultural sectors was about Rs. 1200 crore in 1984-85. It has increased to Rs.33,350 crore in 1999-2000. Though the two sectors account for 50% of electricity consumed, their contribution to the revenue is one-sixth of the total sale. The tariff for the industrial sector used to cross-subsidise these sectors. The tariff for industrial sector in India in international terms is around 10 cents per unit against 3-5 cents in other countries. This situation is unsustainable in a liberalised economy where the industry has to be globally competitive.

The low tariffs for the agriculture sector have created a vicious circle. They are the consequence of the policy adopted by the Government and the cause of the crisis in the State power sector. The average agriculture tariff, which was 49 paise per kwh at all-India level in 1984-85, has come down to 25 paise per kwh in 1999-2000. There are some States where power for agriculture is given free of cost. It is generally thought, though mistakenly, that any increase in power tariff for agriculture will go against the interests of the farmers. But a recent study by the World Bank on the supply of power to agriculture in Haryana shows that a 50% tariff increase with no improvement in supply conditions is estimated to reduce net farm income by less than 4% on an average. However, subsequent and sustained improvements in the conditions of power supply, along with phased tariff increases towards full cost recovery would, in fact, increase the net farm income of all farmers, regardless of their size over the medium term. Over a period of about 6 years the farmers' average net income would more than double as a result of power reforms even if agriculture tariffs were increased to reach a level equivalent to about two-third of the cost of supply. Econometric simulations indicate that under the reform scenario the net income of small and marginal farmers will increase by almost 200% over the medium term, compared to about 140% for the medium and large farmers. On the other hand, under

the no-reform scenario, the net farm income of medium and large farmers would be reduced by about 70%, while the small and marginal farmers would risk bankruptcy.

Any subsidy leads to inefficiency and also inefficient use of electricity and acts as a disincentive for measures aimed at efficient use of energy and water. Therefore, subsidy, if any, in the transition period should be well targeted and limited to consumption of specified quantity by the target groups.

Private investors would not come unless there is a credible move towards restoring the creditworthiness of the power sector. Imposition of economic user charges holds the key to the overall reforms process. It is, however, not merely a question of increasing the tariff level and reducing cross subsidy but it is also equally an issue of efficiency pricing. Time has come not only to place emphasis on unbundling of SEBs but also to highlight the issue of the cost of inefficiency. A study made by the Centre for Development Studies shows that the cost of inefficiency represents about one-third of the reported cost of electricity supply in India in 1997-98. Reduction in T&D losses, enhancing labour productivity from 3.4 employees per MU sold in 1997-98 to 2 employees per MU sold and reducing the interest burden of SEBs by converting part of the Government loan to equity would lead to commercial surplus. Emphasis, therefore, needs to be laid on efficiency gains. The SEBs—unbundled as well as the composite ones—owe it to themselves and to the country to launch a drive to enhance their efficiency levels within a definite time-frame of 2-3 years so that private sector reforms are not perceived by the consumers as only a device used by the State Electricity Regulatory Commissions or by the SEBs themselves to raise tariff rates. Power produced and supplied has to be affordable. Unbundling of the SEBs need not be a condition precedent for taking measures aimed at efficiency gains and levy of economic user charges. In fact, unbundling could even follow these measures or be done concomitantly.

Another aspect, which needs emphasis, is that in order to augment power availability in a short period, R&M works should be given priority. It is well known that 1% improvement in plant load factor is

equivalent to creation of 600 MW capacity. Similarly, 1% reduction in T&D losses leads to additional revenue of about Rs. 600 crore. Recognising the importance of R&M works and improvement in transmission and distribution system and 100% metering down to the consumer level, the Government has recently introduced Accelerated Power Development Programme under which the States will get special grant for taking up these works. The States willing to avail of the assistance will have to agree to certain measures for reforming the power sector and enter into MOUs with the Ministry of Power setting milestones for the same. All the State Governments should come forward to take advantage of the new dispensation.

There has been a deceleration in the rural electrification programme during the Ninth Plan and the Eighth Plan compared to the Sixth and the Seventh Plans. About 80,000 villages remain to be electrified. Of these, 18,000 villages are in remote and difficult areas where grid supply may not be feasible. Non-conventional energy sources have to play a critical role in electrifying these villages and meeting their energy needs. Most of the unelectrified villages have to be covered in the next six years. The Finance Minister, in his Budget Speech for the year 2001, has already announced that the States would be assisted for village electrification works under the PMGY whose funding is being augmented. Time has come to make a paradigm shift in the approach to rural electrification. It should be a matter of making power available for various domestic and economic activities rather than merely lighting a village or a portion thereof. The community has to be involved through NGOs and Panchayati Raj Institutions.

You would recall that I had mentioned at the outset that we are at the crossroads of development of the power sector. We have to marshal the requisite political will and administrative acumen to carry out the power sector reforms with resolve. Mere resolutions in conferences without actual follow up will not solve the problems. To give one example, it was resolved as a part of the Common Minimum National Action Plan in the Conference of Chief Ministers in 1996 *inter alia* that no sector shall pay less than 50% of the average cost of supply (cost of generation plus transmission & distribution). The tariffs for

agriculture sector would not be less than fifty paise per kwh to be brought to 50% of the average cost in not more than three years. This decision has not been acted upon yet. If we do not act now, we may slip into an era of darkness – quite literally. On the other hand, if we act now, I am sure, we will see light at the end of the tunnel.

To sum up, the following measures may be taken urgently:

1. Improve the financial health of the SEBs by taking measures aimed at efficiency gains and, thereby, have efficiency pricing;
2. Phase out subsidies in general and bring down the subsidy in the agriculture tariff, in particular, in the next two years;
3. Unbundle the SEBs and privatise distribution immediately. However, this need not be a pre-condition for taking measures aimed at efficiency gains and levy of economic user charges;
4. Take up R&M works and measures for improvement in transmission and distribution system and 100% metering in a time-bound manner;
5. Encourage captive power generation;
6. Cover a majority of the balance 80,000 unelectrified villages within the time span of six years;
7. Encourage decentralised energy production and supply systems, mostly through renewables, by private players like NGOs, cooperatives and PRIs, etc.

Thank you.

* Address at State Chief Ministers and Power Ministers Conference held on March 3, 2001 in New Delhi

STRENGTHENING INDO-UK TIES*

My dear colleagues, it is with great pleasure that I welcome you today to the salubrious surroundings of Sariska for the third meeting of the India-UK Round Table. I hope that members will have a pleasant and productive stay.

As we meet here today, our relationship with UK has been described to be at its "best ever" by the political leadership in both the countries. India is fast emerging as one of the major forces in the international scenario, given its rapidly expanding economy, its geographic size, democratic institutions, its population size and its cultural heritage. This trend is bound to continue as India progressively adds to its strengths, be it economic, strategic or political. Similarly, UK has taken huge strides and established itself as a global actor. In the changing political and economic scenario, India and UK have engaged in a rewarding partnership. We have a vibrant political dialogue as well as an extensive interaction in the fields of trade and commerce, development programmes, culture, science and technology, to mention a few. In addition to these traditional areas of interaction, in recent years India and UK have focused on co-operation against international terrorism, information technology, education, small and medium enterprises etc. With these efforts, our relationship has moved apace with the new opportunities made available in the new millennium.

I would like to thank Dr. R.A. Mashelkar for his keynote address yesterday evening on "Perceptions of India and the U.K. in the 21st Century". The presentation has indeed placed the India-UK relationship in the correct perspective and gave us a glimpse of what the two countries could look forward to in the new millennium.

Our previous two meetings held in New Delhi and Warren House last year had allowed us to dwell on, and suggest, various initiatives to enrich and strengthen our multi-faceted bilateral relationship. The

recommendations made in these two meetings were sent to the respective governments. We now have with us the responses of both governments to the initiatives, which we have shortlisted. They have also suggested more areas in which fruitful bilateral co-operation was possible. May I, on behalf of my colleagues convey our appreciation to both governments for their support to the Round Table.

I have no hesitation in saying that the Round Table has given a fresh outlook and clearer perspective to our bilateral relationship. In our deliberations it has emerged clearly that the future of the bilateral relationship lies in both countries exploiting the exciting opportunities in the non-traditional areas. The warm and close relations, which both the countries have enjoyed in the last couple of years, is an eloquent testimony to the commitment at the highest levels to enrich the relationship.

Our commercial linkage has received a special priority both from the two Governments as also the Round Table. We look forward to the presentation on 'Bilateral Trade and Investment' by Mr. Hemendra Kothari and Mr. David Loyd. Globally, UK is India's second largest trading partner and its largest trading partner in the European Union. In the year 2000 the bilateral trade reached a turnover of 3.7 billion pounds excluding our exports in services, which are of a significant magnitude. India's exports to UK have been to the tune of 1.71 billion pounds and imports from the UK are nearly 2.05 billion pounds. Both sides are hopeful that the bilateral trade will reach the target of 5 billion pounds by the end of 2001. Concerted efforts by both sides, including the Governments, private sectors and Chambers of Commerce, were instrumental in this positive trend. India seeks to forge 200 joint ventures between small and medium enterprises by the end of 2001. This is an area, which has remained neglected so far. Such co-operation could be institutionalised through linkages between the umbrella organisations representing SMEs in India and UK. Both sides have also shown keen interest in co-operation on issues related to labour.

In terms of the actual inflow of FDI, UK has been the fifth largest investor in India, with US \$563 million during the period 1991-1998. British investment in India is far below the potential that exists.

We hope that British investors will be encouraged both by the Government and the chambers of commerce and industry to increase the level of investment in India. India's economic indicators point to an economy growing at a healthy rate and expected to perform well in the coming years as well. A steady growth rate of 6.4% was recorded in 1999-2000 and it is expected to remain at a constant 6% in 2000-2001, notwithstanding the recession in the US and European economies. Our export and import growth rates for April-December 2000 have stood at an encouraging rate of 20.4% and 9% respectively compared to the corresponding period in 1999.

India has emerged as one of the leaders in the area of information technology, the fastest growing sector of our economy, which boasts of a compound annual growth rate exceeding 50% for the past few years. Our estimated global software exports recorded an impressive figure of US\$4 billion in 1999-2000. Our software exports for the year 2000-01 are estimated to be US\$6.3 billion. Mr. Dewang Mehta, President, National Association of Software and Services Companies (NASSCOM) and Mr. Alpesh Patel will be presenting the exciting opportunities available in this field. At the second meeting in Warren House, we recognised the immense potential that this area holds for bilateral interaction. We suggested that to facilitate mobility of our IT professionals the UK Government should ease the visa and work permit regimes. We have welcomed the addition of IT to the list of skill shortage category by the UK Government. This has increased the number of IT professionals working in the UK by 300 per cent. We look forward to further visa relaxations in this sector. To consolidate our trade-related initiatives, we had suggested the setting up of a Round Table website as a database for potential partners for joint ventures, advertising educational linkages, providing IT-related information and facilitating an online education programme. We hope that this suggestion can be implemented to the mutual benefit of both countries.

During the course of our discussions we will try to identify ways of strengthening our linkages in education, which have not reached their full potential yet. During the first meeting, we had recommended

that Chairs and Professorships should be set up in reputed Universities to promote different studies. A laudable achievement has been the launch of Professorship of Indian History and Culture in the University of Oxford to be funded through an endowment of 1.8 million pounds provided by the Government of India. We hope that this development will rejuvenate academic interest in Indian studies in the UK. St. Cross College has been selected by the Oxford University to be associated with the Chair, which would formally come into existence in the year 2002. I hope that British institutions and private sector will take a cue and contribute generously to the setting up of similar Chairs and scholarships. We also welcome softening of the visa regime for students by allowing the conversion of student visas into work permits in the skill shortage categories, including information technology. We look forward to the session on educational exchanges in which Mr. Gautam Sen and Sir Tim Lankster would be presenting their views.

Fostering mutual understanding between the people of the two countries has been recognised as an important area to be addressed by the two countries. Both sides have recognised that mutual perception of India and the UK by the media and the people needs to be balanced and should reflect contemporary realities. We have sought to do this by addressing media coverage, extensive exchange of journalists and through conscious efforts to cultivate each other's media. I am heartened to note the suggestions, which we received from the media. Members will have an opportunity to consider them during the next two days. Mr. Swapan Dasgupta and Ms. Daljit Dhaliwal will share their views with us on the interesting subject of "Mutual Perceptions".

Along with the areas of trade, information technology and education, the Round Table has also given attention to the scope for strengthening cultural linkages. The Round Table needs to follow up its past recommendation of organising a conference on "Mutual Perceptions on Cultural Pluralism". A detailed and informative presentation on "Managing Cultural Diversity" would be presented by Mr. Girish Karnad and Mr. Mark Tully.

On behalf of all the members of the Indian side, may I also convey our appreciation for UK's contribution of nearly £10 million and their assistance to relief and rehabilitation efforts following the Gujarat earthquake.

During our discussions today and tomorrow, we will endeavour to review cooperation in areas, which need our focussed attention. We will simultaneously explore new fields, in which there is potential for a fulfilling partnership. Finally, with a view to imparting further momentum to the Round Table's initiatives we can review our working strategies and also discuss the group's future direction.

Ladies and gentleman, this is the broad framework for the discussions at this third meeting. I am confident that this meeting will prove to be productive and that its venue will be welcomed by all lovers of nature. I sincerely hope that the enthusiasm of both sides would find expression in the invigorating ideas for carrying forward our bilateral ties.

** Opening Statement as the Co-Chairman of Indo-UK Round Table on the occasion of the 3rd meeting of Indo-UK Round Table held in Sariska on April 6, 2001*

RESTRUCTURING OF PLANNING COMMISSION*

I am very happy to have this opportunity to speak to you all at a time when we are engaged in this very purposeful exercise aimed at making the role of the Planning Commission even more effective and efficient at this very crucial and sensitive phase in our country's development. In the face of the emerging global trends, our response to the ongoing process of change in national thinking on development policy and economic management must be dynamic as it is our responsibility as an institution to evolve a national vision of our development goals and contribute decisively to their attainment. This calls for a systemic capacity to be sensitive to changing requirements, functions and operational strategies at any point of time. However, for an institution with a long history of shaping the thrust and structure of our development process it is not easy to implement any change even when it is deliberate and well thought out. To my mind, there are three or four issues that have to be kept in focus while planning for a change and changing for the better.

First of all, it is important to have a shared perception on what is desired, why it is desired and how best it has to be attained. In today's world of specialisation and technological advancement it is not possible for each one of us to be equally knowledgeable in all areas and hence it becomes important to pool our resources, skills and experiences to arrive at shared perception.

Secondly, once there is a vision backed by strategies for change it becomes important for each one of us to have a sense of ownership of, and involvement in, the process and its outcome. That alone can improve the quality of our functioning. This can be brought about through interaction and dialogue as well as through sharing of information at all levels in the organisation. This ideally should be the case at all times in any result-oriented organisation with clear-cut

objectives. But, that is often not the case, especially in the administrative context. I sincerely hope that we in the Planning Commission become more sensitive to this requirement and internalise it in our work culture and ethos. Success in this endeavour will be one of the measures of the success of the exercise that you are engaged in at this moment.

Finally, any desirable change in our functioning and our roles has to be sustained beyond the tenures and lives of individuals who may be responsible for first implementing them. This calls for modifying or even creating new institutional structures within the organisation or even in relation to the so-called "external stakeholders" that facilitate continuity and provide scope for future improvements. As individuals and as a collective body we should demonstrate the capacity for attitudinal changes so that we are better placed to meet the challenges and the tasks assigned to us.

Two years ago when I took over as the Deputy Chairman of the Planning Commission a proposal for reorientation of planning and restructuring of the Commission was placed before me. It was one of the many proposals that had been prepared or commissioned in the last ten years or so. I felt at that stage that the issue was far too important to be done in a piecemeal manner and, therefore, asked the Secretary to re-examine the proposal afresh. More importantly, I felt that any such exercise has to begin with serious introspection of what we have been doing as an institution and also as individuals over the last many years. A logical starting point was to identify the many weaknesses that had crept into our allocated functions and the underlying process of Plan formulation. It was only after this that we were to turn to strengthening other aspects of our functions that were important from the point of the present context of our economy. I believe that in the face of the changing domestic economic policy regime and an equally fast-paced integration of our economy with the emerging global order, investment planning is no more the only, and not always the most predominant, determinant of development. Planning has to necessarily go beyond undertaking mere budgetary allocations between competing sectors and regions. It has to address with greater vigour the need to

release the latent energies and stimulate private initiative in different aspects of our development process. Ultimately, we have to plan for an environment that provides ample opportunities for all to actualise their potential. As an institution it means that Planning Commission has to strengthen its role as a "Think Tank"—an institution that is a repository of expert knowledge. It has a comparative advantage in this context, namely, the presence of a multi-disciplinary faculty under one roof and the fact that its allocative and planning functions require an almost continuous dialogue with Governments both at the Centre and in the States as also with other partners in the development process. It is well placed to harmonise private initiative and public investment in the interest of sustained economic growth, regional and inter-personal equity and social justice. Boosting production and facilitating the generation of wealth must go hand in hand with the removal of want and fear from the lives of all our people.

I am happy to share with you that the Members of the Planning Commission and I have gone into these issues at great length. Over the last year or so many initiatives have been taken that are clear and deliberate steps for improving our allocative and planning functions and strengthening our role as a Think Tank. We have initiated, as you perhaps are aware, first the Vision 2020 Document for the country and second, the State Development Reports with a view to documenting the development profiles of the States and foster their growth by, *inter alia*, broadening and deepening the process of economic reforms initiated at the centre and third, the National Human Development Report for India. We have set up a number of Task Forces and Expert Groups on important issues that impinge on our development prospects and, therefore, need to be addressed urgently. We have initiated a number of studies to assess the impact of important Plan schemes and strengthen the process of dissemination of information, policies and development strategies.

In the context of the Tenth Five Year Plan, we have had discussions with different interest groups and experts from various sectors with a view to strengthening the consultative inputs in our planning process and formulating an approach to the Plan, which does justice to

emerging concerns and ground realities and which reflects and addresses the basic needs of people at large. We have also initiated a process to improve the efficacy and efficiency of Plan spending. In this context, in the course of this year, we are looking at completing a process of convergence of similar schemes within and across Ministries and Departments, weeding out such schemes that have lost relevance and transfer those schemes that could be better managed as State sector schemes. Yet there is a lot that needs to be done. We have to do our bit for improving governance practices, enhance transparency and accountability in our system and, more importantly, strengthen the monitoring mechanism so that every rupee spent makes its full contribution to economic development and human welfare.

I am looking forward to the outcome of this exercise that you are participating in today. I can assure you that my colleagues and I in the Commission would look into the recommendations and suggestions that emerge from this exercise with great interest and with an open mind. We are already engaged in the task of making the Planning Commission a more effective and efficient body to discharge the responsibilities it has been entrusted with. I welcome the effort being made by ACORD to facilitate this process.

** Message for the Large Group Interactive Event held as part of the Restructuring Exercise of the Planning Commission on April 10, 2001*

DEVELOPMENT VISION OF MAHARASHTRA*

I am glad to be with you in this Seminar on "Millennium Vision - Maharashtra". Maharashtra ranks among the most advanced States in the country and has achieved a growth rate of 7.5% to 8% in the last decade. I understand that the State Government has brought out a Vision Paper for accelerating the annual growth rate to at least 10% and has also constituted a Task Force to work out the operational details and implementation strategies of the Vision Paper. I wish the State all success in its endeavour.

Creation of physical infrastructure and development of human capital are the planks, on which a higher growth rate could be achieved. These are also the key planks for accelerating the growth of investment and of industry—growth that must be the driving force for the overall rapid development of the State in future.

It is well known that the power sector plays a catalytic role in the economic growth of any State or country. The power scenario in Maharashtra was, until recently, brighter than many other States. The problems facing Maharashtra State Electricity Board should be addressed with a sense of urgency. The blueprint for power sector reforms in the country has been charted out. Some States have forged ahead. Maharashtra cannot afford to sit back and lag behind in the race for power sector reforms. The State Government may have to look at options such as accessing funds from multilateral agencies as well as from the recently launched Accelerated Power Development Programme for which power sector reforms are *sine qua non*.

We also need to appreciate that while the Government has a key catalytic and promotional role in the development of the infrastructure, its capacity to fund infrastructure projects is not unlimited. Private sector participation needs to be encouraged, accompanied by a proper

regulatory environment. While the State is well covered by roads, it has to provide more funds for maintenance of its road network. Innovative measures, including partnerships with the private sector in O&M, need to be implemented.

The best way of doing this is to ensure the operational soundness of the projects that we take up in working towards our vision. The Government also has to manifest the political will to levy and recover user charges for the services provided by it. Experience has shown that people do not mind paying higher charges if these are accompanied with improvement in the quality of services. This is particularly relevant for Maharashtra, since many of its past infrastructure developments have been financed by debt and extension of Government guarantees. The capacity of the State Government of Maharashtra to raise further resources in this manner is limited in view of its present fiscal imbalance.

A long-term view should take into consideration the question of inter-generational equity, i.e. the debt burden we are passing on to our next generation, and aim at explicitly sound and healthy finances and balanced budgets. These are essential to be able to sustain the tempo of growth and enhance investor confidence. Ambitious developmental targets must be backed up by equally bold and visionary steps to ensure sustainability.

The emphasis on citizen-friendly governance is also timely. Some States have done well on e-governance and there is no reason why many services cannot be provided through the click of a mouse. Some States have attempted to use the new information and communication technologies to improve the interface with the public at large, both in respect of public utilities as well as in providing regulatory services and general information.

We, in the Planning Commission, appreciate the need for providing an investor-friendly environment and policy framework and I am confident that the deliberations in the Seminar would throw up

practical ideas. At the same time, the private sector and the economy at large have to brace themselves to the WTO regime, where the emphasis has to be on increased productivity and greater competitiveness.

One of the key factors of success would be greater human skill. Globalisation and liberalisation and the concomitant restructuring imposes a heavy burden on industries and the work force. There is a need for a social safety net to take care of the transitional phase so that the pains of adjustment are minimised. Greater emphasis should be placed on vocational education, re-training and overall skill development so that we are in a position to hold our own in the highly competitive environment that the WTO regime promises to engender. This would require that our people have access to good health care and educational facilities as well. It is in these areas that Government would need to concentrate.

As one of the most industrialised States in the Union, Maharashtra has a special responsibility towards the protection of the environment and the natural resources upon which health and productivity depend. The price of industrialisation and a higher GDP should not be environmental degradation. Industry in Maharashtra must take the lead in accepting its social responsibility towards the health of the environment. Untreated industrial effluents must not be released into the soil, air and water, as damaged natural resources inevitably affect growth and productivity. Maharashtra must achieve a harmonious balance between environment and development. This matter cannot be left entirely to the State Pollution Control Board.

The ultimate objective of a vision is an improvement in the quality of life of the people. This cannot be achieved by ignoring the environment. The State Government could consider instituting a 'Least Polluting Industry' award and encourage 'green initiatives'.

Another area that I would request the State Government to look at is that of rural-urban migration. People should not need to eke out a

miserable existence in slums. Rural and urban policies must be integrated. Policies must be devised to generate employment in the rural areas and the smaller towns and cities. I am glad to observe that the State Government in its Vision Document has decided to develop the tourism sector as an employment generator. In remote and backward areas, it is likely to yield the quickest results and help to supplement farm incomes. But it must be remembered that, to succeed, tourism requires a high quality environment and healthy natural resources.

Ultimately, Maharashtra Millennium Vision has to build upon the strengths of the State, which are manifold. The city of Mumbai is one such major strength, which embodies the spirit of free enterprise, openness and tolerance that spurs commercial growth. In the era of globalisation these attributes will serve well to lead the growth of the State and the country.

New frontiers of science and technology are opening up. Information technology, biotechnology and bionics are some such areas. The Millennium Vision would not be complete without giving due importance to research and development in the sunrise sectors. Maharashtra has traditionally been strong in pharmaceutical sector. A push for qualitative shift in pharmaceutical industry may be given by putting in place a strong R&D base. Bombay has been the financial capital of India. Let it be also the knowledge capital in the new millennium.

We are in the process of drafting the Approach Paper to the Tenth Plan, in which all these concerns would be addressed and therefore the discussions today are very topical. We need to identify opportunities where the private sector and civil society organisations could work in tandem to improve the delivery of services, especially in the social sectors.

Maharashtra has always been one of the frontrunner States. In the Tenth Plan, apart from an overall macro approach, we would be looking

at State-differentiated strategies, given the considerable inter-State disparities, which appear to be increasing over time. Maharashtra's Millennium Vision must ideally address the regional dimension of rapid growth and draw out a roadmap for a vibrant progress of all the regions of the State.

** Inaugural Speech at the Seminar "Millennium Vision: Maharashtra" organised by Jagatik Marathi Chamber of Commerce & Industry on April 21, 2001 in New Delhi*

HARMONISING DEVELOPMENT & ENVIRONMENTAL CONCERNS*

It gives me great pleasure to take part in the Earth Day Celebration organised by the Bhoovigyan Vikas Foundation. I am particularly happy to note that the Foundation is not only organising a Conference on Sustainable Development and Sustainable Lifestyles as part of the celebration but, more importantly, is promoting a large-scale awareness programme through the participation of children from schools across the country. I welcome this opportunity to share some of my thoughts with you.

Although the issue of environmental sustainability has formally entered the international agenda only after the Earth Summit, which was held in Rio de Janeiro in 1992, it has been an integral part of Indian planning and policy-making for at least two decades prior to that. The Fourth Five Year Plan, which was launched in 1969, clearly articulated the need to harmonise our development plans with the preservation of the environment. Subsequent Plans have reaffirmed and given concrete shape to strategies for addressing this concern. Indeed, the Agenda 21 of the Rio Declaration to a substantial extent reiterates and emphasises an approach, which has been articulated in Indian Plans for quite some time. This approach, in its essence, states that environmental concerns must be integrated not only with the development strategy of the country but more importantly with the social and economic conditions of living – or 'lifestyles', in short.

The fact that Indian planners and policy-makers expressed concern about environmental issues long before it became fashionable to do so is neither strange nor unusual, since it is deeply rooted in our cultural traditions. To Indian philosophy, the bounties of nature are as much to be nurtured as used for the benefit of mankind. In the Indian ethos protection and regeneration are inherently more desirable than wanton destruction and exploitation.

To quote the Isopanisad—one of the oldest Hindu religious and philosophical texts—“All in this manifested world, consisting of moving and non-moving, are covered by the Lord. Use its resources with restraint. Do not grab the property of others – distant and yet to come.” The global and inter-generational concerns expressed by our forefathers are only today finding an echo in modern discourse.

The noble sentiments expressed by our philosophers and saints and embodied in our development Plans have been overtaken by the pressures of population growth and subverted by the insidious attraction of alternative and more exploitative lifestyles that came first as part and parcel of our colonial history and perpetuated by the global information revolution in more recent times. Much as we would like to deprecate these developments, we cannot shut our eyes to this reality. Our best-laid plans and comprehensive legislative framework for environmental protection have not fully succeeded in reversing the deterioration in our environmental endowments of air, water, soil and life forms.

Population pressure and poverty together form a potent combination that can undermine all ethical considerations and can severely distort the valuation of the interests of the present generation relative to that of the future. The ready availability of technologies, which can quickly and cheaply meet the immediate needs through exploitative use of resources, is difficult to resist, particularly in democratic societies. Considerations of extra-territorial and inter-generational welfare tend to get relegated to the background by the pressing imperatives of the “here and now”. This is reinforced by the well-known “tragedy of the commons”, whereby natural and ecological resources are considered as ‘free goods’ to be exploited at will. Degradation of land quality through excessive use of chemical inputs and depletion of water resources through unrestrained use of tube-wells are consequences of such behaviour, which are being experienced in large parts of India.

There has also been an alarming decline in the extent of forest cover in the country. Although this trend has been checked to some extent in recent years, there can be no room for complacency. Almost all

studies on the subject indicate that the extent of forest cover necessary for sustainability is around 30% of our total land area. We are well below this target. Efforts are on to gradually improve the situation until the target is attained. In this process we should guard against an excessively simple-minded approach to afforestation. Forest cover has two important components in terms of its environmental significance. The first is as a carbon sink and the second as a repository of bio-diversity. I believe that too much focus is being placed on the first. However, India is practically unique in terms of its bio-diversity richness. We must try to conserve and, indeed, expand this natural endowment.

This is not just an ethical issue but has a practical dimension as well. In recent years there is a growing recognition of the importance of genetic resources for human well-being. We need to therefore nurture these resources and ensure that they are used in a sustainable manner. At the end of the day, however, no governmental effort is likely to succeed without the full involvement of the people. Every segment of our society, whether individuals, political parties, corporate entities or civil society organisations, will have to subscribe to a shared vision of our economic and social future and work in concert to make that vision a reality. Such involvement and co-operation are steadily increasing and we must encourage them further. Recent experiments with joint forest management, for instance, have been very much successful, which is a clear indicator of what can be achieved with the Government and the people working in tandem.

In the Planning Commission our concern has been, and continues to be, one of integrating environmental concerns with that of human development. In the absence of an integrating agency, the role of the Planning Commission has been of singular importance. The Commission interfaces with many Ministries and Departments and State Governments in decision-making. Such integration is crucial because while the principles of ecological balance and interdependence of various elements of environment are recognised, there is a tendency to address specific issues such as deforestation, soil erosion, conservation of water, conservation of biodiversity and so on in a compartmentalised

manner. As a result, not only are synergies lost but, more importantly, the mindset of viewing the goals of development and environmental conservation as mutually conflicting gets perpetuated.

It is now widely accepted that development and environment can be mutually supportive and reinforcing. We need to continuously provide for eliminating or minimising the negative impact of development efforts on vegetal cover, soil, wildlife, water and air through an integrated approach. Integrated efforts in this context refer to environmentally suitable pattern of resource use at various levels of implementation. While the national level policy statements may address the larger environmental concerns, whether they address regional specificity and whether the institutional framework has been established to respond to such regional problems are important considerations. In what detail the integration between environmental concerns and human development can be spelt out depends on the scale at which integration is attempted – national, regional or local.

This should not, however, be confused with the conceptual dichotomy that exists between the bottom-up and the top-down approaches to planning and programming. In this context, the bottom-up approach does not necessarily render top-down approach redundant or comes in conflict with it but underlines the fact that they are a part of a simultaneous and iterative process. The scale differentiation is an important consideration, since it is associated with the nature of integration—indicative or policy statements at the national level, perspective plans for resource development at the regional level, operational details at the cutting edge level and so on. For example, how a broad policy statement relating to forest conservation *vis-à-vis* energy resource development at the national level gets translated in a regional development plan or how the environmental concerns of a regional development plan get operationalised at the implementation level are important issues to consider. Whether the integration efforts are meaningful will, in the final analysis, depend upon the efficacy with which they are operationalised at the grassroots level.

Agro-climatic regions demarcated at the national level are too large to address issues of agricultural development and environmental integration. Micro-watershed, as a planning unit, is increasingly being

considered more appropriate, particularly for development of agriculture, horticulture, fodder and fuel. The smaller the unit of planning, the greater is the possibility of integrating concerns of development and environment.

Plans dealing with primary activities tend to promote greater integration efforts with environmental protection, since activities such as agriculture, animal husbandry and horticulture depend heavily on environmental factors for their sustainability. Where the core of the plans is growth in the primary sector, such as agriculture, horticulture and animal husbandry, the environmental concerns manifest themselves more prominently. That approach must get extended to development plans in other sectors also.

Unfortunately, the methodology for including environmental costs while carrying out cost-benefit analysis has yet not been developed and standardized. This acts as a major constraint in appraising projects. This issue is important because it concerns the manner in which decisions to include, or not to include, projects in the plan are taken. Some standard quantitative methodology of incorporating environmental costs and benefits will need to be evolved in order to facilitate project appraisal. As long as environmental concerns continue to be articulated in qualitative and subjective terms, their incorporation into the planning system appears to be unlikely. The Ninth Plan had placed emphasis on developing natural resource accounting methodologies for implementation in the planning and statistical systems. Although there has been some progress, we are yet to arrive at a completely acceptable methodology.

Regulatory interventions at the national level are crucial for their strong signals to compel regional and local development efforts to be filtered through environmental considerations. In addition, the national level efforts facilitate R&D and strengthen long-term goals of sustainability.

There has also been too little effort to involve the State governments in evolving a policy frame for integrating environmental considerations with development planning. This is particularly important, as the States are the implementing agencies for most forms of development interventions. Unless they internalise and operationalise the concept,

there is little possibility of their coming into practice. The Ministry of Environment and Forests, for instance, has issued various guidelines to prepare projects for their environmental appraisal. The State-level organisations, however, have neither the necessary expertise nor an adequate database to concretise the guidelines. It is in these contexts that expert bodies could play an important role.

Another set of contradictions arises from the obvious boundary anomalies between administrative and natural regions. The choice of the planning unit is one of the basic issues in any integration effort. While plans for natural sub-units are clearly appropriate for regional economic development, it must certainly be linked with administrative regions since it requires an administrative unit to enforce the plan. The departmental system of administration promotes a sectoral approach to planning, and even when local or regional plans are made, the approach is sectoral. Experience shows that technical capacity to prepare plans, which address the question of development-environment integration, is available but the institutional mechanism for plan implementation, monitoring, mid-course correction as well as plan financing is weak.

The traditional approach to regional planning was a systems approach, wherein nearly all kinds of linkages—inter-sectoral and inter-regional—were taken into account. Integrated development cannot be achieved in one stroke but is a continuous process. The important point is the appreciation of the crucial linkages between the use of various resources while planning. Up to what extent such linkages are to be taken note of is a moot point.

I note that some of these issues are coming up in various technical sessions of this Conference. I shall look forward with interest to the outcome of your deliberations.

My best wishes for a fruitful Conference.

* *Keynote Address at the International Conference on "Sustainable Development & Sustainable Lifestyles" on the occasion of Earth Day Celebration organised by the Bhoovigyan Vikas Foundation on April 22, 2001*

TOWARDS HUNGER-FREE INDIA*

During the first two decades after Independence, India had to import large quantities of foodgrains to meet the shortfalls in domestic production. The extent of vulnerability came into sharp focus during the severe drought of 1965 and 1966. The cessation of food aid because of the Indo-Pakistan War of 1965 led to unacceptably high famine deaths in the country. It is a lesson we should never forget. Geopolitical conditions are still not such that food security can be dropped from its position as a central element of our economic strategy.

It is this strategy, which powered the green revolution and in a relatively short period of time the country started producing enough not only to meet its internal demand but also to generate a small surplus. This in itself is not a mean achievement as the country's population has more than trebled since Independence. However, this should not be a cause for complacency since the per capita production and availability of foodgrains remain below the normative needs of our population. The National Family Health Survey (NFHS)-II of 1998-99 has shown that undernutrition, especially in children, is still widely prevalent. Almost half of the women in the age group of 15-49 years and three-fourth of children have been found to be anaemic.

Increasing foodgrains production in the country should therefore continue to be a major element of our agricultural strategy. In the past, surplus foodgrains production was realised primarily in Punjab, Haryana and western UP. However, there is a tendency among the farmers in this region to diversify towards crops other than foodgrains. Alternative cropping pattern must, therefore, be encouraged. The eastern region in the country has the maximum potential for increasing foodgrain production, particularly of rice. The next green revolution in the country has to come about in this region.

But the rest of the country cannot be neglected either. Even today the extent of poverty is unacceptably high. Considerable research suggests

that agriculture has the most beneficial effect on poverty reduction. Agricultural growth must therefore be viewed not merely as a means towards food security but also as a strategy to subserve the broader goal of poverty eradication. Looked at this way, the effort must be to broad-base our agricultural growth pattern so that every part of the country participates, to the extent possible, in increasing our agricultural output.

Although there is considerable potential for accelerating agricultural growth in the country, including allied activities such as horticulture, animal husbandry, dairy and fishery, the pace of progress has been slow and certain weaknesses are becoming increasingly evident. Among the factors of concern are environmental considerations, such as land degradation and water depletion, inadequate market integration leading to localised shortages and gluts, tardy progress of technology diffusion and inadequacy of appropriate infrastructure. What is also worrying is that the pace of employment creation in agriculture has slowed down significantly in recent years. This has ominous implications for the future.

India's efforts to attain better yields and productivity has also been less than adequate. In fact, we seem to be slipping down the productivity ladder in most agricultural products compared to the rest of the world. Some of these issues can be addressed by increased investment, but many cannot. In particular, a gradual shift in the geographical pattern of agricultural production, in order to bring it in line with the resource endowments appears essential.

The single most important issue in raising agricultural production is land and water management. Large parts of the country are already suffering from water stress and corrective action has to be taken immediately. Almost 62% of the net sown area is rain-fed. Latest estimates of 1993 made by the Ministry of Agriculture show that the extent of degraded land in the country was more than 173 million hectares. Public investment in irrigation, rainwater harvesting and watershed management, coupled with greater participation of the people in managing these common resources, must, therefore, be accorded immediate priority.

Malnutrition among a large section of the people has been identified to be on account of factors other than the availability of foodgrains and other forms of nutrition. For example, even if all the food with adequate complements of all nutrients were available, their absorption physiologically may be problematic because of lack of good quality of drinking water and a clean environment. The problem of hunger, nutrition and food security, is thus related to the whole development process. We have had a growth of almost 6% in the recent past. It may not be disappointing but it is not enough to account for the major development issues, which relate to the quality of life of our people. The Hon. Prime Minister has, therefore, directed us to examine the feasibility of doubling the per capita income in the country over the next ten years. We are in the process of undertaking this exercise keeping in view the availability of resources. To reach such a target, we must be prepared to jettison concepts and policies, which are no longer relevant. Today India is no longer an economy of shortages but an economy where overall adequacies are maldistributed.

This is amply borne out by the huge surplus of foodgrains that has been accumulated in the FCI godowns. The Government is concerned about the fact that in spite of surplus production of foodgrains, we have still not been able to eradicate hunger. It appears, perhaps, that the food procurement policy is itself becoming a vehicle for supporting high prices of foodgrains. The Government, therefore, has to strike a balance between what is necessary for the welfare of the farmers and for the welfare of the consumer. The poor in the country will certainly benefit from low prices of foodgrains in the market but if this comes through unremunerative prices to the farmers, then the pace of future progress will necessarily be adversely affected. Therefore, we will have to tread a narrow path.

I hope this consultation will suggest how best we can tackle the problem of ensuring Hunger-Free India.

** Keynote Address at the Consultation on "Towards Hunger-Free India" held in New Delhi on April 24, 2001*

ROLE OF S&T IN NATIONAL DEVELOPMENT*

It gives me great pleasure to be here among this galaxy of scientists and experts on this occasion and to present the prestigious Shri Om Prakash Bhasin Awards for the Years 1999 and 2000 to some of the most distinguished scientists and technologists of India for their significant contributions to their respective fields of science and technology. I am told that these awards are given every year by Shri Om Prakash Bhasin Foundation in five important fields of national development viz. agriculture & allied sciences, biotechnology, electronics & information technology, engineering including energy & aerospace, and health & medical sciences. In addition, the Foundation also promotes activities relating to economic, technological and cultural development of the country, especially rural development and welfare and upliftment of the weaker sections of society.

I need hardly emphasise the role that science and technology plays in the process of accelerating growth, removing poverty and ensuring significant improvement in the living standards of our people. Our country has still to overcome the problem of poverty. Even today a large number of our people live below the poverty line. According to Pandit Jawahar Lal Nehru, "It is science alone that can solve the problems of hunger and poverty, of insanitation and illiteracy, of vast resources running to waste, of a rich country inhabited by starving people". He also said that "The future belongs to those who make friends with science". Further, the Scientific Policy Resolution of Government of India states, "It is only through the scientific approach and method and the use of scientific knowledge that reasonable material and cultural amenities and services can be provided for every member of the community". It also further explains, "The wealth and prosperity of a nation depend on the effective utilization of its human and material resources through industrialization. The use of human material for industrialization demands its education in science and

training in technical skills. India's enormous resources of manpower can only become an asset in the modern world when trained and educated". These statements underline the potential of science as a critical input for solving the problems of socio-economic development of the country and provide ample justification for the view that investments in science lead to national development. We have, today, a large pool of scientific and technological manpower. This is an invaluable resource. Significant progress has been made in various areas of science and technology, particularly in agricultural research, nuclear energy, space technology, biotechnology, electronics etc.

The challenges and opportunities of global competition in the emerging knowledge economy can only be met through sustained development on our human resources. The creation of a rapidly expanding cadre of top-class professionals in various disciplines of science and technology, especially in information technology and biotechnology, is needed to meet the demands of both domestic and international markets. However, lack of enthusiasm among young students for higher studies in science and careers in scientific research, large-scale migration of science students from India to other countries or shifts from science career options to others are resulting in non-availability of specialised and trained manpower in the fields of S&T. Such a trend, if not arrested at this stage, may result in serious shortages of good quality teachers and research scientists, thereby reinforcing a vicious cycle. Sustained efforts are being made to attract young scientists through several incentives, which, beside various awards, include the launching of Swarnajayanti Fellowships, providing research support to outstanding young scientists, Kishore Vaigyanik Protsahan Yojana, supporting senior school students for taking up specific science projects; CSIR programme for Youth Leadership in Science, enabling senior school students to visit its laboratories to experience the excitement of R&D. However, these efforts do not appear to be enough to reverse the trend. There is, therefore, a need to take up other imaginative and innovative programmes by various agencies to stimulate the interest of young students in science and technology.

The second half of the 20th century has witnessed a sea change in the economic, political and technological environment. All over the world, many age-old attitudes and mindsets have been discarded. India has been no exception. Its economy has been unshackled and the forces of competition have been unleashed. A new vision of India as a major player on the global stage has been articulated. The wave of change sweeping the country and the world has thrown open vast opportunities and at the same time posed daunting challenges for all sections of Indian society.

The increasing integration of national economies into the world economy, through international flows of goods and services, investment, people and ideas, has given rise to new forms of competition and cooperation among firms and countries and encourages the diffusion of new ideas and technologies. The ability to create, distribute and exploit knowledge and information seems ever more important and is often regarded as the single most important factor underlying economic growth and improvements in the quality of life. Identifying niche markets in which our international competitiveness can be improved, increasing technology investment and enhancing productivity have become imperative.

The processes of liberalisation and globalisation have offered new challenges to our R&D establishment, especially in the context of WTO and TRIPS. The aftermath of the recent nuclear explosions by India has also put up newer challenges for Indian science. Under the WTO regime, one of the main challenges lies in the area of knowledge and technology and one of our responses must be to enhance the protection of our intellectual property rights. While major efforts have been made to create awareness among the scientists and technologists of the country through the Patent Facilitating Centre, which provides assistance in patenting innovations emanating from university-funded and Government-funded research programmes, much more needs to be done. Continuous alertness and quick action are also needed to prevent others from securing intellectual property rights on manifestly Indian products. A more proactive approach to encourage patenting is urgently called for.

Some of the newly industrialised countries have been successful in achieving technological advancement and economic growth by dovetailing technology imports with domestic R&D endeavours. In India, hitherto the two main players in the innovation chain, i.e. the R&D system and industrial enterprises, have not really joined forces with the common objective of national development. The domestic R&D system, which is mainly confined to the publicly funded and government-owned institutions, has thus far done rather well in strategic and non-competitive areas of R&D and technological development such as aerospace, atomic energy and agriculture but its impact on the commercially oriented industry and services sectors has been minimal. The publicly funded R&D institutions and the in-house R&D units in industry had thus far been inward looking and there was little meeting ground between them. However, globalisation is compelling both the publicly funded R&D and the industry to establish a dialogue and work together for mutual advantage. As a result of this there has been some change in the outlook of both the groups. The R&D programmes of publicly funded R&D institutions are now more market-driven and there has been an increasing consciousness of IPR-related issues. The industry has also recognised technology as a vital component of any corporate strategy to derive competitive advantage and is now going in for higher investments in R&D in selected sectors.

In most industrialised countries the industry contributes a major portion of funds for industrial R&D. The industry organisations provide not only the setting where the bulk of the nation's R&D is carried out but also the framework within which the results of these R&D efforts are translated into new products and processes, leading to gains in quality and productivity, which ultimately get translated into economic growth, improved export performance and increased employment. If India has to catch up with the industrialised countries in the context of our industrial liberalisation, the industry has to participate increasingly in R&D to meet the growing R&D needs of the country for domestic consumption as well as for export. Recognising that science is an endless frontier and a uniquely human

activity without limits, there is a need to provide adequate support to frontline basic research, especially in universities

There is no doubt that significant achievements have been made over the years in various disciplines of science and technology. Primarily, the efforts have been directed at the promotion of basic research and scientific excellence by creating sophisticated infrastructure facilities in research and academic institutions. The same cannot be said for technology development programmes, which appear to be distinctly sub-optimal. Although several technology spin-offs have taken place, final commercialisation and large-scale use of indigenous technology are yet to attain the desired threshold level. Most of the research programmes, irrespective of discipline, require to be demand-driven, recognising the importance of the market mechanism so that the sophisticated research facilities and the vast scientific and technological expertise could be utilised optimally for improving the quality and productivity of all goods and services.

An important issue that has generated a lot of debate is the impact of technological change on employment. An oft-expressed fear associated with the emergence of any technological innovation is that it displaces labour. This reflects a static view of things. In a dynamically evolving economy, technological innovation helps in increasing production, productivity and improvement in quality of goods and services, which ultimately, in turn, generate more economic activity and employment. There is, therefore, no reason to regard technological innovation as being employment reducing in an aggregate sense. There are numerous success stories, where S&T has played a major role, and which have had visible impact on the lives of the common man, like the Green Revolution for self-sufficiency in food production, White Revolution in milk production, Blue Revolution in application of space sciences, Pink Revolution in pharmaceuticals, Brown Revolution in leather industry and the latest technicolour IT revolution. There has also been a substantial increase in life expectancy, drastic reduction in the death rate and significant reduction in the infant mortality rate. Above all, S&T has helped to reduce drudgery in the day-to-day lives of our toiling millions, though much more needs to be done in this area.

Our goal to make India a leading scientific nation in the world in the new millennium hinges critically on how successfully we take science to the people and create a stronger scientific temper in our society. Superstitions, perpetuated by low levels of literacy, remain ingrained in our value system and continue to plague large sections of our society. This has been a major impediment to development. Sustained efforts are being made by the scientists in academic and research institutions, as well as by voluntary organisations, in creating a scientific temper among the people through campaigns for popularisation of science. Success of these efforts is critical since this will help in promoting reason and removing superstitions.

There is a need to take bold initiatives to seize the big opportunities that have arisen. The latest developments in the field of biotechnology, particularly the human genome research, has opened up new vistas of pharmaceutical research. The emphasis is now shifting towards gene targeting for management of new and emerging infections, microbial resistance and development of newer drugs, vaccines as well as drug delivery systems through the use of re-combinant DNA technology. India's vast human genetic diversity provides an invaluable source of that knowledge.

With these words, I once again offer my heartiest congratulations to the recipients of the Shri Om Prakash Bhasin Awards for the Years 1999 and 2000 and appreciate the efforts being made by Shri Om Prakash Bhasin Foundation in promoting science and technology in the country.

** Address on the occasion of the presentation of Shri Om Prakash Bhasin Awards for Science and Technology for the years 1999 and 2000 on May 11, 2001*

ASSESSING WOMEN WORKFORCE CONTRIBUTION *

I extend a warm welcome to all of you. A sound database is a *sine qua non* for information gathering, analysis, policy formulation, monitoring and evaluation of schemes and programmes. India has sought to develop solid and sound statistical foundations, comparable to the best in the world.

Alleviation of poverty through employment and income generation schemes and programmes has been one of the important objectives of our Five Year Plans. The Work Participation Rate, i.e. worker-population ratio, disaggregated for males and females and rural and urban areas, has been an important variable and a yardstick employed in planning for employment generation in India. The conventional concept of Work Participation Rate used in the population census and National Sample Surveys capture only those who are engaged in economic activities (paid work) during a specific reference period. Though women in India are generally engaged in many economic activities related to agriculture, animal husbandry, household industry etc., their work gets under-reported because of (i) the methodology employed to enumerate their work, (ii) total lack of female investigators to determine the correct nature of women's work by putting probing questions, (iii) current social perceptions about the work women do, which gets reflected in the responses of the head of the family and (iv) above all, a tendency to withhold information on women working outside their households as it is not generally considered very desirable. These are very formidable obstacles, which need to be overcome.

The demarcation between household work and economic work frequently gets blurred with the result that it is difficult to distinguish between the two at the conceptual and operational levels. The conventional methods fail to cover this type of work and workers and consequently, it is not surprising that the conventional population

census and surveys fail to net all types of work and workers, particularly the poor and women who are engaged in the informal sector and home-based work, which contribute to national income.

The Time Use Survey is a new concept and a tool, which has been employed by a few countries to estimate the work force participation rate. The surveys, if properly designed, have the potential to net all activities. They provide comprehensive information on how individuals spend their time, on a daily or weekly basis, and bring out the time distribution of individuals with precision and comprehensiveness. With a shorter reference period of one day, no important activity is likely to be missed out, thereby ensuring a fairly accurate and dependable data on work and the work force.

As all of you are aware, the first pilot Indian Time Use Survey was conducted in 1998-99, adopting a reference period of one week for collecting the data, covering 18591 households in six major States, selected from six major regions of the country — Orissa in the East, Tamil Nadu in the South, Gujarat in the West, Meghalaya in the North East, Haryana in the North and Madhya Pradesh in the Central India — with a view to testing the concepts and methods in six different socio-economic situations. Being representative of their geographical locations, they can be deemed to generally represent the all-India picture.

I notice that the main objectives of the survey are (a) to develop a conceptual framework and suitable methodology to estimate the labour force/workforce in the country, (b) to collect the data for properly quantifying the economic contribution of women in the national economy, (c) to study gender discrimination in household activity and (d) to estimate the value of unpaid work in the economy in a satellite account.

In all the six States the distinguishing common feature is that the WPR for females from Time Use Survey (TUS) is much higher than from National Sample Surveys or the Census. There is a need to establish the correct approach for determining this important indicator. We cannot live with such huge unexplained differences. I

understand that the Ministry of Statistics and Programme Implementation has taken upon itself the task of reconciling these differences and taking up some more useful studies. I would suggest that this exercise should be completed in a time-bound manner.

The Time Use Survey initiated in 1997 must be taken to its logical conclusion sooner than later. Even if it suffers from any disability, the data collected at public expense must be placed in the public domain for wider dissemination and analysis so that its design is approved with the participation of all concerned.

May I now request that the presentation on the subject be made, followed by a discussion?

** Speech at a meeting on Workforce Participation Rates for Males and Females under Time Use Survey held on May 15, 2001 in New Delhi.*

IMPACT OF WTO AGREEMENT ON AGRICULTURE*

We have spent the day discussing one of the most important issues that faces us as a nation, namely, the impact of WTO Agreement on Agriculture and Food Management mostly at the post-harvest stage. Such discussions are of great value as they contribute to the shaping of a national consensus.

I would like to take this opportunity to touch upon some issues, which deserve your attention. Since the 1970s our farmers have clearly demonstrated their ability to adopt new technologies and practices so that food production has not only kept pace with the population growth but also exceeded it. Our country has the range of geo-climatic conditions under which we can produce practically any agricultural product. Thus there is every reason for us to view our agricultural potential with a measure of confidence. The Chief Minister of Punjab has observed that we may not be producing enough to meet the actual needs of our population. Huge buffer stocks do, however, show that the effective demand has been more than met.

The WTO can be viewed either as a threat or an opportunity depending upon our ability to actualise that potential. Our aim must be to push aggressively for accessing the huge international market for agricultural products on terms that are favourable to us. The time has come for us to give serious thought as to which agricultural products can be produced in each State with the quality, the price and in the quantities that can address not just the local or even the national market but the global market. I am certain that each State will find at least one such product and these collectively should form the basis of our charter of demands at future WTO negotiations. The intervention of the Chief Ministers showed that soyabeans could be the product in Madhya Pradesh, apples in Himachal Pradesh, horticultural products in North-East and so on.

The task ahead is very challenging. Agricultural production and productivity have to keep rising to keep pace with the growing demand. This calls for firm political commitment in some key areas. The first is irrigation. Out of a total minor irrigation potential of about 82 million hectares, the potential of about 60 million hectares has been created but only about 91% is being utilised. That would mean that over 5 million hectares of minor irrigation potential created is not being utilized.

The figure in respect of major and medium irrigation is also very disconcerting. Out of about 59 million hectares of potential, we have been able to take up only 35 million hectares. But the reported utilisation is about 30 million hectares, leaving a gap of 5 million hectares. The total irrigation potential, which remains unutilised, is more than 10 million hectares. I would like to emphasise that neglect of this vital sector is against the public interest. We should all attempt to utilise the created potential fully and at the earliest. States should take full advantage of programmes like AIBP to complete the on-going irrigation schemes. Moreover, we have a little more than 20 million hectares of minor irrigation potential, which can be easily harnessed and developed. This has several advantages. The per unit cost of developing minor irrigation is comparatively low. There remains about 5 million hectares of untapped potential of surface water under minor irrigation. We are already using about 30% of our power for pumping out water from the underground sources. If the surface waters were to be tapped, it will not be power-intensive and will be more eco-friendly and less costly.

The next point to which I wish to draw your attention is that water-use efficiency in the country is reported to be only 25-30 per cent. Surely, this can be increased. The corresponding level in Israel is 80 per cent. We need to conserve water whether in agriculture or in other uses. India is predicted to face a mild water crisis in about 6 to 7 years time and a more serious one in about 20 years time. Unless conservation measures receive attention, we will be left literally high and dry. However, this crisis can be tackled by implementing ambitious

watershed development programmes to conserve our land and water resources. I am glad that many Chief Ministers also laid stress on this.

Agriculture, being the largest user of water, has to take up research to optimise the use of water. Participatory irrigation systems involving farmers and the irrigation authorities should replace the present adversarial relationship between them. We must improve the efficiency of our irrigation system, which has been created at huge cost, by maintaining, renovating, modernising and nurturing it with the active involvement of the people. Appropriate user charges for irrigation waters are necessary not only for fiscal reasons but also to curb inefficiencies and wastage in water use.

Eastern India with only 20% of its ground water tapped so far is a sleeping giant, which needs to be awakened. Here again, with relatively lower quantum of investments, there can be a quantum jump in food and feed production, as has been demonstrated recently in parts of Assam and Bihar.

I am sure you are aware of the fact that there are serious problems in the availability of good seeds of the established varieties. I am glad that this was specially mentioned by one of the Chief ministers. This is so in spite of the fact that we have implemented the National Seed Projects Phase-I, Phase-II and Phase-III. Besides, we have had Technology Missions on Oilseeds and Pulses. Moreover, there are crop-specific Research and Development Directorates. Why seeds should be a constraint is beyond my understanding. I would urge the Agriculture Minister to evolve a policy so that seeds, which can increase productivity by about 20-30% in the self-pollinated crops and more than 200% in the hybrids, are available to the farmer when he needs them.

The Planning Commission's assessment shows that the support systems of agriculture production have broken down. Not only are the irrigation systems not being maintained, even the seed testing laboratories, soil and fertilizer testing laboratories, pesticide testing laboratories etc. are not functioning. The results of the soil testing of the samples submitted are badly delayed. The laboratories are not

even equipped for testing the micro-nutrients. The best advice to the farmers regarding use of fertilizers does not come from the extension system but from the fertilizer dealers. This is happening because these services are being starved of funds. The States may like to have a close look at these aspects of services.

What has all these led to? From 1960 to 1997 the yield of wheat in India went up from 790 kg to 2654 kg per hectare. Productivity of wheat in Netherlands and Ireland is more than 8,000 kg per hectare. These are the yield levels as reported by FAO. In the other major cereal crop, namely, paddy, India's level of productivity was 1410 kg per hectare in 1960. Its level during 1997 was 2915 kg, i.e. in 30 years period, our average productivity went up by 1505 kg. During the same period, the productivity level of Australia went up from a high of 6410 kg to 8244 kg, i.e., by 1834 kg per hectare. Productivity of sorghum in 1997 was 804 kg per hectare as against 6020 kg in Italy. India's ranking in rapeseed and mustard productivity has slid from 24th in 1960 to 39th in 1997. In the case of chick pea India has slid from 10th position in 1960 to 15th in 1997. This is an area of major concern. Our key to better maneuvering and negotiating position will be through better productivity level in the field of agriculture. That is how we will be able to safeguard our interest in the WTO agreement on agriculture. Many Chief Ministers have referred to the importance of increasing the productivity.

Today's meeting has been organised against the backdrop of fears about the adverse impact of the WTO Agreement on agriculture. It must not be forgotten that in spite of significant economic turbulence in the world, WTO has helped in the expansion of the world trade significantly. India's share in the world trade has also gone up from 0.60 per cent to 0.65 per cent, registering an increase of about 8.3 per cent. But we need to focus on more increase. In order to safeguard the interests of Indian agriculture we have sufficiently increased the bound rates and are operating at the maximum level in most of the commodities. With these steps taken by the Government, imports of food-grains and sugar have virtually stopped. I wish to dispel the fear that India will be flooded with imported agricultural commodities.

The Minister of Commerce & Industries has already given the facts to dispel the fear that India will be flooded with imported agricultural goods and assured that adequate safeguards have been put in place through tariff restrictions to ensure that this does not take place. Continuous monitoring of sensitive items of imports by the Standing Group of Secretaries is also being done to protect the interest of Indian agriculture.

I do not, however, want to minimise the threat, which comes from the unfair trade practices by grant of very heavy subsidies to agriculture by the developed countries. This point has been mentioned by many speakers. For example, export subsidies provided by EEC constituted over 50% of the export price earned by it on butter and butter oil and over 20% in the case of skimmed milk powder. The USA too gives subsidies that form over 50% of the export price earned on butter and butter oil and skimmed milk powder. The EC members give subsidy of Rs. 3 per kg on wheat and wheat flour and Rs. 3.50 per kg on sugar. Thus European countries and North America provide sizeable export subsidies to encourage disposal of surplus in outside markets in the context of domestic prices ruling much higher than international prices. These facts show that the level of subsidy in the developed countries are so high that they cause serious trade distortions and free trade remains only a distant dream.

On our part we must take steps to improve infrastructure facilities like storage, rural roads, transport, port facilities etc. so that our commodities can effectively compete in the international market. The Chief Ministers had also referred to this. I may add that special emphasis is being laid on rural electrification and efforts are on so that by the end of the Tenth Plan all villages, which can be connected to the grid, will be electrified. The Hon'ble Finance Minister referred to the scheme of rural roads. Accelerated Power Development Programme (APDP) has been launched to assist States in undertaking power reforms.

It is a matter of satisfaction that the decentralised procurement announced by the Finance Minister has received support from the

Chief Ministers. The issue of meeting the incidental costs fully needs to be addressed.

Lastly, I would like to emphasise that agriculture will not reach its optimum level of production and productivity unless the fetters imposed on this sector are removed. Reports suggest that besides the statutory restrictions some States also impose informal restrictions on the movement of foodgrains to outside the State during particular periods of the year. Some of the restrictions imposed by the States are in the form of written instructions while others are in the form of oral orders.

These restrictions are hampering the growth of free trade in the country and are against the interest of the producers as well as consumers. For example, it is felt that if the restrictive regime on sugar is removed, sugar prices will go down benefiting the sugar consumers. It will slowly lead to a regime of stability in the production of sugarcane and sugar. By not doing so one of the commodities, in which India holds a distinct advantage, is not being exploited. In an age where WTO has forced national boundaries to be thrown open the restrictions on inter-State or intra-State movement of agricultural products is paradoxical. I am glad that there is a general consensus on removing such restrictions.

The Finance Minister has spoken about the incentives for storage and processing. There seems to be support by some of the Chief Ministers to the scheme of decentralised procurement. However, their concerns regarding incidental costs in procurement need to be adequately addressed. I am confident that the scheme will take care of the food security concerns raised by the Chief Minister of Kerala.

In the end, I am confident that we would convert the apparent threat posed by the WTO agreement on agriculture into an opportunity. I am of the considered view that we can do so by making Indian agriculture more efficient, more cost-effective, sustainable and more environment friendly. Many Chief Ministers have referred to the widespread use of information technology and it needs to be promoted vigorously. The Planning Commission will initiate a special scheme

for the promotion of biotechnology in the States during the Tenth Plan. In fact, many States are taking keen interest in this field, which has an enormous potential.

The timing of the Conference could not have been better. We are on the threshold of finalising our strategies for the Tenth Five Year Plan. We have to jointly evolve the right strategies for agriculture. To this end, we would like full advantage of the many constructive remarks made by the speakers today.

** Valedictory Speech at the Conference of Chief Ministers on 'WTO Agreement on Agriculture and Food Management' held in New Delhi on May 21, 2001*

PROMOTION OF SMALL-SCALE INDUSTRIES*

The Indian economy has been on an accelerated growth path in the past two decades. After the start of economic liberalisation the economy has grown at more than 6% per annum. The Government has now started the second phase of economic reforms. Notwithstanding this, a sizable proportion of the population continues to live below the poverty line. It is, therefore, imperative to make all-out efforts to increase the growth rate. The draft Approach Paper has proposed 8% growth rate for the Tenth Plan.

Unemployment is one of the major problems before us. There is an urgent need to encourage the small-scale industries (SSI) sector, which has the potential to generate sustainable jobs at comparatively low investment per job. It is also contributing substantially in production and exports, besides employment. This sector accounts for 95% of the industrial units, contributing about 40% of value addition in the manufacturing sector, 80% of manufacturing employment and about 35% of exports, both direct and indirect.

Recognising the importance of this sector and its contribution to the national economy, I had set up a Study Group under the Chairmanship of Dr. S.P. Gupta, Member, Planning Commission, to study the constraints on the SSI sector and suggest appropriate policy measures to strengthen the SSI sector. An interim report was presented by the Study Group in July 2000, which was considered by a Group of Ministers (GOM), set up by the Prime Minister, under the chairmanship of Shri L.K. Advani, Home Minister.

Based on the recommendations made in the interim report the GOM suggested number of policy initiatives, which were accepted by the Government and announced by the Prime Minister on August 30, 2000 at the National Convention of Small Industries. The Ministry of Small Scale Industries and Agro & Rural Industries followed this

up by announcing additional policy measures. Thus, this has been a unique case where a large number of recommendations have been accepted and implemented by the Government even before the final report of the Study Group has been presented.

Now the final report of the Study Group is available in the printed form. I am very happy to release the final report of the Study Group. This report contains a number of valuable recommendations. As already mentioned, a large number of recommendations have already been accepted and implemented by the Government. The rest of the recommendations will require a detailed examination and inter-ministerial consultations. I am sure this will be done expeditiously. Implementation of the recommendations of the Study Group would go a long way in strengthening the SSI sector and further enhancing its contribution to the economy, especially towards employment, exports and reduction of regional imbalances in industrial development.

The Study Group has worked hard to discharge the onerous responsibility assigned to it. I would like to place on record my sincere appreciation and grateful thanks for the tremendous efforts put in by all the members of Study Group and especially the Chairman of the Group, Dr. S.P. Gupta, Convenor, Shri B.D. Jethra, and Shri S.G. Raoot, Joint Adviser (VSI). I understand they have held detailed discussions with a wide cross-section and all interest groups and have come up with very useful recommendations. I am sure these recommendations will go a long way in ensuring healthy, rapid and sustained growth of the SSI sector.

I once again congratulate Dr. S.P. Gupta, Chairman of the Study Group and its members for having come out with useful recommendations for the growth of the SSI sector.

** Speech on the occasion of the Press Release of the Report of The Study Group on Development of Small-Scale Enterprises on May 25, 2001 in New Delhi*

DEVELOPMENT OF CHILDREN & ADOLESCENTS*

I am glad to be among you today when the Child Development and Adolescent Health Centre at the Vidyasagar Institute of Mental Health and Neuro-sciences (VIMHANS) is being upgraded and made more comprehensive. I am thankful to the organisers for giving me this occasion. I recall that I also had the fortune to be present in the foundation stone laying ceremony in February 1985.

As many of you are aware, in the current phase of demographic transition over 40% of our population consist of children and adolescents. We are an ancient civilization but with a young population. The future of the nation depends on the health and well-being of the children and adolescents of today.

The number of children in the age group 0-9 years in 1991 was 220.35 million and the projected population in this age group in 2016 is 239.94 million. The number of adolescents (10-19 years) is expected to increase from 181.42 million in 1991 to 215.33 million in 2016.

This provides us with a window of opportunity. If we are able to take care of the physical and mental health of the children and adolescents and educate them and develop their skills, the current demographic phase can be converted to a great opportunity for development, where each individual can reap the benefits of liberalisation and globalisation. It is in this backdrop that the preparation for the Tenth Five Year Plan, which would be launched from April 1, 2002, is being done. While we are aiming at 8% annual growth rate, we are also conscious of the fact that growth by itself would not be sufficient to take care of the inter-personal and inter-regional disparities. The Prime Minister has emphasised that human development by way of better health care and education should be one of the thrust areas for the Tenth Plan. We need to improve the quality and coverage of health and

nutrition services so that there is reduction in mortality, improvement in health and nutritional status and optimal development.

We have achieved considerable progress at the macro level. India is among the ten fastest growing economies in the world in the nineties. The level of poverty, both in absolute terms as well as percentage of population, has reduced, although not as much as we would have liked. But there are considerable inter-State differences. The most populous States have not grown fast enough. Unfortunately, poverty and illiteracy are also concentrated there. A very large percentage of our children are malnourished.

There are a number of schemes seeking to provide adequate nutrition and antenatal care to pregnant women to promote better intrauterine growth. At the same time, considering that the critical phase for growth and development of a child is the period between 6 months and 24 months, the Reproductive and Child Health (RCH) and the Integrated Child Development Scheme (ICDS) programmes have components of nutrition and nutrition education. Last year, the Prime Minister's Gramodaya Yojana was launched. This stipulates that the State Governments must spend a minimum amount on nutrition in rural areas.

We in the Planning Commission are conscious of the fact that despite a plethora of schemes, the progress is not as fast as expected. Some schemes are overlapping while others have outlived their utility. We are undertaking a zero-based budgeting exercise to ensure that only such schemes, which are demonstrably useful, are carried forward to the Tenth Plan.

The mental well-being and development of a child begins early. The intrauterine growth and consequently the birth weight are important factors that determine the development of the child. The prevalence of low birth weight is over 30% in India. There is also evidence that low birth weight is associated with higher risk of development of non-communicable diseases in adulthood. The disorders in children range from mental retardation, cerebral palsy, communication disorders, learning disability, attention deficit hyperactive disorder, childhood

autism etc. There is very little data on the incidence of developmental disorders and psychiatric problems in children. Schools have limited ability to focus on emotional and behavioural problems of children. This is an area that will require additional focus in coming years.

The adolescent period is a period of rapid physical, sexual and mental growth and development. The changing lifestyles, urbanisation and the current information technology boom leads to stress, growing conflicts with parents, confusion in identity establishment, the need to conform and gain peer popularity as well as career concerns. In adolescents, who fail to cope with the stress, all these lead to depression, failing school grades, delinquent activities, drug and alcohol abuse, un-wed pregnancy and sexually transmitted diseases.

I would like to share with you that considering the special needs of the adolescents the Planning Commission for the first time had set up a Working Group on Adolescents for the Tenth Five year Plan. The Working Group has since submitted its report. The report brings out how the psychological concerns of the adolescents are being accentuated in today's fast changing world. There is a need to explore appropriate mechanisms and institutional structures for groups in rural and urban situations both for boys as well as girls to help them respond to anxieties, fears, stress, anger, aggression, depression and related mental and emotional needs for their well-being. Perhaps there is a greater need for counseling by individuals, parental as well as by the community.

Governments have taken upon themselves too many tasks and people have stopped taking initiatives. There are innumerable success stories within the country, which shows that wherever the people have participated either individually, or as user associations or through voluntary organisations, assets and services have been maintained in a sustainable manner. We have been talking about public private partnerships. I think more institutions like VIMHANS need to come forward.

Early detection of developmental, behavioural and learning problems is important and the number of centres engaged in this effort is too

small. Undoubtedly, the effort of VIMHANS is a timely step in the right direction. I am glad to learn that this Centre will not only focus on diagnosis and treatment of developmental disorders and mental health problems but it will also take up awareness generation and promotion of positive mental health in children and adolescents.

With these words I am happy to inaugurate the upgraded comprehensive Child Development and Adolescent Health Centre at VIMHANS. I wish the Centre all success.

** Inaugural Speech on the occasion of inauguration of the Upgraded Comprehensive Child Development and Adolescent Health Centre at Vidyasagar Institute of Mental Health and Neurosciences (VIMHANS) on July 21, 2001 in New Delhi*

GLOBALISATION & SOCIAL SECTOR DEVELOPMENT*

Mr. Nguyen Dy Nien, Excellencies and Colleagues from ASEAN and Dialogue Partner Countries and distinguished delegates,

We assemble this year for the ASEAN Post Ministerial Conference, immediately after the ASEAN has taken major decisions regarding the future of its association. The Hanoi Declaration is a farsighted document. It aims to promote equitable economic development to reduce poverty and economic disparity. In a sense the Hanoi Declaration encapsulates the objectives of all the developing countries. We believe that the ASEAN will achieve its goal, given the resilience and the determination of the peoples of the ASEAN region.

Mr. Chairman, as we stand back and review global developments during the past few decades, we find that sea changes have taken place in the international scenario. This new emerging world of ours has made progress in diverse fields — genome mapping, robotics, advanced molecules for treatment of diseases, industrial and consumer electronics, communications and information technology. The suffering and deprivation of the underdeveloped is no longer hidden from world audiences. The multinational model of doing business, where goods and services are sourced from all over the world, has proliferated. In the global village, based on interconnectivity and economic interdependence, both the developed and developing world have learnt to talk to each other. Excited by the prospects of integrating with the global mainstream, many of our countries have undertaken significant liberalisation of our economies.

We meet, nevertheless, at a time of global economic uncertainty. This uncertainty has affected all our countries to some extent. The world economy appears vulnerable with several of the major industrialised nations showing declining rates of growth. The loss of jobs, the decline in capital spending and a global slide in industrial production and

demand are worrisome for everyone but even more so for developing countries, which in recent years have made enormous efforts at considerable cost to their national industries to integrate with the global market. We find that we are unable to shrug off the slowdown in the world's rich countries. Our economies are, in fact, paying for it.

Even in late 2000 the prognosis was that the world economic recovery was gathering momentum. The optimism, however, seems to have given way to a marked uncertainty. The latest World Economic Outlook projections confirm the onset of a cyclical downturn in the global economy. Though the situation may be short-lived if there are quick policy responses from the locomotive economies, apprehensions regarding its continuation cloud the prospects of world growth. A prolonged slowdown, combined with persistence of high oil prices and virtually stagnant non-fuel commodity prices, would increase the vulnerability of non-oil importing developing economies. This would have serious implications for growth, employment, poverty reduction and balance of payments.

We notice in the current global economic situation that countries, which are more dependent on the technology export sector, have been badly hit. Economies, which in a sense have globalised and better integrated their economies with those of the developed countries, have become more vulnerable. Those countries, which have strong domestic demand, have been less affected by the global slowdown. This makes it clear that in our national policies we should lay emphasis on the growth of all sectors of our economy and not just the export sector. We should lay emphasis on the growing domestic demand, which alone can provide a buffer against the shrinkage of the export market.

This emphasis on the domestic demand can also be extended to a region-wide basis. Instead of depending on one or two export markets to sustain our industries and drive the global economy, if we can meet and generate demand on a regional basis, we would be cushioned against such crises. This would be more effective than allowing our currencies to weaken in order to keep exports attractive. No matter

how much we weaken our currencies, a lack of demand in the global market place cannot sustain exports. On the other hand, our imports become dearer and further impact our national well being adversely.

Even when the current economic slowdown reverses, if global growth is dependent only on the health of the economies of the industrialised nations, it will remain fragile. This is because, essentially, the markets of the industrialised nations are largely saturated and can only generate incremental demand and that too mainly for new technologies and products. This limited demand cannot satisfy the huge capacities, real and potential, that we have in the global technology, manufacturing and services sectors. The answer to the global economic slowdown lies in increasing demand.

Robust and sustained growth can only ride on the back of robust and sustained demand. This demand can only be generated in the vast potential markets of the developing countries. It is also a fact, however, that the developing countries themselves do not have the resources for investment and employment that will stimulate demand. Only a massive and sustained influx of resources into the developing world can ensure demand for goods and services. These resources will act as "enablers" of development and hence as "enablers" of demand. We need resources for our infrastructure development in roads, railways, communications, education, health etc. By investing in these sectors the idle capacities of corporations can be put to use and their distressing employee layoffs can come to an end.

Fundamental structural changes are therefore required in the use of global resources. Lowering of interest rates, depreciation of currencies, reduction of wage bills etc. can help but are not the essential scaffolding needed for a demand-driven, dependable and integrated world economy.

We have reason enough to support globalisation in the best sense of that idea. But we cannot ignore the important institutional and policy issues that can help globalisation to enrich all of us. Professor Amartya Sen, Nobel Laureate, talking of globalisation has said, "Globalisation

has enriched the world scientifically and culturally and benefited many economically. Pervasive poverty dominated the world not many centuries ago, with only rare pockets of affluence. In overcoming that penury, modern technology and economic interrelations have been influential. The predicament of the poor cannot be reversed by withholding from them the great advantages of contemporary technology, the efficiency of international trade and exchange and the social and economic merits of living in open, rather than closed, societies. What is needed is a fairer distribution of the fruits of globalisation.”

When the leaders of the Group of Eight nations met in Genoa last weekend they confronted the issue of the need to build support for globalisation. The G8 can do that if it addresses the impact on our economies of the slowdown in the developed markets, how it affects our agriculture and our industry and reduces further the resources available to us for our social agenda. The G8 can sell globalisation only if it shows leadership in making development its prime agenda, combined with reducing global poverty. Poverty alleviation is a major initiative announced by the major industrialised nations at Genoa. Poverty alleviation is perhaps the most daunting of the several challenges facing the international community. There is a moral compulsion for development so that we can have a tomorrow where poverty ceases to exist.

In this context, we have seen that globalisation has several positive outcomes but it also places severe constraints on the national governments that have to devote significant fiscal resources to poverty alleviation, particularly in meeting the problem of chronic poverty on a large scale. We have also seen how technological progress implies rapid skill-obsolence and consequently, job-insecurity. This makes the tasks of national governments dealing with poverty even more complex.

Next, we have to recognise the changing balance between the state and the market, and how this limits state action in poverty alleviation.

Hence, multilateral institutions as well as global initiatives should supplement governments' efforts. There should also be a fair degree of corporate contributions in meeting such national challenges.

The major instrument for public action in favour of the poor in the framework of globalisation would, therefore, have to be through higher growth and through orientation of the growth to impart benefits to the poor.

One important consequence of globalisation is that it tends to direct resources towards activities where private returns are high. This has a serious implication for poverty. Globalisation may, therefore, require strengthening the presence of government in certain sectors, where social returns are higher than private returns.

We must accept, therefore, that poor-oriented growth is possible only when the intellectual community and policy makers treat markets with some reserve in respect of their poverty-alleviation capabilities and the poor with the respect and urgency that they need. The need is to build arrangements that integrate the efforts of governments, companies, voluntary organisations and concerned citizens in the fight against poverty while recognising the contribution of globalisation, technological progress and marketisation to prosperity. Sincere advocates of globalisation must ensure that globalisation raises all boats.

The current economic crises in some countries, along with the cyclical slowdown of the global economy, underline the fact that the developing countries as a whole are still exposed to an uncertain and challenging social future. In this context there should be increased attention paid to the issue of the funding for global public goods. International funding must be maximised for global public goods and to ensure access of the poor to these goods at reasonable and affordable prices. Developing countries need increased provisioning for global public goods like cost-effective drugs for HIV/AIDS and other diseases such as malaria and tuberculosis. Funding for global public goods must be additional to global development finance flows and should not seek to displace the assistance for country programmes. There is an urgent need to adequately finance the existing institutions and increasingly

locate new institutions and organisations that provide global public goods in developing countries.

We believe that the fight against HIV/AIDS would be determined by the outcome of the fight against poverty reduction. Patent rights should not come in the way of the patients' right to live. Much remains to be done to allow drugs to reach the needy at affordable prices and in a timely and regular manner.

Apart from communicable diseases, protection of the environment and development through the knowledge revolution need to be funded. We must, however, be cautious against taking up global public goods with few resources, for it will result in spreading resources too thin with relatively little impact. Hence a key challenge for the global public goods agenda would be adequate funding.

It is imperative that the international community should spearhead a global initiative on the provision of universal primary education. Universal access would not only produce major gains in health and income standards but also offer a fertile territory for cultivating common ground in the divisive debate over globalisation. There can be no clash of interests in respect of aiming for universal education. It has been said that each year of additional schooling in developing countries can raise a child's future earning power by 10-20 per cent. Now, with globalisation and technological innovation, it is said that substantial education can raise wages even more. Other studies indicate that it will be access to education that will also be critical in determining whether new trade brings increased opportunity to these nations.

At the same time, multilateral funding for education in the developing countries is shrinking and the total resources available hardly make up the \$7bn-\$9bn annual increase, which UNICEF estimates rich and poor countries will have to contribute together to get every child into school by 2015.

We have to ensure that the chief multilateral operators work with donor countries to develop an effective global structure for ensuring

and funding basic education. This can only work if there is collaboration in the true sense—to combine efficient planning and delivery along with the cultural sensitivity inherently needed in such an endeavour. For global well-being the global human potential should not be wasted.

Our economic forecast indicates a better future for our country's economy in the current year with a 6.3% growth in real GDP against the 5.2% growth in the last fiscal. An important feature of this outlook is that the growth is projected to come significantly from the agriculture sector. Increased income in the farm sector impacts the entire economy with an almost immediate effect on sectors like consumer durables and non-durables, transportation and other services, etc. Thus, the relationship between agricultural income and economic growth is almost direct. After two years of shrinkage, growth in agriculture production during the current year is expected to rise sharply. The greater disposable income generated in the rural areas will now create a new demand-pull by a large section of the population.

It is now ten years since India opened up its economy and the latest World Economic Outlook has described India's sustained growth performance as an important source of stability. India is firmly settled on a relatively high growth trajectory and is well into its agenda for the second generation of structural reforms. The economy has successfully overcome the difficulties of the early 1990s through a calibrated programme of far-reaching structural adjustments. It has accumulated a healthy level of foreign exchange reserves, exhibited high growth in exports, moderate inflation and an improved external debt profile. Another aspect of the Indian economy that will sustain its growth in the years to come is its foundation of knowledge-based industries. Indian advances in information technology, biotechnology, pharmaceuticals etc. give the economy the potential to take advantage of the opportunities of globalisation.

At the invitation of Prime Minister Atal Behari Vajpayee, the President of Pakistan, General Pervez Musharraf visited India on 14-16 July 2001. During his visit, the President of Pakistan had extensive discussions with the entire Indian leadership, including three rounds

of one-to-one meetings with the Prime Minister and an hour-long farewell call prior to his departure. There were also detailed discussions during delegation-level talks. All these meetings were marked by cordiality and candour. They provided an invaluable opportunity to both sides to understand each other's view points, concerns and compulsions.

At the commencement of the official-level talks on Sunday, 15th July, the Prime Minister of India, in his statement, said, "We firmly believe that a framework to address the differences between us on Jammu and Kashmir would have to include the issue of cross-border terrorism in its ambit. We can also look at other confidence building measures to further encourage this process."

Trade and industry circles have constantly urged both Governments to respond to the desire for greater interaction. The Prime Minister of India expressed his willingness to take further major steps in this direction. Even before the arrival of President Musharraf India announced a reduction or elimination of tariffs on 50 tariff lines to encourage Pakistani imports to India. Prime Minister Atal Behari Vajpayee also proposed that a group of experts of both countries be constituted to recommend measures to increase bilateral trade, economic and technical interaction.

In addition, he referred to certain specific matters such as the release of Indian POWs that remain in Pakistan, the return of terrorists and criminals guilty of crimes such as the bomb blasts in Mumbai in 1993 and the hijacking of the Indian Airlines flight in 1999.

India is, of course, disappointed that the two sides could not arrive at an agreed text. This was on an account of the difficulty in reconciling our basic approaches to bilateral relations. India is convinced that narrow, segmented or unifocal approaches will simply not work. India believes that the focus has to remain on the totality of the relationship, our endeavour to build trust and confidence and a mutually beneficial relationship even as we address and move forward on all outstanding issues, including Jammu and Kashmir, building upon the existing compacts of Simla and Lahore.

Terrorism is a global scourge that has developed pernicious linkages with illicit trade in drugs, arms and money laundering. Global terrorism needs to be defeated through organised and collective action by the international community. Some countries use terrorism and cross-border terrorism as an instrument of state policy. Terrorism constitutes a threat to peace and security, poses a threat to the right to life and is, therefore, a violation of human rights. To address these concerns, India had circulated a draft Comprehensive Convention on International Terrorism, which is currently under discussion in the UN. Early finalisation of the Convention would signal the international community's determination to strengthen international cooperation in the fight against terrorism.

The menace of international terrorism threatens the peace and stability of our region and tears the fabric of our multi-ethnic societies. Obscurantism, fundamentalism and intolerance have the potential to unleash violence and divisiveness in other areas. This ideology has caused the destruction of mankind's common cultural and artistic heritage in recent months. The segregation and institutionalised branding of people of different religions smacks of the worst form of fascism. Boundaries are sought to be re-drawn on the basis of religion and under fear of the gun. India is already suffering from increased terrorist violence as a result of the shelter and training provided to such elements by their mentors who subscribe to such ideologies and policies. It is necessary for all of us to join hands and to fight the scourge of international terrorism.

A recent report prepared for the G8 Summit this month in Genoa has said that information technology can "strongly enable development" in less industrialised countries. Countries with large IT export industries can enjoy "significant" economic benefits but these gains may sometimes fail to translate into social development. The question of the "digital divide" between the IT resources of rich and poor countries became a central theme of last year's G8 meeting in Okinawa. Unequal access to IT is widening the gap between rich and poor nations.

As an example, it is worth referring to a new experiment conducted very successfully in India by a major software company. They found that a quick and effective way to reach this powerful communication medium to the masses is to install Internet kiosks. Kiosks serve well to introduce the Internet to the local community and to familiarise them with its benefits. It was found that, contrary to popular belief, Internet usage requires no formal instruction and mere access to the Internet was enough.

In a radical method for bringing the next generation into the Information Age, they found that children, even very poor ones with little education, could quickly teach themselves the rudiments of computer literacy. The key is for teachers and other adults to give them free rein so that their natural curiosity takes over and they teach themselves. This is the concept of "minimally invasive" education. This lesson in computer literacy learnt from the poorest kids in India has now caught the fancy of the World Bank and the IFC.

PCs connected to the Internet were provided on the roadside and turned on without any instructions or announcement. It was then seen that the acquisition of basic computing skills by any set of children was achieved through incidental learning, provided the learners were given access to a suitable computing facility with entertaining and motivating content and some minimal (human) guidance. It is now widely felt that children are more adept at modern computing skills than most adults, although they seldom can get formal education in this area.

In another experiment called LEDA (Learning through Exploration, Discovery and Adventure) the structured use of computer games for meeting learning objectives was the key strategy. Once again, it was observed over a period that skill training would happen automatically in children given enough access and motivating content.

Information and communication infrastructure constitutes the nervous system of the global knowledge economy. Broad-based access to the all-pervasive Internet has dramatic implications on a community's economic efficiency and thus its effectiveness in acquiring an acceptable quality of life.

In India we are happy to learn of the measures being taken by the ASEAN to reduce the development gap among the ASEAN member-countries and to promote the integration of the new members into ASEAN. In this context, the focus of Initiative for ASEAN Integration on Cambodia, Lao PDR, Myanmar and Vietnam (CLMV) is an important one. India would like to express its commitment to this Initiative and would like to extend all its cooperation in respect of programmes connected with the CLMV countries.

The ASEAN countries have said that the integration of the CLMV countries within the ASEAN is primarily the responsibility of the ASEAN member-countries themselves. But they have also said that in the interest of international solidarity and equitable distribution of the benefits of globalization it is important for the international community, including the private sector, to participate in this endeavour. India appreciates this approach of ASEAN, which is one of internal effort combined with a measure of international support.

India has a number of bilateral programmes with the CLMV countries. They are now being supplemented by our joint projects with the ASEAN and will be further bolstered by those that we have together identified under BIMST-EC and the Mekong Ganga Cooperation. We understand that the ASEAN has emphasised infrastructure, human resource development and information and communication technologies as the key drivers of the IAI. We believe that India's co-operative endeavours with the CLMV countries have a focus appropriate to the IAI.

**Statements at ASEAN Post Ministerial Conference 10+10 held at HANOI on July 26, 2001*

PROMOTING INDO-ASEAN CO-OPERATION*

Your Excellency Mr. Datukseri Syed Hamid Albar, Your Excellency Mr. Somsavat Lengsavad, distinguished colleagues, ladies and gentlemen, I am delighted to be here in Hanoi to participate in the ASEAN Post Ministerial Conference 10+1 with India. I wish to thank the Government and People of Vietnam for hosting the Post Ministerial Conference, for their excellent arrangements and for the warm hospitality extended to our delegation. The ARF and the PMCs have become important fora for India to exchange views on economic, political and strategic issues.

Mr. Chairman, India greatly values its relationship with ASEAN that is rooted in the deep social, cultural and economic ties that India enjoyed with Southeast Asia throughout history. For centuries our peoples have interacted with each other, having been in each other's extended neighbourhood. And with ASEAN's westward enlargement, ASEAN and India are now immediate neighbours, sharing a land boundary. These linkages, with the passage of time, have created a natural sense of affinity and empathy between us.

In the past decade, India has pursued its relationship with ASEAN with renewed vigour under our 'Look East Policy'. This, coupled with a decade of economic reforms and liberalisation in India, has contributed significantly towards the strengthening of our relations with the ASEAN countries. India became a Sectoral Dialogue Partner in 1992 and subsequently a Full Dialogue Partner in 1996.

There is excellent understanding between our governments at the bilateral level. With our hosts, Vietnam, India has always enjoyed a very special relationship. Our ties with Southeast Asia have been further cemented through the exchange of a number of high-level visits since we last met in Bangkok. These include the visit of our Prime Minister to Singapore in November 2000, to Vietnam and Indonesia this

January and to Malaysia in May. Our Vice President visited Indonesia for the G-15 Summit in end-May, as well as Cambodia in early July. From the ASEAN countries, we have had the honour to receive the Foreign Minister of Malaysia, H.E. Datu Syed Hamid Albar in October and the Foreign Minister of Thailand, H.E. Mr. S. Sathirathai, earlier this month. India has also hosted the visits from Myanmar of H.E. General Maung Aye, Vice Chairman, State Peace and Development Council in November 2000 and of H.E.U. Win Sein, Minister for Culture, in January 2001.

The institution of Dialogue Partnership is a very important component of India's relationship with ASEAN. India shares ASEAN's vision of prosperity through co-operation. There is no gainsaying that India remains keen to exploit this Dialogue Partnership to our mutual benefit. A vigorous and sustained interaction in the form of co-operative projects, formulated after careful consideration, will work to the advantage of both India and ASEAN.

The two organisations, in which India partners with some of the ASEAN countries, namely the BIMST-EC and the Mekong Ganga Co-operation, show considerable promise of meaningful and profitable involvement of our countries, although they have been formed only recently. We have drawn up relevant work programmes in energy, fisheries, trade and investment, technology and transportation under BIMST-EC. In the MGC we have very innovative and novel projects in the field of culture, education, tourism and communication. In both these groupings our aim is to have the quickest and maximum involvement of the people of the participating countries.

I also wish to express my sincere thanks to Malaysia for having so ably steered the Dialogue Partnership over the past year and especially for its positive contributions at the ASEAN-India meetings of the senior officials, as well as at the ASEAN-India Working Group.

Mr. Chairman, I feel that the time has now come to elevate ASEAN-India co-operation to a higher level. The previous ASEAN-India meetings at the level of SOM and Working Group have identified new areas for ASEAN-India co-operation. Some of these are public health and pharmaceuticals, including TRIPS issues on access to

medicines, English language training, especially for the new ASEAN members, and the promotion of greater interaction between the private sectors, especially young entrepreneurs. Further, we want to integrate our activities more closely with the Initiative for ASEAN Integration (IAI).

Mr. Chairman, we have read with interest the Hanoi Declaration issued by the ASEAN Foreign Ministers and are keenly following the concerted efforts by ASEAN under the Initiative for ASEAN Integration to narrow the intra-ASEAN gap in development through dynamic growth. India would like to participate actively in the e-ASEAN initiative for narrowing the digital divide within ASEAN. Besides, we would like to be involved in the ASEAN initiative for the integration of the CLMV markets through the development of a communications network involving highways, railways, river navigation, port facilities, etc. I am happy to report that efforts in this regard are already being made through the Mekong-Ganga Co-operation initiative, in which all the CLMV countries are participating, together with India and Thailand. We would also like to organise workshops and visits involving the CLMV countries in order to better understand their development needs.

Allow me, Mr. Chairman, to take the liberty to recount the activities implemented by India and ASEAN working together in the past year and suggest proposals for new co-operative endeavours.

India's emerging relationship with ASEAN is based on real-time complementarities in fields as diverse as trade, investment, infrastructure, human resources development, science and technology, tourism and culture. The focus of ASEAN-India current co-operative activities is significantly technology-based, whether they relate to advanced materials, biotechnology, space technology or information technology.

A joint study on AFTA-India Trade and Investment Linkages is being conducted by experts from both sides. It commenced in December 2000 and is nearing completion. The study was taken up in order to provide the basis for increased commercial and business interaction between the ASEAN countries and India, because it was felt that

India's trade and investment presence in ASEAN and *vice versa* were not commensurate with the potential of our countries. Our experts have been asked to highlight the potential for profitable business exchanges in specific areas and in identified products and categories of products and services, apart from the barriers to be tackled in increasing trade and investment flows.

The development of transport and infrastructure occupies a central place in the development objectives of India and likewise for ASEAN. The importance of embarking upon co-operative projects and activities in this sector cannot be over emphasised, as India had mentioned last year in the PMC 10+1 in Bangkok. The institutional mechanism for this, namely, the ASEAN-India Working Group on Transport and Infrastructure, should be operationalised. We are awaiting the proposed visit of ASEAN transport officials to India after which the first meeting of the Working Group is to be held. Many of you have made impressive progress in this sector and we want to benefit from your experience. Further, we would also like the AFTA-India study to come up with innovative means for channelising investment into this crucial sector.

I would like to reiterate to our ASEAN friends that India wishes to be part of the international community engaged in the social and economic development of the Greater Mekong Sub-region. I feel that, given our reservoir of technical manpower and engineering expertise, we are in a position to make a very significant contribution to the development of transport and infrastructure in that region, *inter alia*, by providing technical and managerial expertise and other consultancy services. In addition, India could also develop and execute projects relating to fisheries, water management, as well as agriculture. Experts from the two sides should meet at the earliest to identify those areas where such projects could be taken up.

ASEAN and India have collaborated in the scientific field of Advanced Materials. This has emerged as a very important area of contemporary R&D, especially in view of the innovative applications of composite materials. We have undertaken a joint project on High-Energy Rare Earth Magnets, which find wide applications in industry. This has

given our scientists a better understanding of the technology involved in the fabrication and application of such composite material magnets. The next step would be to begin commercial tie-ups and joint ventures. A market survey is to be undertaken in both ASEAN and India as well as in potential markets elsewhere. I would urge that this survey be undertaken and completed within a short period.

Our scientists have also worked together in area of Surface Engineering, involving the development of water resistant and thermal barrier coatings for automotive and other applications. A review meeting of this project was held in Singapore this June and the project is to be completed by December 2001.

The review meeting held last month on the Surface Engineering project indicated that in view of the numerous benefits derived by the project partners as well as the significant progress made during the project the surface engineering programme could be extended to newer projects in the area. Work on areas such as advanced ceramics could be taken up. There was also a strong possibility for future collaboration in commercialising coating technologies. Another project being thought of is on development of thermally sprayed ceramic-based coatings for land-based gas turbines and biomedical applications.

An important outcome of our S&T cooperation has been in the form of contacts between our scientists—contacts that will outlast these projects and which constitute our joint investment for the future.

The role of information technology in all spheres of our lives is on the increase. India organised a six-week training programme for 94 ASEAN candidates in advanced software techniques last year at the National Institute of Information Technology, one of our well-known education and software development companies. We understand that the training was useful and that many ASEAN countries have requested that such training programmes be conducted on an annual basis. In response, India would suggest that some scholarships, say 50 out of the other 100 scholarships that it is offering to ASEAN on an annual basis under the ASEAN-India HRD Programme, be used for IT courses. These would supplement the approximately 250 scholarships being

offered by India on a bilateral basis to the countries of ASEAN under our Indian Technical and Economic Cooperation (ITEC) Programme.

ASEAN and India have also collaborated in setting up the ASEAN-India Digital Archive (AIDA), which is being implemented in two phases. Phase-1 is complete and has provided multimedia representation of common phrases and terms in various ASEAN languages as well as in Hindi and English. We are agreed that the activities planned under Phase-II should be carefully reviewed to enhance the utility of the archive and that it should be structured to provide material for course-related vocabulary.

India also renews its offer to provide training in high-end networking to ASEAN and will supply the additional details sought by ASEAN.

Information and communication infrastructure constitutes the nervous system of the global knowledge economy. Broad-based access to the all-pervasive Internet has dramatic implications for a community's economic efficiency and thus its effectiveness in acquiring an acceptable quality of life.

India would like to participate in the Initiative for ASEAN Integration by taking up projects on a large scale for the development of ICT in the CLMV countries, including e-governance and use of IT in rural areas. In school teaching as well as higher education, distance and interactive learning through multimedia could be employed with advantage. It would be pertinent to mention here that during his recent visit to Vietnam, our Prime Minister had announced a grant of US \$ 2.5 million for the establishment of training and software development centres in Vietnam.

We are aware that ASEAN is determined to use information and communication technology (ICT) as a tool for closing the development gap between and within its member-countries. ICT has been reaffirmed as important to promote development, for raising people's income, especially in the rural areas, for improving the system of public education and for enhancing the effectiveness of public health and medical care for the poor. India would like to be closely associated with these endeavours.

A quick and effective way to reach this powerful communication medium to the masses is to install Internet kiosks. Kiosks serve well to introduce the Internet to the local community and to familiarise them with the benefits of the medium. Studies conducted in India have indicated that, contrary to popular belief, Internet usage requires no formal instruction. Mere access to the Internet is enough. India could consider the setting up of a few kiosks in each of the CLMV countries. Typically, each kiosk would consist of three to five computer terminals, with a managed uninterrupted power supply system in an enclosure of either brick and mortar or of other materials like wood or wood substitutes.

We understand that during the ASEAN Informal Summit in Singapore, an ASEAN e-Task Force was set up to give a boost to the IT sector in ASEAN. We would like to discuss with your experts as to how India can be involved in this initiative.

An ASEAN-India interactive portal is proposed in order to facilitate trade and investment exchanges and to promote e-commerce.

An IT-based human resources project that I would propose is that India should provide assistance to the CLMV countries in the effective use of the English language. This will upgrade communication skills in the language, as also catalyze IT training since English is the *lingua franca* of the ICT industry. The training could be web-based or computer-based in which an element of classroom training would be included. It can also be implemented in association with educational institutions, such as schools or universities.

As a next step, India could help in developing content for extending the scheme to support distance and interactive learning through multimedia techniques in different disciplines. The connection of educational institutions in the region on a Wide Area Network would be an interesting project. India has the largest system in the world for long-distance education in the Indira Gandhi National Open University (IGNOU) network. We could also arrange linkages with IGNOU so that students in the CLMV countries can obtain university degrees through our distance learning programmes.

It is understood that the ASEAN wants to undertake a comprehensive assessment of the training needs of government officials in CLMV and hopes to obtain international support to meet these training needs. Given our institutes like the Indian Institute of Public Administration and the Indian Institute of Manpower Research, etc. India has an advantage in this area. We would like to offer five training slots each year to each of the CLMV countries for training in such institutes. We would also like to discuss training possibilities in Indian institutes with funding that the ASEAN may obtain for this purposes from other agencies. Another alternative would be the seconding of Indian faculty to relevant CLMV institutions.

Our biotechnology co-operation is in the areas of plant biotechnology, animal biotechnology and bioinformatics. Given the tremendous advances achieved in biotechnology by some ASEAN countries, notably Singapore, we view this area as one of the most promising in our co-operation, both technologically and commercially.

In plant biotechnology we are focussing on crop improvement and better utilisation of natural resources. A joint Workshop was held in June 2001 in New Delhi to work out the action plan for the period 2001-2004. Joint R&D projects have been identified for products and processes such as improved crop varieties, planting materials, etc. This envisages short-term training besides research in genetic engineering, herbal product development and the development of tissue culture, etc. The Workshop specified joint activity in three areas. These are (1) joint research activity in the area of plant transformation utilising genes to produce protein-rich transgenic potato and sweet potato, as well as fungal disease-resistant rice and coffee; (2) joint research on five common medicinal plants for their secondary metabolites or saponins important in cosmetic industry and (3) micropropagation including standardisation of tissue culture of *Durio* species (edible fruit popular in Brunei) and edible bamboos from Vietnam, involving technology development and transfer. The first meeting of the project coordinators on animal biotechnology is to be held in October 2001. In this meeting the work plan will be drafted in keeping with the recent trends in biotechnology.

Consultations are also under way regarding the establishment of an ASEAN-India Bioinformatics Network. Bioinformatics is a rather young discipline that combines the life and computer sciences and is an example of the increasing application of ICT in diverse areas. Such has been the explosion in our knowledge of biology over the past two decades that we need powerful tools to organise that knowledge itself and to analyse biological data. Bioinformatics supplies these tools, which, for example, can be applied to better therapeutics as well as in the manufacture of specific drugs tailored to an individual's genetic make-up.

A Bioinformatics Network involving relevant institutions and laboratories in India and their ASEAN counterparts would facilitate access and exchange of information on biotechnology on a regular basis. It is on account of this future promise we see in bioinformatics that we have suggested that ASEAN-India co-operation should go beyond just training activities.

The ASEAN-India Eminent Persons' Lecture Series has elicited good response and a number of lectures have been held both in India and in ASEAN. We had the honour of listening to the Malaysian Foreign Minister on 'India-ASEAN Partnership—Challenges and Opportunities' in last October. In his lecture the Foreign Minister candidly put forth his views on ASEAN-India co-operation as well as on globalisation and security issues relevant to ASEAN and India's constructive role in this regard. Thereafter, H.E. Mr. Rodolfo C. Severino, Secretary General of ASEAN, visited India in January 2001. In his lecture on 'ASEAN and India - A Partnership for Our Time', he spoke of India's rightful place in the ASEAN Dialogue System and the common economic interests of ASEAN and India. The Secretary General also suggested co-operation in pharmaceuticals and related TRIPS issues.

We both are keen to continue the Lecture Series and have agreed at the previous Working Group meeting that for future lectures we should identify specific topics of ASEAN-India co-operation. This would greatly help in enhancing the immediate relevance of the lectures.

There has been forward movement in our co-operation in the field of human resource development. An ASEAN-India Workshop was organised in New Delhi in October 2000 on the practical ways and means for implementing the recommendations of our joint HRD study. Indian delegates also participated in the ASEAN University Network (AUN) meeting in November 2000. The universities for technical and management education in ASEAN and India have made initial contacts. We should now provide the necessary fillip for faculty and student-level exchanges, twinning of our universities, establishing degree equivalences, mutual recognition of degrees, setting up of chairs, etc.

To enhance national capability in space technology, three areas of capacity building, namely, human resource, infrastructure and institutional arrangement are to be addressed. India can combine two areas of capacity building in the training it offers to ASEAN candidates in India. This will provide expertise in the use of remote sensing data for environmental management, such as forest fire monitoring, control management etc. The training programme at the Indian Institute of Remote Sensing (IIRS), Dehra Dun, and the Space Application Centre (SAC), Ahmedabad, will be end-to-end, covering all aspects of remote sensing such as data acquisition, processing, analysis and interpretation and information extraction for resource management. The remote sensing data required for this purpose would be obtained through the station at NRSA (Hyderabad) and through other stations as required to cover the ASEAN region. One person from each ASEAN country is invited to participate in the training programme towards capacity building as well as the use of IRS data. The programme can be between 3 to 6 months' duration and commence from November this year. India has submitted a detailed proposal to ASEAN and we are awaiting a response from our ASEAN friends. India is keen to begin the co-operation at an early date.

Space co-operation can also be extended to space science research and development, data transfer for application in areas such as tele-education and tele-medicine, including the usage of VSAT, mini-

satellite development, and optical and microwave sensors. ISRO in India is in contact with their Malaysian counterparts about this co-operation.

Future ASEAN-India projects should involve the private sector. Increasingly, the focus should shift to projects that lead to direct co-operation between companies. In this context, we should look at technologies developed indigenously in ASEAN and India, as a first step. Some of the technologies developed in India include eco-friendly wood alternatives, superior artificial limbs using composites, utilisation of fly ash in road construction, ceramic engineering, development of a bio-adhesive for sutureless surgery, eco-friendly natural dyes for textile applications, industrial wastewater treatment, and temperature sensitive labels for the pharmaceutical industry etc. In this endeavour, promotion of greater interaction among young entrepreneurs would be of obvious relevance.

We are now working on an ASEAN proposal for a Workshop on Health and Pharmaceuticals in India. This is one of the most promising fields of co-operation, in which representatives from the pharmaceutical industry and medical specialists could jointly participate.

Co-operation in health and pharmaceuticals has high social relevance. Mr. Chairman, provision of healthcare services via telemedicine is an innovative use of ICT for the public good. It can make speciality healthcare more accessible to underserved rural and urban populations. Video consultations from a rural clinic to a specialist can save prohibitive travel and associated costs for patients. Videoconferencing also opens up new possibilities for continuing education or training for isolated or rural health practitioners. These advantages have particular relevance for developing countries. Our experts could consult with each other to develop projects in these areas.

ASEAN and India could launch joint efforts in the area of tropical medicine, telemedicine and for eradication of dengue and cholera. Another area is epidemiology, which is concerned with the occurrence, patterns, prevention and control of disease in human populations. Epidemiological methods are very useful for identifying and

understanding public health problems and can be applied in the management, evaluation and planning of healthcare services. Co-operation in these areas had been suggested at the meeting of our senior officials in January this year. I am keen that specialists in these areas should now meet to see how we might work together.

For facilitating the access to essential drugs and life-saving medicines, we could co-operate in the development and manufacture of generic medicines. At the Working Group meeting in March 2001 both ASEAN and India had expressed keenness in this regard. I might also point out there are different elements of the TRIPS Agreement that relate to public health issues and are of great concern to us. In particular, the provisions related to patents on pharmaceutical products have an obvious effect on national policies on access to essential drugs and life-saving medicines at reasonable cost. That this is an area of common concern is underlined by the fact that last month a number of developing countries, including India, Indonesia and Thailand, submitted a paper on 'TRIPS and Public Health' to the TRIPS Council highlighting these concerns. The protection of intellectual property rights, in particular patent protection, should be such that it encourages the development of new medicines and the international transfer of technology to promote the development of manufacturing capacities of pharmaceuticals, without restraining policies on access to medications. Experts from both sides should meet soon to work out how best we may co-operate in these areas.

India had earlier indicated that it could share its experience on technology scan mechanisms, S&T networking and programme management, etc., which also happen to be the key elements of the ASEAN Vision 2020. India has therefore proposed a Workshop on "Technology Management on Competitiveness" at the Indian Institute of Management, Bangalore, India in March 2002.

I would like to suggest that a meeting of ASEAN-India Ministers of Trade take place in New Delhi later this year. This meeting could take place in the second half of November when we organise our major annual India International Trade Fair. The Fair will be an occasion

that will also attract our corporate representatives. This can be followed by the participation of India in the ASEAN Trade Fair in 2002 in Bangkok.

I would also like to inform you that India would be participating in the ASEAN Science and Technology Week in Brunei in September this year. In that event scientists from our Defence Metallurgical Research Laboratory would also be presenting papers on their joint work with the ASEAN scientists on Advanced Materials.

In conclusion, I wish to say that India remains very keen to join hands with ASEAN to work for a better future for all of us. There is much scope for expanding and deepening our co-operative agenda, for there is much that is common between India's goals for economic development and those of ASEAN. The possibilities for functional co-operation between us are limitless. India is hopeful that our enthusiasm and our efforts will result in tangible gains for all of us.

In closing I would like to mention that at the political level we should emphasise the need for the maintenance and the continuation of our co-operative projects so that the cumulative impact of our efforts is felt and seen by our people. Only then will there be a sense of ownership of these projects and a willingness to commit their intellectual and physical resources to them. Only then can these projects graduate from the ambit of purely government-driven initiatives.

** Detailed Statements at the ASEAN Post Ministerial Conference 10+1 with India at Hanoi on July 27, 2001*

ACTION PLAN UNDER MEKONG GANGA CO-OPERATION*

Mr. Chairman, His Excellency, Mr Somsavat Lengsavad, Foreign Minister of Lao PDR, His Excellency, Nguyen Dy Nien, the Foreign Minister of the Socialist Republic of Vietnam, Your Excellencies, ladies and gentlemen, Mekong Ganga Co-operation is indeed an appropriate name as it captures the essence of our historic ties and complementarities. Both the Ganga and the Mekong are rivers, which gave birth to enduring civilizations. Our peoples have developed versatile cultures rich in indigenous technologies, aesthetics and traditions, and for centuries we have enjoyed dynamic commercial and cultural interaction among our nations. It is only natural for us, therefore, to now seek to consolidate our relations in a regional context.

The Vientiane Declaration, covering co-operation in tourism, culture, education, as well as transport and communication, is an expression of what our people can do together. It is a revival, with a current relevance, of an interactive vitality that has proven itself in the past, and can enliven us afresh, both culturally as well as commercially.

The Hanoi Programme of Action for Mekong Ganga Co-operation is the first document for the implementation of our co-operation in the four areas. Drafted on the basis of expert advice, it lists projects that will impact positively on our cultural and economic well-being. The energy with which we implement these projects will define the success of the MGC.

The most daunting task before our countries is to address our developmental challenges, like universal access to education, provision of basic health care, safe drinking water, poverty eradication, sustained economic growth and provision of employment. This has to be done while keeping the social fabric intact. These are broadly the common priorities of our nations. We have to ensure that all MGC work-programmes are channeled so as to eventually contribute to our meeting these goals.

In this context, today, I would like to announce India's offer to extend co-operation under the MGC in flood forecasting and control, an area of great relevance for the Mekong region. Floods disrupt communities and damage the means of livelihood. Satellite remote sensing expertise available with India can be useful in this effort.

India offers to host the first meeting of experts on the project for the setting up of a Museum of Traditional Textiles in Cambodia. It would be useful if each MGC country could nominate an expert who would attend this meeting and would thereafter be the person to follow up on the implementation of the project. Dates for the meeting can be fixed as soon as possible.

In the area of co-operation in the field of education, I would like to offer training courses for five English language teachers from each of the MGC countries, annually for three years. As you are aware, apart from this, India can make arrangements for training English language teachers, diplomats and professionals by paying for their fees and local hospitality if the international air fare is taken care of by the sending country. In addition, India is also agreeable to provide ten scholarships on an annual basis for two years to each of the other five MGC countries. The duration, subjects, etc. can be decided bilaterally through the Indian Embassies in their countries. I would also invite the MGC countries to send one of their museum personnel per year for undertaking courses in museology and/or conservation at the National Museum Institute or the Institute of Archaeology in New Delhi.

In this context, I would also invite the MGC countries to participate in the World Book Fair to be held in India in January 2002 for which we will provide stalls to the MGC countries on a complimentary basis. On a similar basis, MGC countries are invited to participate in the annual Indian Handicrafts and Gift Fair held in New Delhi.

The MGC comprises of a well-defined, sub-regional grouping that can be efficiently connected by transport links. We have denied ourselves considerable economic gain because of this inter-connection not having taken place so far. We have poor border-crossing facilities

and land transport linkages. I believe that it is fundamentally important for us to address this issue. India will seriously examine the Trilateral Agreement on the Facilitation of Cross-border Movement of Goods and People between Lao PDR, Thailand and Vietnam. Cambodia is to accede to this Agreement shortly. It remains for India and Myanmar, within the MGC, to facilitate cross-border movement of goods and people. Efficient road and rail linkages will immediately help boost tourism, strengthen cultural links and yield economic benefits.

Ladies and gentlemen, to survive and flourish in the modern world, we have to identify and strengthen the strands of economic stability. This is all the more relevant today when the global economy increasingly tends to be more volatile and we are subject to external and unpredictable variables.

Regional co-operation acquires relevance because it reduces uncertainties and helps to cement the forces of economic sustainability. It also renders us more capable of harnessing globalisation without endangering our development objectives. Co-operation, such as we envisage under the MGC, will strengthen our capacity to do so. But we have to ensure that the MGC projects are result-oriented. The measure of this lies in enhanced people-to-people interaction and an increase in intra-MGC trade and investment flows. The task is challenging but full of promise.

I sincerely thank the Government and the people of Vietnam for their hospitality in hosting this MGC meeting. I also thank the people and the Government of the Lao PDR for having hosted all of us last November, for providing the inputs to make the Vientiane Declaration and the Hanoi Programme of Action a reality and for having guided this association in its infancy. Thank you.

* *Statements at the Second Ministerial Meeting of Mekong Ganga Co-operation held at Hanoi on July 28, 2001*

HUMAN RESOURCE DEVELOPMENT FOR HEALTH CARE*

I am glad that eminent medical educationists from all over the country, university Vice Chancellors, policy makers and programme administrators are attending this one-day Special Consultation on Medical Education.

The time is appropriate to discuss the opportunities and challenges in the country's programmes for human resource development in health as the Tenth Plan is being prepared.

At the outset I would like to share with you some of the concerns and dilemmas that we face. At the time of Independence the country had 30 crore population. Famine and starvation, epidemics of communicable diseases took a massive toll of human life. Infant and maternal death rates were among the highest in the world and life expectancy was about 33 years. There were about 50,000 medical graduates and 25,000 nurses belonging to modern system of medicine to provide health care to the population.

Soon after Independence the country embarked on a massive expansion of medical and para-professionals' training so that the health manpower needs for the proposed expansion of the health system institutions are met through training within the country. Five decades later there are 181 medical colleges in the modern system of medicine and over 400 ISM&H colleges. Annually the country produces over 16,000 doctors in modern system of medicine and a similar number of ISM&H practitioners as well as para-professionals. A vast health care infrastructure in Government, voluntary and private sector has been created and is manned by professionals and para-professionals trained in the country.

These achievements are impressive. India's achievement in health and family welfare has been impressive. However we have to recognise

that some of our neighbouring countries with far less investment in health manpower development have far better health indices. There are a number of paradoxes, which are a cause of concern.

While the country has succeeded in producing a large number of skilled professionals, who man major hospitals and teaching institutions in the country and abroad, even now there are huge gaps in critical health manpower in primary health care institutions in remote rural and tribal areas. The initiatives taken by most of the States to correct this problem have not been very successful so far.

The vast health care infrastructure in the Government sector has been created to provide essential primary health care, emergency life saving services, family welfare services and services under national disease control programmes free of cost to all citizens. However, ready access to health care at affordable cost continues to elude both rural poor and urban slum residents. The unmet needs for contraception and maternal child health exist in all States. If all these unmet needs are fully met the country easily can achieve the goals set in the National Population Policy. The coverage under many disease control programmes is poor but many persons seeking care for these problems do not have ready access to Government services. About 80% of curative outpatient health care is still provided by the private practitioners some of whom are untrained. Hospitalisation ranks among the major causes of indebtedness not only among the poor but also among the middle-income population.

As planners we cannot accept this situation. We have to find a solution for this problem. One suggestion, which has not been implemented so far, is that medical education needs be reoriented to meet the health care requirements of the population. Doctors and para-professionals have to be trained in community settings. The current system of medical education does not appear to enable the students to develop clinical and analytical skills and function effectively in the primary health care settings. The community and family physicians, who not only have excellent clinical skills but also appropriate people orientation and commitment to improvement of health status of the community,

appears to be dwindling. There is an increasing trend towards specialisation. It is estimated that about two-third of doctors obtain postgraduate degree or diploma. They prefer to practise in urban private sector hospitals and provide high-cost high-technology, tertiary or super-specialised health care, which generally does not address major public health problems at affordable cost.

I am told that Chhatisgarh has now evolved a three-year condensed course for medical graduates, who will work at primary health care level. Will this be an appropriate solution to meet primary health care needs of the population?

Orissa has made it mandatory that all those, who are selected for post-graduate degree, should serve for two years in the identified PHCs where the government doctors have not been available to provide health care.

I understand that some other States are considering making two years of rural service compulsory after the MBBS degree before the person is qualified to seek admission for post-graduation. I am sure that there would be other models, which would come up during the discussions.

There are massive inter-State differences in health indices, health care institutions and health manpower production. The four States—Karnataka, Andhra Pradesh, Tamil Nadu and Maharashtra—have over one-third of country's medical colleges. However, populous States with poor health indices, such as Bihar and UP with large gaps in health manpower and poor health infrastructure, are not investing adequately in health manpower.

The ability of the Central or the State Government to set up more colleges is getting limited not only by the resource constraints but also by the need to provide for primary health care. Over the last two decades, several medical colleges have been set up in the private sector. There had been a massive disparity in the criteria for admission and fee structure between private and Government-funded medical colleges. Judicial intervention has, to some extent, moderated the differences in the criteria for admission and fee structure between the private and

Government-funded institutions. However, even today large sums of money are being spent for admission to good medical colleges indicating that the demand for these continues. The high demand and restrictions on opening new colleges have also resulted in the persistence of conditions, which are reminiscent of the Licence Raj. It is important to meet the demand for medical education in a transparent manner. This in turn would enable the country to meet the growing health care needs of the population.

The need for regulating the quality of medical education cannot be over emphasised, more so when we seek a greater role for the private sector than in the past. Over the years, there has been a perception that the quality of medical education has declined. I wonder whether many of you share this perception. Decline in the quality of medical education will undoubtedly result in poor quality of the graduates and deterioration in the quality of health care. A far more serious outcome will be the decline in the quality of the teachers. Once the vicious cycle of poor teachers contributing to decline in quality of medical education and poor quality of medical education resulting in decline in the quality of teachers begins, it may be difficult to reverse.

As we enter the new century, we face newer opportunities and challenges. In the context of the rapidly evolving technology, demographic transition, changing lifestyles and disease patterns it is imperative that the process of education should continue throughout the career of all health professionals so that their patients have the benefit of updated knowledge and skills. Information technology revolution has enabled us to increasingly use distance education methods, which are cost-effective to reach the widely dispersed population.

The Planning Commission has provided Additional Central Assistance of Rs.6.00 crore through the State Governments for information networking between teaching and training institutions affiliated to the six Universities of Health Sciences. All other States should ensure that they are not left behind.

The outcome and impact of all the efforts to improve health status of the population depends upon the knowledge, competence, skills,

aptitudes and commitment of persons providing the health care. The country's health professionals need to redouble their efforts and commitment to improve health status of the citizens and to achieve rapid population stabilisation. Medical educationists have to train adequate number of health professionals with appropriate knowledge, skill and attitude to meet the health care needs of our growing population and the dual burden of disease. In this era of globalisation India with its excellent teachers and abundant clinical material can become a global player in medical education. The health care institutions both in modern medicine and ISM&H can transform India into a major medical tourism destination. Appropriate investment in R&D and quality control can result in explosive expansion of the pharmaceutical sector for both modern medicine and ISM&H. The future decade will show whether we have successfully used these opportunities to provide gainful employment of highly skilled technical manpower within the country and contribute substantially to country's economic development.

I am confident that today's deliberations will come with recommendations, which, along with the Report of the Working Group on Human Resource Development in Health would help in the formulation of appropriate policies and strategies for development of human resource for health during the Tenth Plan period.

* *Inaugural Speech at a Special Consultation on Medical Education held on August 28, 2001 in New Delhi*

DEVELOPMENT OF NORTH EAST REGION*

Hon'ble Home Minister, Chairman of the North Eastern Council, Chief Ministers from the NE States and Sikkim, ladies and gentlemen, it is my pleasure to be present here today amongst you. I thank the Chairman of the NEC for this opportunity to share my thoughts on the development of a most important and sensitive region of the country. I must also compliment the NEC Chairman for his efforts to improve the functioning of this Council.

During its existence spanning three decades, the NEC has spent thousands of crores on investment projects. In the Ninth Plan itself, the actual outlays for the NEC have been of the order of about Rs. 2000 crore. This is not a small sum. At the same time, there have been cost and time overruns on many projects, while some projects have just not taken off. In this perspective, it seems to me that the first, and the most important, task for NEC is to look within. We need to review and evaluate the projects financed and draw upon the lessons learnt to streamline and improve the operations. Much more attention needs to be paid to this than hitherto. There is a need for conducting such evaluations in future as a matter of routine, as the lessons of experience would help us in avoiding errors that may have occurred in the past and in increasing the effectiveness of future investments.

As we all know, the North Eastern Council (NEC) was originally conceived as a regional planning and development agency to deal with inter-State development issues of common interest. Now that the NEC encompasses eight States, the regional planning and development role is perhaps even more relevant and important than it was at the time when NEC was set up. I believe that the time has come for the NEC to assume the regional planning role mandated of it in right earnest and aim to become a think-tank for the region as well as an expert

guide to provide technical assistance for the North Eastern States and Sikkim. For this, it is necessary that the NEC must set out a vision of its role and accordingly a strategy to achieve the vision. This vision has to be a holistic one, which is shared by all the constituent States. Every activity taken up by NEC in the NE States must be perceived by its member-States to be in the common interest of more than one State or of the region as a whole.

Similarly, the NEC should seek to strengthen its technical assistance role by commissioning studies in subjects of common interest to all the States. At the same time, we should develop feedback mechanisms whereby the findings of these studies, as also the evaluations of projects, are duly taken into account by the Council in determining the nature of future policy and investments. Our development experience in the NE has indicated that project formulation, plan implementation bottlenecks, issues relating to finance and resource constraints and manpower rationalisation strategies are some of the important subjects on which expert guidance would be needed. Technical assistance can also be provided in simple ways like expanding training and capacity building activities or even providing assistance to States for the preparation of project proposals and feasibility reports. The Planning Commission has already shown the way in this regard by establishing Project Preparation Facility for States to finance professional preparation of project proposals for external and institutional funding. It is for the States to take advantage of this facility.

I would also suggest that, as the regional planning agency, the NEC may consider tie-up with a reputed national-level database agency to produce a quality monthly or quarterly review of the economy of all the States in the region, as is being done by the Governments of a few larger States. This would be helpful for potential private investors seeking information, as also for the State Governments themselves, the Central agencies involved in the development of the States and the people of these States. Such an economic review would contribute also to the proper formulation and implementation of the Tenth Plan.

When we look at the potential focus of investments, it is evident that the interventions needed to increase the economic activity and

employment must have primacy. Such interventions should, however, be worked out taking into account the resources and manpower strengths and weaknesses. By way of illustration, the resource-based activities, on which the North East Region has potential strengths, are areas such as bamboo, medicinal plants, horticulture etc. Similarly, the manpower-based activities, that are independent of the geographical disadvantage of the region, may possibly include service sectors like information technology and tourism.

As a regional planning agency, the NEC would need to work out how best to promote such activities, keeping in view the financial resources available within the State Plans with Central Ministries and financial institutions such as NEDFI active in the region. It is not necessary for the NEC to directly finance through its own Plan every deserving investment that is brought to its notice. Rather, it needs to prioritise essential investments and then proactively facilitate the flow of resources, both public and private. Where policy bottlenecks, including those relating to the labour and land sectors, inhibit the growth of economic activity and employment, a regional forum such as this should, I feel, take it upon itself to identify them and build up a consensus to remove them.

Recent developments have given rise to the hope that in the future the international borders will be further liberalised and this would increase the possibilities of economic benefits for the region through improved trade and transit. A number of independent studies, including a recent NEC-sponsored study, have identified the huge potential spin-offs that can accrue from liberalised trade and transit with neighbouring countries. The present locational disadvantage of the region can be converted into a geographical advantage by establishing communication and trade links with neighbouring countries. This would increase the comparative advantage of products produced in the region. This is an issue, which is directly in the interest of all the North Eastern States but about which individually not much can be done. It is for these States to use a regional forum like NEC to articulate the needs of the region, mobilise opinion in favour of such

far-reaching policy initiatives and take them up with key decision makers. Once trade and transit links begin to strengthen, critical supporting investments could be identified to accelerate the process.

All these add urgency to the need for the NEC to reinvent itself with corresponding changes in the Secretariat. If it is to be transformed into a more functional body, as it must, there seems to be a need for downsizing the large non-technical establishment that has been built up over time. The NEC Secretariat should be restructured into a more flexible body, with most of the higher appointments on contract. I would suggest a smaller core research and advisory staff with minimal secretarial support, relying more on hiring the best expertise that can be had, as per its requirements. There is also a need to set up durable systems for tight control and monitoring of project performance and expenditure in order to be able to utilise the available funds efficiently. This would also set an example and provide a model for all the States in the region.

The NEC has financed many regional projects in pursuance of its original mandate. However, it is a matter of concern that it has also increasingly taken on a State-specific gap-filling role and is often perceived by States to be just another source of funding for projects that cannot be accommodated in the State Plan. Completion of all ongoing projects should be a top priority. The NEC should resolve not to take up any new projects henceforth until the ongoing projects are substantially completed. Rather than spread limited financial resources thinner and thinner over an ever-expanding list of projects that take longer and longer time to complete, the emphasis should be on bringing to a close the projects on hand. Tangible benefits could then flow to the member-States quickly. My request to the States would be not to put pressure on NEC for fresh sanctions but push for closer monitoring and timely completion of the ongoing projects.

Finally, I would urge all the Chief Ministers assembled here to collectively own the NEC and seek to promote their common interests through reinforcement of its regional identity and role. The success of the Council in stimulating development in the North Eastern States

and Sikkim depends on you. You need to build up the NEC as an effective body to visualise, support and articulate the aspirations and development needs of the States in the region.

I am confident that the NEC with the collective support of all the Chief Ministers and the dynamic leadership of its Chairman will be fully equal to the tasks facing it in the new millennium. I look forward to the new approach being reflected in the Tenth Plan Document of the NEC. We in the Planning Commission will in turn do our best to increase our interaction with the NEC and support and strengthen its role as the regional catalyst for the development of the North Eastern States and Sikkim.

** Keynote Address at the meeting of the North Eastern Council held in New Delhi on September 3, 2001*

STRENGTHENING INDO-ASEAN RELATIONS*

I have great pleasure in extending a warm welcome to the Foreign Minister of Vietnam. He is no stranger to India. His association with India stretches back to his student days in the Banaras Hindu University, which has conferred a Doctorate on its distinguished alumnus.

When I met him in July earlier this year at Hanoi, I found in him a strong supporter of Indo-Vietnam friendship. We, of course, fully share this sentiment. On my return, I suggested to Dr. Panchamukhi that the RIS must invite the Foreign Minister under their India-ASEAN Eminent Person's Lecture Series. I thank the Foreign Minister for accepting the invitation.

Over the years, the Forum has been addressed by a number of eminent persons from ASEAN from each of whom we have gained valuable insights, which have helped to bring us closer to the region. The first lecture in the series was given by H.E. Dr. Mahatir Bin Mohammed, Prime Minister of Malaysia, on 21st December 1996. The last lecture, the 11th in the series, was given by H.E. Mr. Rodolfo Severino, ASEAN Secretary General, on 9th January 2001.

I would like to take this opportunity to point out that the challenges of development, which both India and Vietnam face, are not dissimilar. While there are differences in the economic profiles of the two countries, there are similarities in terms of population density, GDP growth rate, structure of GDP, savings ratio etc. There is a potential to augment the existing trade and investment levels. We have also to explore how best to enhance co-operation in newer areas like infrastructure development and energy.

I had the opportunity to visit some rural areas in Vietnam. The images are still fresh in my mind. So was the friendliness and hospitality of the Government and the people. You can gauge the depth of interest

in, and the extent of goodwill for, India from the fact that the Indian Embassy received around 50,000 applications from students in response to an essay competition on India.

I also saw a living monument – a Buddhist temple – at the site where, long centuries ago the first Buddhist monk introduced the message of the Buddha into the cultural and spiritual landscape of Vietnam.

What I saw could not but remind me of the age-old civilisational ties between India and Southeast Asia over the centuries, leading to a fusion and flowering creativity, which has found expression in the form of art, scripts and languages, architecture and ways of life. This confluence is not the product of conquest or colonisation. It has emerged through a peaceful and harmonious meeting of minds and inter-mingling of ideas and cultural streams.

South East Asia and India could not retain this old relationship during the colonial era. But after the end of the cold war the natural ties of history, geography, culture and trade have begun to assert themselves. In recent years our political and economic relations with South East Asia and particularly, the new members— Vietnam, Cambodia, Myanmar and Laos— have acquired a special role. By the early 90s, with the end of the Cold War and restoration of peace in Cambodia on the one hand and liberalisation of India's economic policies on the other, trade, political and economic conditions became favourable for an intensive dialogue between India and the whole of South East Asia. This approach towards South East Asia culminated in India's well publicised "Look East" policy and ASEAN's spontaneous response in accepting India as a Full Dialogue Partner in 1996. As a Full Dialogue Partner India also became a member of the ASEAN Regional Forum (ARF) – the ASEAN-driven multilateral security dialogue platform. Thus, ancient links with ASEAN are today being reactivated and given new form.

The ASEAN region has a combined population of 550 million, gross GDP of US\$ 735 billion and a trade turnover of nearly US\$ 720 billion. The region is rich in natural, human and energy resources. The total bilateral trade between India and ASEAN countries has increased from about US\$ 2.5 billion in 1993-94 to US\$ 7.35 billion

during 1999-2000 i.e. nearly threefold increase in six years. The East Asian economic crisis slowed down the rate of growth in trade but as the Indian economy remained reasonably stable and the ASEAN economies picked up momentum in the post economic crisis period, trade and economic co-operation has started looking up.

India has established high-level exchanges with the ASEAN region with several Heads of State or Government from ASEAN visiting India and Indian leaders visiting ASEAN countries. Through the institution of this dialogue at various levels with ASEAN, areas for focussed interaction have been identified in fields such as science and technology, tourism, human resource and infrastructure development. An offer of 110 trainees to Vietnam under the ITEC Programme during the current year has brought many Vietnamese scholars to Indian institutions. Training slots have been increased for ASEAN countries in IT and other fields. Moreover, projects are being identified for setting up joint ventures and training institutions in Vietnam and other ASEAN countries.

I led our delegation to the 8th ASEAN Regional Forum (ARF) and the 34th Post-Ministerial Conference (PMC) in Hanoi in July this year. I have referred to the visit earlier. In the ASEAN + 1 meeting, we reviewed the progress on the cooperative work programmes between ASEAN and India. A Hanoi Plan of Action was adopted under Mekong-Ganga Co-operation. New projects were agreed upon relating to distance learning programme such as with Indira Gandhi National Open University, teaching of English, training needs of Cambodia, Laos, Myanmar and Vietnam government officials, computer literacy, commercialisation of indigenous technologies, plant biotechnology for meeting nutritional quality and disease resistance, cosmetic formulations from indigenous plants using biotechnology techniques, health and pharmaceuticals, technology competitiveness, remote sensing for resource management in areas such as environment and forests etc.

With this introduction, I have great pleasure in inviting His Excellency Mr. Nguyen Dy Nien to speak to us on the subject: ASEAN-India

Relations, Structure, Prospects and Future. We are confident that your lecture here today will strengthen and enrich Vietnam-India and ASEAN-India Co-operation and encourage think-tanks like RIS and business associations like the FICCI to work with their counterparts in Vietnam to contribute meaningfully to this common objective.

"Welcome Address on the occasion of the ASEAN's Eminent Person's Lecture delivered by Mr. Nguyen Dy Nien, Foreign Minister of Vietnam on "ASEAN-India Relations, Structure, Prospects and Future" on September 15, 2001

ISSUES IN POPULATION STABILISATION*

Dear colleagues, Members of the Planning Commission, Members of the National Commission on Population (NCP), Secretaries to the Government of India, ladies and gentlemen, I am happy that we have with us today important Union Ministers, Members of the Planning Commission and Secretaries to the Government representing different social sectors, whose policies and programmes have been recognised as very important for achieving the goals of the National Population Policy 2000. As you are aware, the NPP transcends purely demographic concerns and link them to the overriding objective of improving the quality of life of the people of India.

As you are all aware, the Census 2001 has shown that the population of India was 102.7 crore in March 2001. During the preceding decade the population of India registered a growth of 1.9% per annum, compared to 1.4% of the world and about 1% of China. At the dawn of the 21st century India, with only 2.4% of the earth's surface area, is required to support 16.75% of the world population.

Many hold that most of the complex social and economic problems like poverty, unemployment, fragmentation of land holdings, urban overcrowding, over exploitation of natural resources, environmental degradation etc. can directly or indirectly be attributed to our burgeoning population. This also contributes significantly to the prevalence of high levels of unmet needs in various sectors of development like health care, family welfare, education, nutrition, water supply, sanitation, housing etc., which in turn leads to higher levels of human fertility. Therefore, promoting vigorously the small family norm should form an integral part of the policies and programmes of all social sectors because early population stabilization would be of great help in achieving the targets and objectives in each sector.

While dealing with the demographic problem we should, however, remember the substantial progress achieved since Independence. The latest Census has shown that between 1991 and 2001, there has been a decline in the exponential population growth rate from 2.14% to 1.93 per cent. This significant reduction in growth may be an indication that the country is entering a phase of rapidly declining fertility in the process of demographic transition.

Unfortunately, the demographic picture is not uniform across the different regions of the country. Ten States and Union Territories, including Kerala, Tamil Nadu and Punjab, reported that they have already reached the population replacement level of fertility. These States and UTs account for about 13% of the population of the country. Another 10 States with about 41% of the country's population are likely to achieve the target of TFR 2.1 by 2010. However, 15 States and Uts, which include populous States like Uttar Pradesh, Rajasthan, Bihar, Madhya Pradesh, Jharkhand and Chhatisgarh, may not achieve the NPP medium-term goal of reaching replacement level TFR 2.1 by 2010. These States and Union Territories account for about 45% of the country's population. There is no doubt that the major task of population stabilization in the immediate future lies in these States.

An exercise undertaken by NCP along with ICMR has shown that there are 133 districts in the country with TFR greater than 3.5. The 133 districts having 3.5+ TFR, accounting for about 22% of the country's population, may not be able to achieve the goal of reaching TFR 2.1 by 2010. Of these districts, 51 are in UP, 21 in Bihar, 9 in Rajasthan and 4 in Madhya Pradesh. There are 196 districts with TFR ranging from 2.5 to 3.5. Out of the 196 districts, 155 districts having present TFR levels between 3 and 3.5, may not also achieve population replacement level TFR by the target year. Thus, it is clear that 248 districts with about 39% of the country's population may not reach population replacement level TFR by 2010. More vigorous implementation of population stabilization programmes in States like

UP, Bihar, Madhya Pradesh and Rajasthan between now and 2010 is needed to accelerate the process of fertility reduction in these States.

The State Governments have a crucial role in improving the social, economic and demographic indicators especially in the high-fertility districts. The performance of the concerned States would determine the year and size of the population at which the country achieves demographic stabilization. I am happy that Uttar Pradesh, Madhya Pradesh and Rajasthan have since formulated their State Population Policies and have taken up population stabilization efforts in right earnest. It is likely that these efforts may lead to positive results in regard to fertility reduction in these States. Bihar and Orissa are in the process of finalising their population policies. In the case of the newly created States of Jharkhand, Chhattisgarh and Uttranachal, the NCP has a plan to assist them to draw up their Population Policies, which is the first step needed for effective implementation of population stabilization programmes.

In view of the pivotal role played by District Magistrates, the Commission convened a meeting of DMs of the 133 identified high fertility districts. After detailed discussions, the District Magistrates resolved to bring up population-related issues to the forefront with a resolve to fully meet the unmet needs for reproductive and child health services so as to reach the replacement level of fertility at the earliest. They further decided that District Action Plans would be prepared with short-term, medium-term and long-term objectives for improving the social, economic and demographic indicators in their districts.

The Commission selected some social, economic and demographic indicators such as female literacy, age of marriage of girls, safe delivery for mothers, child survival, clean drinking water supply, basic sanitation facility, child nutrition, immunization and adoption of family planning methods, which directly or indirectly influence human fertility. Based on the data obtained from the Census 2001 and other sources, 569 districts of the country were ranked using 12 indicators and a

composite index with a view to know the comparative position of each district. This data was published on the occasion of World Population Day on 11th July 2001.

I feel that for India the task of demographic stabilization is both a challenge and an opportunity. In the next two decades, the size of India's population will be determined mainly by the actions of adolescents and young adults, who will be hopefully more literate, aware and able to make better use of the opportunities that arise. If their felt needs for health and contraceptive care are fully met, there will be a steeper decline in mortality and fertility, helping the country to achieve the replacement level of fertility earlier. This is an opportunity to utilize the abundant available human resources of the country to accelerate economic development, take advantage of this period of low dependency ratios to improve the quality of life and promote savings. The challenge is to develop synergy between the ongoing demographic, educational, economic and technological transitions so that India can hasten population stabilization and rapidly achieve sustainable development – social, economic and human.

Some Working Groups and Advisory Groups were formed by the NCP for detailed examination of various issues. Most of these Groups, in whose working the Central Ministries and Departments were actively involved, have already completed their work and submitted their reports and recommendations. These are being integrated to the extent possible in the policies and programmes for the Tenth Five Year Plan. The programme of action emerging out of these recommendations will also be considered in separate meetings with the concerned Ministries at the Centre and the States. I am confident that the presentations on topics like elementary education, woman and child development, tribal communities, slum development, drinking water supply and sanitation and Panchayati Raj Institutions being made today by the Departments will bring out the inter-sectoral concerns and the demographic linkages of the programmes of these Departments.

The presence of important Central Ministers, Members of the Planning Commission, Members of the NCP and Secretaries to the Government of India today will help in placing the population stabilization issues in the proper perspective and to ensure necessary coordination and synergy of the programmes and policies of the different sectors. With your active support and cooperation, I am confident that definite progress can be made in reaching the social and demographic goals outlined in the NPP.

** Speech at the Meeting of Union Ministers, Members of the Planning Commission, Members of the National Commission on Population, Secretaries to the Government of India on October 4, 2001 in New Delhi*

TASKS BEFORE CONSTRUCTION INDUSTRY*

I am glad to be with you at the 7th Asia Construct Conference organised by the Construction Industry Development Council (CIDC) with the theme "Build India with International Co-operation". I am specially delighted to see senior industry captains, not only from within our country but also from several Asian countries, who are an integral part of this important regional co-operation group and represent apex construction organisations of their respective countries.

As the patron of the Construction Industry Development Council, I welcome you all to this important event. The choice of topics for this Conference is very appropriate. One of the subjects, which particularly calls for an in-depth discussion, is the impact of globalisation, liberalisation and WTO commitments on the construction industry against the backdrop of a changing international scenario. I hope the galaxy of experts assembled here will formulate a practical and dynamic agenda for action and reforms for the balanced and healthy growth of the construction sector not only in this country but also in the whole of the Asian region through mutual co-operation and support. I look forward to their recommending the basic ingredients of a policy framework for the construction sector for the consideration of policy makers.

The Indian economy is at a critical juncture of its development process. The rate of growth has accelerated but it needs to accelerate further to reach the desired levels over the next decade of the new millennium. Rapid growth in the Tenth and subsequent Five Year Plans will generate a heavy demand for infrastructure, especially power, telecommunications, roads, railway and transport. These services being non-tradable, the additional demand has to be met by expanding domestic supply substantially. This requires a major and sustained step-up in construction activity. It offers a challenge to the construction

sector of the country and an opportunity to the construction sector of the region. We shall fully support the building of quality infrastructure in our country. The Government has already stepped up investment in major construction programmes like national highways, rural roads, power and railways. This is to be supplemented by private sector investments.

The construction effort will have to make a major collective effort to come up to the expectations of the nation. The projects will have to be completed without time and cost overruns and without compromising quality and safety. To achieve this objective, the construction sector will need to strengthen itself through technological upgradation and by improving the skills of construction workers so as to equip itself to tackle efficiently the problems of financing and implementing the projects. We would welcome international co-operation in our quest for building more and faster.

I would like to draw the attention of the construction industry to India's National Highway Development Project (NHDP). This project aims at 4-laning and, in parts, 6-laning of the Golden Quadrilateral, comprising Delhi, Mumbai, Chennai and Kolkata, and the North-South and East-West corridors connecting Srinagar with Kanyakumari and Silchar with Porbandar. The total length of the network is more than 13,000 kilometres with investment of more than Rs. 50,000 crore. The target for completing the Golden Quadrilateral is December 2003 and for the North-South, East-West corridors it is 2007. This is the first effort of such magnitude since Independence and it creates unprecedented opportunities for the construction industry. Indeed, this prestigious nation-building project offers it the chance to take a great leap forward to a much higher level of capability.

Many agencies are engaged in the development of various infrastructure sectors and the issues related to them are slated to be discussed in the Conference. As many of the construction entities have traditionally developed informally and not as an integral part of the organised sector, the quality of their operations needs to be evolved as an important component of the grading norms being discussed for the construction

entities. Besides, this Conference may deliberate on some of the issues of concern to the construction industry, such as the absence of clearly defined approach towards human resource development, conservative approach of banks and financial institutions, absence of mechanised and modern methods of working and absence of a uniform code of business practices. I would suggest that your deliberations should highlight the better work practices, benchmarks and frameworks applicable in other countries in the region, so as to enable all the participants to benefit from each other's experience and improve their systems.

The construction sector is an important sector due to the labour-intensive nature of construction activity and in an economy like ours employment generation is a matter of priority. Construction in many countries has been fully mechanised and advances in technology have enabled introduction of very modern equipment. This has helped in improving the quality of construction and in shortening the time required to complete these projects. We must take full advantage of new technology particularly in the high-density corridors. This will improve the overall efficiency levels. The training requirements of workers at various levels need to be assessed and some of the modern-day technologies need to be incorporated in the training manuals. The upgradation of efficiency levels through proper on-the-job training and an awareness of the best systems currently in vogue in other countries will make them the most important assets of the industry. I hope the Conference will tackle the host of issues related to HRD in the construction industry and provide a blueprint for action.

There are also several opportunities for the construction sector in areas like power generation and transmission, waterways and airways. The timely completion of many projects, however, depends crucially upon the way in which international expertise in the area is tapped and absorbed by the Indian construction sector. This would also help the Indian construction sector to become more productive and quality conscious. The sector has to tap the positive potential, which globalisation offers.

It is important that the construction sector focuses on providing quality service, which would enable it to raise funds for meeting its requirements through direct and indirect user charges. The issue of user charges, though not one of the direct topics of the Conference, is crucial for formulating effective cost recovery policies, which among other things, helps in productivity improvement, in ensuring financial viability and in augmenting supply of infrastructure and services.

I hope this Conference will provide important inputs for the successful calibration of the construction sector to the requirements of the Indian economy and its process of globalisation.

"Presidential Address at the 7th Asia Construct Conference on "Build India with International Co-Operation" on October 4, 2001 in New Delhi

NEW CAMPUS OF IAMR*

I am glad to be here with all of you on the occasion of the inauguration of the new campus of the Institute. It is a red-letter day in the life of the Institute. It now has its own home to the building of which many have contributed their time and effort. I place on record my appreciation for all those who have been involved in this important project.

On the occasion of laying the Foundation Stone of the Campus, the then Director-General of CPWD, Shri Duggal, had assured us that the construction work of the campus buildings would be of international standards and that the campus would be completed on schedule. I am very glad that the buildings have come up very well and in time. I have now been informed that the entire campus would be completed on 31st December 2001 as per the revised schedule.

The Government of India set up the IAMR in 1962 to undertake research, impart training both at the national and international levels and provide consultancy services in the area of manpower planning and human resource development. The research work of the Institute was intended to be focussed on the topical areas of concern to the planning process in the country. I am glad to note that the Institute has taken several steps towards fulfilling the objectives for which it was set. It has expanded its activities over the years, particularly in the area of training on issues relating to human resource development. The Institute has also diversified its areas of work. It now conducts post-graduate degree and diploma programmes for international participants. More recently the issues of governance have also begun to be addressed by the Institute — an important dimension that has been dealt with at some length in the Approach Paper of the Tenth Plan. The Institute is also entering into collaborative research work with institutions of international repute the world over.

The Institute had been facing constraints in its operations owing to lack of proper infrastructure at its present building in Indraprastha Estate. Consequently the Institute was forced to restrict its activities. The absence of hostels, shortage of lecture halls, guest house, auditorium, proper library and reading rooms for scholars and faculty, office space, residential flats and related facilities had been hampering the training activities both for the international and the national participants as also consultancy and research work.

I am confident that at this campus, where all the facilities will be available, the Institute would now venture into newer areas within the ambit of its mandate. The campus of the Institute is located on the outskirts of Delhi. This may mean some initial difficulties in commuting. However, DDA's Narela Complex Area has been developing at a brisk pace and in a short span of time the area is likely to be fully inhabited.

Working and living in a campus such as this has its own unique features. Away from the dust and din of the city centre, it provides a conducive atmosphere for academic activities and opportunities to the faculty for self-development. It also offers opportunities for closer social interaction amongst colleagues.

I take this opportunity to congratulate everyone involved in the conceptualisation, designing and construction of the campus for the good work done by them. And finally, I wish the Director, the faculty and the staff of the Institute all the best.

Thank you.

** Address at the inauguration of the newly built IAMR Complex Building at Narela on October 5, 2001*

TASKS BEFORE INSTITUTE OF APPLIED MANPOWER RESEARCH*

Distinguished members of the General Council, I have great pleasure in welcoming you all to the first General Council meeting in the new Campus of the Institute of Applied Manpower Research. It is, indeed, a historic occasion for the Institute.

At this 38th annual meeting of the Council, we shall review what the Institute has done in the recent past and consider the activities contemplated for the near future.

I had, at the last Meeting, expressed the hope that the Institute would continue to explore new and challenging areas of work. It is good to learn from the Director that the Institute has already taken steps to restructure itself, wherever needed, and to revamp its research work to focus on studies relating to impact of economic reforms and that the Institute has started a Centre for Public Policy and Governance that would address research issues in the contemporary and emerging areas of importance such as Exit Policy, labour market reforms, issues related to rightsizing, social security net, decentralisation and redeployment, delivery of public services, etc. I understand that some research projects have been undertaken in areas like educational planning to cater to manpower needs, need-based vocational education system and grassroots-level employment planning.

Since the agenda for manpower planning and research is drawn in the backdrop of evolving demographic, labour force and employment scenario, one has to take note of certain concerns. Adequate growth in employment opportunities to provide productive employment for the continuing increase in the labour force is one of the most important problems facing the country. Acceleration in GDP growth should be accompanied by a commensurate expansion in employment. A rise in

unemployment rate first affects the new entrants to labour force, the youth, and leads to frustration, since their aspirations of quality employment would remain unfulfilled. The Approach Paper to the Tenth Plan, which has recently been approved by the NDC, apart from aiming at 8% annual growth rate, has also set the provision of gainful high-quality employment to the additions to the labour force as a target to be monitored.

The Approach Paper recognises that the Government will have to continue to play a significant role in the development of infrastructure and provision of social services, in which the private sector is not likely to come in a big way. At the same time, the Government would have to restructure its role and withdraw from other sectors. The IAMR can examine as to how the manpower needs of the Government in its restructured business can be met by redeployment and retraining.

Considering the stress on the Central and State finances, the role of the State as employer has to diminish. The areas where quality employment can be given and where skill upgradation is necessary needed to be studied in depth. The IAMR can also develop the synergy, which is possible by, say, converging the schemes of vocational and technical education.

Another area of study emanates from the particular stage of demographic transition that we are now experiencing. We are fortunately going to have a population structure in which the percentage of the working age group will be very high. It is for us to exploit this window of opportunity. The IAMR can identify the missing gaps in the skills required by the emerging work opportunities.

Despite the many achievements of development planning, a variety of imbalances and deprivations still persist in our country. Unequal regional developments, economic inequalities and gender biases are some of the areas of concern. This brings governance issues to the forefront. Professional bodies like IAMR can play a pivotal role in the independent evaluation and feedback of the impact of developmental schemes meant to overcome inequalities, social or economic. The IAMR

may take up studies on a much larger scale to support decentralised, grassroots-level employment planning. A well-equipped database management system can be developed by IAMR, which in turn would help the planners and policy makers to focus on vulnerable sections such as women, children and downtrodden people etc. The informal sector is one sector in which IAMR can usefully take up some meaningful studies.

The Government attaches great importance to projecting a positive image of women and the girl child. Participation of women in employment is relatively much lower. The contribution of women to the national economy, though substantial, has not always been recognised. Special studies can be taken up in areas of gender biases and women's empowerment.

Today's economy is driven by knowledge, which in turn forms the base of power. There is a need to focus on human resource planning to exploit the opportunities offered by information technology. The thrust areas may include appropriate policy and strategy for accelerated growth of the hardware industry, IT awareness in the society and full use of the potential of e-governance. The IAMR should also take up studies on some of these areas.

I understand that in the previous year the Institute has completed a few studies pertaining to the North East, focussed on Mizoram and Nagaland. Much remains to be studied and done in the North East region of our nation in various aspects of employment and manpower as well as in other fields.

Yet another aspect of utmost importance to our society is the periodic monitoring of the status of human development in various regions of the country. I am confident that various Ministries of the Government of India, and even the State Governments, would be willing to support such studies.

The Institute is no doubt making efforts to look after the welfare of its employees. At the same time, it is necessary for the Institute to strengthen its efforts to achieve economic self-reliance. Reducing expenditure, attempting to rightsize, making efforts to mobilise more

resources, expanding activities in various fields, collaborating with national and international institutions, etc., are right steps in this direction. It would be essential for the Institute to build up its own corpus in the course of time so that it may shed its dependence on government funds. For this purpose, the Institute needs to step up its earnings and effect savings out of its receipts and pool them to form a corpus. The Institute should also make efforts to persuade various government bodies, financial institutions and other corporate bodies to contribute to the building up of the corpus. The sooner the corpus is built up, the better it would be the health of the organisation.

It is a matter of satisfaction that the Institute has been recognised as a Centre of Excellence and is affiliated to GGS Indraprastha University for M.A. and Ph.D. courses in Human Resource Development. You would be glad to know that presently a Post-Graduate Course and Diploma Courses are running in the premises of the Institute for foreign nationals with 23 participants on the rolls and the Institute has just now completed another international training programme for another 31 participants. I wish the Institute all success in its proposal to open up various academic courses in fields, in which it has the strength, including Manpower Information Systems. This would result in better utilisation of both the Institute's human resources and the expanded physical infrastructure in the Narela Campus.

Before formally inaugurating the 38th meeting of the General Council let me take this opportunity to thank, as President of this Institute, everyone responsible for the success of the ventures of the Institute. I solicit your continued co-operation in strengthening the Institute.

With these words, I am happy to inaugurate the proceedings of the 38th meeting of the General Council.

** Presidential Address at the 38th meeting of the General Council of the Institute of Applied Manpower Research at Narela Campus of the Institute on October 5, 2001*

TONING UP DEVELOPMENT PROCESS*

As always, it is a pleasure to be with you. We have yet another opportunity to exchange views on the state of the economy and its future prospects. During the past few days, the Finance Minister and several of my other Cabinet colleagues have already interacted with you on many of the topical issues. I would like to briefly place things in a slightly different perspective.

The evidence is now clear that an important causal factor in the recent slowdown is the severe shortfall of public investment during the last three years. In the present uncertain situation we cannot rely on private investment, particularly foreign direct investment, to pull us out. The psychological consequences of September 11 and the Afghanistan war on investor confidence are bound to persist for some time. Therefore, we believe that the role of public investment, both directly and indirectly through its effect on the private sentiments, has become even more critical. We must create conditions whereby the private investor in India regains confidence in the robustness of the economy. As you are aware, the Prime Minister has been taking personal interest in measures to boost public investment in the country. We need to vigorously carry his initiative forward. Adherence to fiscal rectitude will need to be balanced against the growth imperatives.

The war against terrorism will be very different from previous wars in the sense that one does not know how long the world will remain in a heightened sense of uncertainty. How things will evolve is difficult to predict. The economic challenges that will arise from such uncertainty will require a standing mechanism to assess the trends and to suggest corrective action. Although the Tenth Plan document will certainly reflect our present assessment of what is likely to happen, I also intend to establish a mechanism within the Planning Commission, perhaps one of the Member, to monitor international

developments and suggest corrective steps, which can be incorporated in the Annual Plans and budgets.

We must also be aware of the fact that the principal role in undertaking public investment lies with the States. The Centre can only be supportive of their efforts. The fiscal problems, which are being faced by the States and which are constraining their ability to invest, need to be addressed urgently. We should not politicise this issue. During my interactions with the Chief Ministers, they have made the point that political considerations get in the way of taking rational economic decisions. I believe, therefore, that there is now a considerable degree of consensus amongst the State leadership about what needs to be done and the roadblocks that exist need to be removed.

In the present situation it is all the more important, therefore, that all the States are adequately empowered to enhance their investment and growth rates significantly, especially those States, which have not experienced much growth in the 1990s. It also becomes incumbent upon us to ensure that no State has a feeling of being left behind or of not getting adequate resources. The potential forces of polarisation that may emerge from the current international scenario are such that efforts towards a more inclusive pattern of development have become even more important than ever before.

Since there are limitations to promoting balanced development through public sector investment in this era of liberalisation, we need to ensure that other resources, including those from the private sector and external agencies, flow more evenly. I have been sensitising external agencies as well as the State Governments to pose more projects for external assistance. The project preparation facility, which we introduced last year, will assist the State Governments to get suitable project reports prepared. Coordinated policy reforms will help in generating a more balanced flow of private investment and we will continue to impress upon the State Governments the need to liberalise inter-State transactions in order to create a nation-wide economic space.

In order to bring about the requisite degree of focus on State-level issues we have undertaken the preparation of State Development

Reports in co-operation with the State Governments and independent agencies. We have great hopes that these reports will contribute significantly to our understanding of the development forces at the sub-national level and, thereby, improve our planning process.

Governance is being increasingly recognised as an important factor in the development process. It determines, to a very large extent, why in some States the development schemes are being implemented better than in others. It is not, however, a factor, which can be changed overnight. There has, therefore, been a conscious emphasis placed by the Planning Commission on project-based assistance for core critical sectors like power, irrigation, rural connectivity, rural electrification, etc. We have also been focusing on implementation issues while designing support to the States. In fact, we are considering the setting up of an annual fund at the Planning Commission, where funds to States would be released on the basis of performance, whereby the States undertake reforms and improve governance as per agreed benchmarks.

A new dimension is being added to the planning process by bringing issues of human development into the forefront of our development strategy. To this end, a start was made by encouraging and assisting States to prepare State-level Human Development Reports to bring out the present status of access to basic social services and extent of deprivation at a disaggregated level. We are taking the process further by preparing a National Human Development Report, which will provide both a picture of different States on a comparable basis as well as provide a methodology, which can be used to influence the planning processes in the Centre and the States.

I am confident that the State Development Reports along with the National Human Development Report will provide the basis for equitable development of all the regions of the country. If we can put our own house in order, we have little to fear from adverse external developments. The next couple of years will no doubt test our resolve but I am confident we will successfully meet the challenge. Thank you.

STEPS TO PROMOTE TOURISM SECTOR*

I am glad that the Ministry of Tourism has convened this Conference of Chief Ministers and Ministers of Tourism under the Chairmanship of the Prime Minister to discuss the draft National Tourism Policy.

India has a spectacular wealth of natural resources, scenic beauty and rich cultural heritage. The country offers a number of tourist attractions and options including beach tourism; forests, wild life and landscapes for eco-tourism; snow, river and mountain peaks for adventure tourism as well as natural health resorts of Yoga, Ayurveda, etc. Yet, India's share of total world tourist arrivals and world tourist receipts remains miniscule.

I believe that given an appropriate policy framework, the untapped potential of the sector will receive the long overdue fillip for growth. The recognition of the role of tourism as an engine of growth and the policy initiatives required to give it the impetus it deserves is a matter of paramount importance if our people are to partake of the manifold benefits that can flow from it in terms of employment, income generation and poverty alleviation. The most desirable reward of a proactive and enabling tourism policy would be that it carries a message of hope for the unemployed and underemployed in some of the remotest parts of the country.

To do justice to it, I would suggest that tourism should be accepted as one of the national and State priorities, commanding a highly focussed, coordinated and result-driven approach to facilitate the investment required for its growth. The next step would be to create a practical and speedily implementable policy framework for the industry. For this purpose, we must, to begin with, recognise that tourism is not just a single activity. It is a composite experience, which involves a wide range of sectors and activities.

For example, it is for the Ministry of Civil Aviation to augment the availability of airline seats and develop airports of international standards in the country. Action by the Ministries of Home Affairs

and External Affairs is needed to simplify the visa regime and protect genuine tourists from unnecessary harassment. It is for the Ministry of Finance to tailor the taxation regime so as to make it tourist friendly, taking into account its potential for employment generation and poverty reduction. The Ministry of Railways would need to plan for the promotion of tourist circuits. The success of the Palace on Wheels could be replicated with suitable modifications in other States.

Tourism is a highly competitive industry, which needs to be nurtured with care by the Central and State Governments. We must always bear in mind that for any tourist, a sense of physical security and safety is central to the choice of his destination. We must come down hard on any instance of anti-social elements taking advantage of unsuspecting foreigners. Our law and order system has to be seen to be tourist friendly. This is an area, which needs attention.

The role and attitude of the State Governments can make a vital difference to the development of the sector. In most States tourism is accorded negligible priority. But States like Kerala, Rajasthan and Goa, which have given it a higher priority, have been distinct gainers. I would therefore urge all the States to prepare tourism master plans with the best available technical and professional assistance. These plans should be widely publicised to invite private investment. Awareness generation programmes to elicit local participation and local commitment to the tourism projects must be integrated in the plans and the local community encouraged to value its cultural heritage and safeguard its environment.

As you are aware, the NDC has approved the growth strategy of the Tenth Five Year Plan, in which tourism has been explicitly identified as the activity, which has the greatest potential for stimulating a number of labour-intensive sectors.

The key is policy coordination and clarity of objectives. It is not only Plan funds that will make it happen but also determined policy initiatives that will encourage the growth of the sector and boost private sector investment.

I wish the conference all success.

** Speech at the Conference of Chief Ministers and Ministers of Tourism on October 30, 2001 in New Delhi*

MARITIME DIMENSIONS OF NATIONAL SECURITY*

This is an honour to address such a distinguished gathering on the occasion of the Eleventh Admiral R.D. Katari Memorial Lecture. Admiral Katari was truly a pioneer of modern India's navy, a distinguished diplomat and a sterling human being. He stood first in the examination for the inaugural batch of entrants to the Indian Merchant Marine Training Ship "Dufferin" in December 1927. On completion of the course in June 1930, he was awarded the Viceroy's Gold Medal for "qualities most likely to make a good sailor". At the outbreak of the Second World War he was commissioned as a Sub-Lieutenant in the Royal Indian Navy Volunteer Reserve, where he saw active service in the Atlantic Ocean and the Persian Gulf.

Soon after the end of the war Katari was commissioned into the regular cadre of the Royal Indian Navy in the rank of Lieutenant Commander and appointed as commander of HMIS Cauvery, a frigate. When India won freedom, he became the senior-most Indian naval officer with the rank of Commander and was subsequently involved in the Junagadh operations. He soon became commander of India's flagship, the cruiser "Delhi". This was followed by staff appointments at Naval HQ as the Chief of Personnel in the rank of Captain and as Deputy Chief of Naval Staff in March 1954 in the rank of Commodore.

In April 1958 he was promoted as Vice-Admiral and became the first Indian naval chief since Shivaji's Admirals of the 18th century. During Katari's tenure as Chief of Naval Staff(CNS) the Indian Navy consolidated its acquisitions, planned future growth and enhanced its training and operational effectiveness, the latter through an active role in the liberation of Goa from the Portuguese in December 1961. India's first aircraft carrier, "Vikrant", was commissioned during Admiral Katari's tenure as CNS. Admiral Katari retired as CNS in April 1962. In 1964 he was appointed as our Ambassador in Burma, where he served with distinction for over five years.

Ladies and gentlemen, India is an important maritime State. We see this from our geography, our history, our ancient seafaring and shipbuilding traditions and our commercial and trade ties. Yet, at the same time, there appears to be a lack of basic appreciation of the security aspects of maritime interactions and enterprise over the years.

The mainland Indian peninsula, which is surrounded by the Arabian Sea and the Bay of Bengal, thrusts deep into the Indian Ocean. Our island territories are spread far and wide and some are far closer to other countries than to the Indian mainland. In fact, countries like Indonesia and Thailand, with which we share maritime boundaries, are our "immediate" neighbours. In accordance with the International Law of the Sea (UNCLOS III, 1982), the peninsula and island territories provide us with a vast and expanding "maritime space".

Geographically, India lies astride the major sea-lanes of communication (SLOC) in the Indian Ocean, providing it with considerable strategic importance and potential. Moreover, the vast portion of our foreign trade - 97% in volume and 76% in value terms - is sea-borne. It is interesting to recall that in 1951 the first British Chief of post-Independent India's Navy, Vice-Admiral Edward Parry, had stated that India is "an island, in that she is nearly inaccessible across her land frontiers".

Over the centuries, maritime interactions have influenced the course and direction of India's destiny and prosperity. The earliest written evidence of Indian maritime activity appears in the literature of the Vedic period (2000-500 BC) of Indian history. The motto of the present-day Indian Navy, "Sha No Varuna" ("May the ocean gods be auspicious unto us") dates from this period. It is not well known that southern India inherited a rich tradition of maritime activity in the Indian Ocean. This was perhaps the first such centre of activity in the world, owing to the early growth of civilisation in the area and the presence of the monsoon winds, which facilitated long voyages.

The "father" of Indian maritime history, Shri K.M. Panikkar, writes that from the earliest times till at least the arrival of the Portuguese in the early 16th century, Indian interests were preponderant in the Indian

Ocean. Indian ships for most of the time, that is, till the beginning of the 14th century, had the lion's share of traffic, while the Arabs and the Chinese freely participated in the trade. The South East Asian empire of the Sri Vijayas is but one episode in the long history of India's links with South East Asia, which are civilisational—comprising centuries-old cultural, religious, commercial and linguistic ties.

Nonetheless, there remained insufficient appreciation of our maritime security. Scholars ascribe this to a number of reasons. The first is the absence of any requirement to build and maintain a strong naval force, in view of the trade-dominated interactions within the Indian Ocean. After the great Chola dynasty, which had a fleet largely for the protection of trade, the Marathas were the first to consciously possess and employ a naval force. Secondly, coastal dynasties, such as that of the Zamorin, i.e. the King of Calicut, had a preponderance of small fast boats but lacked large vessels for operations at some distance from the coast. The third reason is the inability to keep pace with evolving naval technologies of warfare in relation to western navies.

Panikkar begins his classic study, *India and the Indian Ocean – An Essay on the Influence of Sea Power on History*, with the declaration of Khairuddin Barbarosa to Sultan Suleiman the Magnificent in the early 16th century. "He who rules on the sea will shortly rule on the land also". He further goes on to say that India's history illustrated this principle better than that of any other country. As a matter of fact, India never lost her independence till she lost the command of the sea to the Portuguese in the first decade of the 16th century. This took place as a result of the crucial battle off Diu (1509) between the naval forces of the Portuguese and the Zamorin of Calicut. Although this battle actually proved inconclusive, the subsequent departure of the Ottoman fleet under the Egyptian Admiral Mir Hussein led to Portuguese naval supremacy in India.

In the earlier battle off Cochin (1503), the Zamorin had superiority in naval strength but lacked an ocean-going navy and was therefore unable to destroy the enemy fleet. Thus, without any decisive battle, the supremacy of the sea passed to the Portuguese. In effect, the battle off Cochin and the engagement off Diu are the most significant events in Indian maritime history.

Dominance over the Indian Ocean subsequently passed to the British, with the departure of the French de Suffren from India (1783) and Nelson's victory at Trafalgar (1805). The Mughals remained blissfully unaware of the importance of sea power to the empire. Consequently, India's maritime and what existed of its naval capabilities were in no position to prevent subjugation by the British. It was clear that the British would control the Indian Ocean through the Royal Navy. There was no requirement for an indigenous Indian Navy in this scheme of things till the late 1920s, when Admiral Katari entered the training Ship "Dufferin".

After Independence, the Government's appreciation of the importance of maritime security affairs was expressed in the following words by Prime Minister Nehru at a Congress Parliamentary Party meeting in April 1955: "I think it is lack of this conception of sea power that has been our undoing often in the past. Now, of course, there is air power, which covers both land and sea. It is important. But I still think that for a country like India the sea is the most important from the defence point of view and obviously from the trade point of view. However, the neglect of naval-power development persisted, partly due to the focus on land-oriented warfare in an adversarial neighbourhood with a predominance of land forces and the consequent absence of a naval threat" This was borne out by subsequent events.

In short, Indian security considerations continue to be dominated by developments on land, with maritime affairs being perceived merely as an extension of these activities. Although there were notable exceptions, such as the part played by the Indian Navy in this country's success in the 1971 war, which also witnessed the intrusion of the nuclear-armed US aircraft carrier-led Task Force into the Bay of Bengal, they remained just that—exceptions to the rule.

Ladies and gentlemen, time has come for us to appreciate the challenges to our maritime security. Maritime security issues are of both a military and a non-military nature. It is, therefore, necessary to take both these components into account for a proper understanding of their collective impact on national security. In this context, ports, shipping and imports of energy resources, for example, should be seen as critical dimensions of maritime security.

In the emerging security environment, India's dependence on the sea will increase in terms of trade, energy resources, shipping, sustainable exploitation of marine resources, ocean research and exploration. Its transportation routes will be increasingly vulnerable to disruption and a range of criminal and clandestine activities. The continuing militarisation of the Indian Ocean and the dynamic role of technology in naval warfare will also impact upon the country. It is imperative, therefore, that the maritime security issues are perceived in a holistic, but not a compartmentalised, manner.

Over the years, the Indian Navy has developed into a multi-dimensional force with lethal weaponry and sensors and enhanced reach. It has encouraged indigenisation of technology and production. Its modernisation continues to keep pace with rapidly advancing technologies and doctrines of modern warfare. Three elements appear to be at the core of the Indian Navy's doctrine - the development of rapid reaction manoeuvrability, along with the concentration of firepower; land-attack capability to influence the war on land; and naval diplomacy.

The latter was most visible during the first International Fleet Review hosted by the Indian Navy last February, which was attended by 24 warships from 19 countries. In addition, 10 other countries sent senior naval representatives. Appropriately enough, it was called "Bridges of Friendship". Apart from this, it could be relevant here to recall the seizure of the Japanese-owned, Panamanian-registered freighter, the MV "Alondra Rainbow" from pirates in the Arabian Sea in late 1999 by the Navy and the Coast Guard.

The naval battlefield environment is changing rapidly. The Information Age has spawned the 'revolution in military affairs' (RMA), which is producing new lethal weapon systems and facilitating the militarisation of outer space and cyber-related crime. The RMA in turn has spawned the 'revolution in naval affairs' (RNA), which has greatly enhanced night capabilities, yielded precision weapons and seamless communication networks and considerably reduced response times

for naval forces. Stealth technology remains critical. The Indian Navy will need to incorporate these aspects in its war-fighting doctrine.

Like the Industrial Revolution, the Information Revolution is bringing about fundamental changes in society, economics, politics and warfare. But there is a key difference: While the Industrial Revolution transformed the parameters of scale and emphasised physical mass and access to natural resources, the Information Revolution blurs or removes boundaries in both time and space and de-emphasises physical resources.

Like the traditional emphasis on sea control and denial, the powerful will seek to exercise space control and denial. Already, the stress is on "control" and "domination" of space and from it the earth below.

Ladies and gentlemen, India has to step up surveillance and protection of its vast coastline of 7,516 kms as well as its EEZ.. Clandestine infiltration and arms drops by Pakistan take place on the Gujarat and Maharashtra coasts. The problems created by the Liberation Tigers of Tamil Eelam (LTTE) along the Tamil Nadu coast are well known. The Arabian Sea and the Bay of Bengal are also increasingly vulnerable to a range of criminal and clandestine activities. These include smuggling, arms and narcotics trafficking (hand-maidens of terrorism), illegal fishery activities, piracy attacks, theft, fraud and other crimes and illegal activities at sea.

Coastal security was one of the issues addressed by the Group of Ministers (GoM) in their report, "Reforming the National Security System (2001)". Its recommendations include the upgradation of the Coast Guard and the establishment of specialised Marine Police in all the coastal States and island territories. These are currently under implementation.

India's thousand plus island territories and rocks are largely uninhabited and lie at considerable distances from the mainland, in proximity to other countries. The Andaman and Nicobar Islands are particularly vulnerable to clandestine activities and illegal infiltration

and occupation. Militancy in both Myanmar and Indonesia has an adverse effect on these islands.

Since 70% of our energy requirements of crude oil are currently shipped from abroad, increased focus would be required on the ability to maintain the safety and security of energy shipments and the prevention of any disruption of supply. Special attention would also need to be given to shipping in the Gulf of Cambay and Kutch. Also, as 19% of our oil demands are met from offshore basins, the defence of maritime assets and infrastructure is critical. Protection of over 150 process and well platforms at sea, operating beyond the EEZ in the near future would also be required.

Following the September 11 attacks the possibility of maritime terrorism is of increasing concern. The hijacking of the passenger ship, the "Achille Lauro", in 1988, brought terrorism at sea to the forefront of international condemnation and resulted in the Rome Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (1988). A terrorist attack on ships carrying dangerous and hazardous cargo, such as a Liquefied Natural Gas (LNG) tanker, especially in port, would result in considerable human and material damage, as well as environmental destruction over a wide area of land and sea. The LNG regasification terminals under construction and planned in India, as well as the existing oil refineries and petrochemical complexes, are especially vulnerable to sabotage. The mining of narrow sea-lanes or approaches to ports will also remain a source of concern. Suicide missions on naval and maritime-related economic targets have taken place in neighbouring Sri Lanka.

Ladies and gentlemen, some of the major policy challenges to India's maritime security include the surveillance and security of the extended maritime zone, an increase in domestic shipping tonnage, enhanced effectiveness of both major and minor ports and the strengthening of regulatory and enforcement mechanisms in India's maritime zones.

Earlier, I had mentioned that the International Law of the Sea (UNCLOS III, 1982) provided India with a vast "maritime space". This is expanding even further. India's maritime zones, over which it has certain rights

and obligations, include a territorial sea up to 12 nm (22 kms) from the baseline, a contiguous zone from 12 to 24 nm (22-44 kms) on the Exclusive Economic Zone (EEZ) from 12 to 200 nm (22-370 kms) and a continental shelf up to 200 nm, as well as up to 350 nms if certain conditions apply, the latter called the outer continental shelf (OCS). These zones currently comprise 2.013 million sq. km area of sea, which is the 12th largest in the world and equivalent to two-thirds of the total land area. With the inclusion of the deep seabed mining area in the central Indian Ocean lying only 370 kms from American naval and military facilities on Diego Garcia and the formal delineation of the OCS by 2005, the total area of India's maritime zones could well be equivalent to India's total land area. In effect, this would provide India with sovereign rights over all non-living resources and sedimentary organisms within 650 kms from the coast, where applicable. This, indeed, is a vast "maritime space" and strategic space for India.

Over the years, India has successfully demarcated its maritime boundaries with Indonesia, Maldives, Myanmar, Sri Lanka and Thailand. However, maritime boundaries with Pakistan and Bangladesh remain to be demarcated. In addition to a military build-up by Pakistan in the Kutch/Sir Creek area, the potential exploitation of oil and gas in these waters, as well as offensive patrolling at sea, could exacerbate tensions. Harassment of Indian fishermen takes place regularly.

In accordance with the current trends, domestic shipping is not keeping pace with the increasing volume of crude oil imports, with the result that the proportion of crude oil carried on Indian bottoms will go down further from the 50% level of the late 1990s. The share of foreign trade carried on Indian bottoms is also expected to decrease from the current 27-30 per cent. Moreover, the Indian shipping fleet is ageing rapidly. We should address the issues arising from the impact of these three factors on our national security in times of uncertainty or hostility.

The inefficiency of ports, with low productivity and high traffic handling time, also has a negative impact upon the country's economic growth and development. Whereas the Average Ship Turn Around

(ASTA) time for container ships in ports such as Singapore is only 6-8 hours, it is as high as 3.74 days at the Jawaharlal Nehru port, the country's most modern port. In 1999-2000, India's 11 major ports handled 272 MT of traffic, with a total capacity of only 258 MT. With globalisation and liberalisation, our exports are expected to increase considerably. This will necessitate additional port capacities to cater to the growing volume of exports and, indeed, of foreign trade.

The regulatory mechanisms in India's maritime zones need to be strengthened by the enactment of new legislation and enforced by setting up mechanisms for implementation. This could include the promulgation of anti-piracy laws, legislation for the exploitation of mineral resources and the designation of Marine Protected Areas (MPA).

Some of the other important policy challenges to maritime security include scientific research in Antarctica, the ability to deal with dual-use scientific data and products, the protection and sustainable utilisation of the marine environment, and the prevention, and if necessary, quick response, to pollution from land-based sources, shipping, and oil slicks.

Ladies and gentlemen, there is currently a fragmentation of organisations, policies, and legal and enforcement measures relating to maritime security issues. This results in overlapping of jurisdiction and an inability to provide quick decisions or respond effectively to fast evolving situations. Currently, as many as 12 Ministries and 8 Departments of the Central Government are involved in maritime-related policy formulation and implementation, as are 9 coastal States and 4 Union Territories, with defence left to the Navy and the Coast Guard.

To deal with such a situation, a formal mechanism for coordination among the multiple users of the sea is urgently required. This would enable effective and speedy coordination among varied maritime-related Ministries and Departments of the Government, as also the concerned States and Union Territories. In this respect, the Group of

Ministers has recommended the formation of "an apex body for management of maritime affairs".

There should also be a concerted focus on maritime security in India's diplomatic, bilateral and multilateral relationships. This could take the form of a regular maritime security dialogue with countries of the Indian Ocean Rim (IOR) to ensure the stability of the sea-lanes of communication in the area, which accounts for over half the world's merchant fleet, by tonnage.

Finally, there is a critical need to create awareness of maritime security in the country, in terms of both education and research. A specialised documentation division for the much-neglected study of Indian maritime history and naval warfare is also required.

Ladies and gentlemen, technological forces are directly impacting on international and regional security at a time when the world is still in transition from the cold war security order to a post-cold war security order. In the face of technological change at an unprecedented rate, the ability to keep pace with rapid change may distinguish the successful cultures from the not-so-successful cultures. In the last five decades, the world has amassed more scientific knowledge than was generated in the previous 5,000 years. The most rapid advances in technology, however, have been occurring since the late 1980s with the advent of the Information Age, with scientific information now increasing two-fold about every five years. It is imperative for us to stay abreast with technological developments to safeguard our security and decision-making autonomy. Particular attention needs to be paid to the maritime dimensions of national security, as they are linked to India's political stability and economic prosperity. To maximise our interests at sea and to effectively manage the fast-paced technological developments, we need to formulate a sophisticated, proactive, multi-pronged, long-term strategy. The strategy should also take into account our immediate concern.

The geo-political environment in our immediate neighbourhood of the Indian Ocean is currently in a state of high tension and increased naval and military-related activity. This follows the tragedy of the

September 11 terrorist attacks on New York and Washington. In the last few days we have seen, on our television screens, the arrival of American, British, and other warships from countries far and wide. They have travelled through the Suez Canal on our west and the Straits of Malacca and Singapore in our east, to deploy in the Arabian Sea. These naval combatant forces, currently comprising three to four aircraft carrier battle groups, are prepared to strike at Afghanistan. They will remain in proximity to Indian shores for some time to come.

The presence of these warships to fight against the forces of terrorism in a landlocked State hundreds of miles from the coast points to the very essence of maritime power—the flexibility, mobility and reach of lethally armed and equipped naval forces. In modern day warfare these forces provide the US and its allies the capability to carry out relatively accurate military strikes in a sustainable, and if required, variable manner. In the absence of actual naval and military operations, the very presence of these forces sends a strong and unambiguous message to their adversaries. They serve as an important lesson to us in terms of the potential, efficacy and multipurpose nature of naval power. Some countries in our neighbourhood also have ambitions in the Indian Ocean.

The incidents of September 11 have brought the issue of terrorism into sharp focus. While countries like ours have been bearing the brunt of terrorism for quite some time, the horrendous incidents of September 11 targeted at the US has made the entire world community realise that terrorism knows no boundaries and that it is a hydra headed monster. It follows no convention. It is against humanity. The world has veered round, however late, to our point of view that the only way to deal with the merchants of terror is to eliminate them. It would be a dangerous folly to permit any State to rationalise the use or support of terror for any purpose, political or otherwise. The sorties against the Taliban are just the beginning of a war, which has to be fought on all fronts, political, military and finance, and at various levels all over the world. The world community cannot any longer afford to condone either fundamentalist or State-sponsored

terrorism. The ISI-nurtured Taliban is involved in many proxy wars not only in J&K but also in the Central Asian republics, Chechnya and elsewhere. This malevolent alliances draws its sustenance from a powerful network of international crime involving a deep nexus between terrorism, narcotics, money laundering, gun running and small arms proliferation.

It is not for me to advise Pakistan as to how best it can extricate itself from a potentially threatening situation of its own creation. One can only hope that Pakistan now realises that terrorism does not pay and that it is able to walk through the minefield without serious damage. It is for Pakistan to weigh the bitter outcome of its policy of sponsoring cross-border terrorism against the advantages that would flow from a reversal of this policy.

With these words I pay tribute to the memory of Admiral Katari.

** 11th Admiral R.D. Katari Memorial Lecture organised by Navy Foundation in New Delhi on October 31, 2001*

USHERING IN 'EVERGREEN' REVOLUTION*

Dr. Mangala Rai, President, Indian Society of Genetics & Plant Breeding, Dr. H.K. Jain, Chairman, Programme Committee, Dr. M.C. Kharkwal, Secretary, Indian Society of Genetics & Plant Breeding, distinguished delegates from India and abroad, ladies and gentlemen, I am pleased to participate in the Valedictory Function of the Diamond Jubilee Symposium of the Indian Society of Genetics and Plant Breeding. I understand that luminaries in agricultural research and development, like Dr. B.P. Pal and Dr. M.S. Swaminathan, have played a key role in fostering the growth of this prestigious Society over the decades.

We can look back with legitimate pride and satisfaction on the accomplishments of our agricultural scientists during the 20th century. The National Agricultural Research System had instilled considerable public confidence and trust in agricultural science and technology by ushering in the Green Revolution during the 1960s. From a stage where Indian agriculture relied mosdy on land-races and varieties with restricted yield potential and consequently heavy dependence on food imports, we have reached a stage of reasonable comfort in foodgrain production, besides holding competitive advantage in exports of certain agricultural products. Plant breeders, over the decades, have been successful in utilising the knowledge accrued from genetics and have contributed significantly to national growth by releasing high-yielding varieties in diverse crops, suitable for cultivation in various agro-ecological regions. Crop varieties have been tailored to meet the various requirements of farmers, both under favourable and unfavourable production environments. These efforts have indeed paved the way for India to attain the much-needed food self-sufficiency. Nevertheless, we have a long way to go. When the country attained Independence, the population in India was a mere 350 million. In just 53 years it

has crossed the one billion-mark and is projected to reach 1.6 billion by the year 2050. At present we have about 16% of the world's population, with only about 4% of its land and 2.5% of its water. In this scenario, we have to consider carefully as to how best we can sustain on a long-term basis our farms and the families and livestock dependent upon them.

In view of the existing and emerging liberalised global markets Indian agriculture has to compete in terms of both cost and quality. Advances in science and technology need to be effectively channelised in a manner that can lead to significant reduction in the cost of agricultural production, particularly by increasing the input use efficiency. Varieties have to be genetically tailored so that the solar energy is more efficiently converted into valuable organic matter, be it food, fodder, fibre or timber. Varieties have likewise to be made more resistant to various biotic and abiotic stresses in order to bring about stability in crop yields and reduce the heavy toll on agricultural production. Due emphasis should also be placed upon improving the shelf-life of perishable agricultural commodities, possibly through genetic enhancement strategies, as post-harvest losses in this country are indeed enormous.

It is important to keep in mind the fact that in India, as in a number of other developing countries, agriculture is more than just a commodity-producing sector. It is not merely a means of livelihood but also a source of dignity and self-respect for the majority of our population. Therefore, although cost and quality considerations are no doubt of great importance, we cannot neglect the socio-cultural dimensions either. Small farmer agriculture is a reality that must be woven into the tapestry of our future vision. This has implications, which may be lost sight of in the perspective of large commercial farming. Issues of dependency and vulnerability loom large when dealing with small and marginal farmers, particularly when they are illiterate and have no access to social security systems. Risk-minimisation strategies have, therefore, been central elements in

traditional agricultural practices. Sudden and excessive exposure to market forces and commercial considerations, especially when the supporting infrastructure is weak, can be counter-productive unless countervailing strategies have been put in place. These considerations must therefore be factored in while developing technological interventions.

India has to now logically move forward towards an 'evergreen revolution' that can aid us in achieving food, nutrition and environmental security. Besides continuing the increases in foodgrain production, there is a need for sustained improvement in the social well-being of the population. Modern technological advances are indeed remarkable and we can be proud of them. However, the fact still remains that millions of people around the world are unable to meet their minimum human needs, including food. The per capita net availability of cereals and pulses, which is the major source of proteins for a majority of Indians, is only 467.4 grams per day. Food security rests on adequate availability and accessibility of food and for nutritional security the element of absorption has to be factored in. The challenge that confronts us, therefore is how to improve food security for millions of our countrymen and in particular nutritional security for children and expectant mothers.

For improving access to food we need to come out soon with a viable 'Action Plan' that, on the one hand, effectively inter-links various States in the country and, on the other, streamlines various institutions within each State. Technologies emanating from scientific disciplines such as genetics and plant breeding have to play a vital role in this complex and challenging endeavour. Inequities in food access have to be tackled in a multi-pronged manner. Agriculture in general has to now transform itself into a vibrant economic activity that can provide more rural employment and income generation all through the year, particularly to the underprivileged sections of the society. It is indeed a challenge for the scientific community to think of strategies, which can help us achieve this primary national goal.

With the advent of modern biotechnological tools and techniques the science of genetics has rapidly progressed in the last few decades. Who could have imagined that one day we will have the 'blueprint' of the entire human genome! The remarkable scientific achievements in genetics and biotechnology will have a significant impact on agriculture, medicine and the environment. Parallel advances in information technology, bioinformatics and instrumentation are equally exciting. Our researchers must not only keep pace with the recent developments, but also should make concerted efforts to efficiently blend these frontier technologies with the conventional strategies. If India has to be at the forefront of science and technology and if science has to effectively and sustainably serve mankind, we must judiciously integrate and deploy all the technologies at our command.

I understand that after in-depth deliberations you have come out with a 'Vision Statement on Genetics and Plant Breeding' on this occasion. I consider this to be an important outcome of this Symposium as the Statement reflects the confidence we have in our scientific capabilities and our resolve to bring about transformation in the agricultural scenario of the country. I strongly believe that 'knowledge is power' but, even more, that 'knowledge is empowerment'. Thus, knowledge can be of very limited utility unless it is effectively channelised in a positive, responsible and creative manner. Translation of knowledge for societal benefit certainly requires a vision that is based on a clear perception of our strengths, weaknesses, opportunities as well as responsibilities to the society. Where such vision has been lacking or limited, the developmental programmes have floundered. I hope that this Vision Document will provide a road map for steering the research and educational programmes related to genetics and plant breeding. I am confident that our learned scientists will come out with clear-cut, action-oriented and time-bound strategies to make this Vision a distinct reality in the foreseeable future.

I am sure that your deliberations during these four days of Diamond Jubilee Symposium will have provided additional impetus to effective utilisation of knowledge and products generated from the science of genetics and plant breeding to ensure a better world for all of us. My best wishes to the Indian Society of Genetics & Plant Breeding for success in all its endeavours in the years to come.

Valedictory Address at the Diamond Jubilee Symposium on "Hundred Years of Post-Mendelian Genetics and Plant Breeding: Retrospect and Prospects" organised by Indian Society of Genetics and Plant Breeding in New Delhi on November 9, 2001

ROLE OF CO-OPERATIVES IN ECONOMIC DEVELOPMENT*

It gives me great pleasure to be with you on the occasion of the celebrations of the 48th All India Co-operative Week. At the outset, I wish to congratulate all those associated with the co-operative movement and the organisation of this week. In particular, I would like to congratulate the President of the NCUI, Dr. S.S. Sisodia and his team, for their commitment to the co-operative cause.

We are all aware that cooperatives had been in existence in India since ancient times. In recent times, the co-operative movement was institutionalised with the enactment of the Co-operative Credit Societies Act of 1904. This was followed by the enactment of State Co-operative Acts by the then provinces for regulating the co-operatives in their jurisdiction. The Multi State Co-operative Societies Act was enacted in 1942 for regulating the functioning of societies having jurisdiction in more than one State.

After Independence, co-operatives were assigned an important role in bringing about socio-economic transformation, especially of the rural areas. There are at present more than five lakh co-operative societies having a membership of twenty-two crores. The co-operative network, I am informed, covers 100% of the villages and 67% of rural households. Co-operatives are closely associated with the agriculture sector and are playing a pivotal role through supply of critical inputs for the growth of output in agriculture. Their contribution in bringing about the Green Revolution has been recognised. Sixty per cent of sugar production comes from the co-operative sector. Dairy co-operatives have played a pioneering role in bringing about the White Revolution in this country. I am mentioning only a few of the laudable achievements of the co-operative sector.

However, notwithstanding their achievements and their phenomenal growth, co-operatives are beset with several constraints and problems.

Mounting over-dues in rural credit societies, resource crunch, increasing number of dormant and defunct societies, apathy of the members and their non-participation in the business and management of the societies, excessive bureaucratic control, political interference, non-conduct of timely elections etc. are the major weaknesses of the system. The founders of the co-operative movement meant it to be a people's movement. But in our country today it lacks many of the characteristics of a people's movement. In fact, if one were to single out the factor most responsible for the present state of our co-operative movement, it would undoubtedly be the lack of people's participation and the dominance of vested interests.

The challenge, therefore, is to restore the co-operative movement to good health. The Government, of course, is committed to strengthen the co-operative movement in India. The National Agriculture Policy 2000 highlights the role of a participatory approach by involving co-operatives in sustainable development of the agriculture sector.

The role of co-operatives has, however, acquired a new dimension in the changing scenario of globalisation and liberalisation of the nation's economy. Sustainable economic development will be the main concern of the nation in the 21st century. Co-operatives can play an important role in this scenario. Active participation of cooperatives in promoting sustainable development will also give a new vitality to the co-operative movement. Co-operatives need committed leadership as well as professional membership to be able to compete in the new economic environment of globalisation and liberalisation, even while recognising that social concerns will always inform their functioning.

For co-operatives to fully realise their potential and contribute, as expected, to the process of economic development of the nation in the fast changing milieu, they must become entrepreneurial in their mindset and functioning. They must strive to be as dynamic as, if not more than, the best corporation. Inefficiency should not be tolerated. In this context the Chinese experience is instructive. The most dynamic of Chinese organisations—the Village and Township Enterprises—are in effect co-operatives. Similarly, financial companies in many countries,

such as Credit Agricole of France and Thai Farmers Bank, are co-operatives. We must emulate these examples to make the Indian co-operative system a viable alternative to conventional forms of economic organisation.

However, co-operatives can compete with efficient economic organisations like multi nationals only if they are given a level-playing field. This requires a favourable and conducive social, political and economic environment. This is the area, which, at present, concerns us the most. It calls for enunciation of a clear and comprehensive policy on co-operatives, for it is the prime responsibility of the State to provide a conducive environment by way of appropriate legal and policy framework.

I am happy to say that, based on our experience, the process of change in the legal framework of the co-operative system has already been initiated. It is the endeavour of the Government to make the co-operatives autonomous, self-reliant and democratically managed institutions accountable to their members. The Government has already introduced a Bill in the Parliament to replace the Multi-State Co-operative Societies Act, 1984, providing for more functional and financial autonomy and democratic management of the co-operatives. I understand that the Parliamentary Standing Committee has also examined the Bill and has presented its report to the Lok Sabha.

The Central Government is also in the process of finalising a new National Co-operative Policy aimed at the economic viability and all-round development of co-operatives. The focus of the proposed National Policy would be to promote professionalism and democratisation of operations to facilitate the development of co-operatives as self-reliant and economically viable organisations, providing their members improved access to various economic spheres and bestowing on them the advantages of collective action.

The Union Ministry of Agriculture has been financing education and training programmes for the co-operative sector under a Central Sector Scheme. It is essential to restructure and reorient the existing education and training programmes by incorporating modern management

practices and essential aspects of information technology. Such programmes will strengthen the professional base of the co-operative sector and equip it better to understand the market forces and exploit the opportunities offered by them in an environment of growing liberalisation and globalisation. The Planning Commission has constituted a Working Group on agriculture credit, co-operation and crop insurance under the Chairmanship of Dr. S.S.Sisodia. I am confident that its recommendations would lead to an appropriate and pragmatic strategy for the development of the co-operative sector.

The theme of the present All India Co-operative Week, "Co-operative Vehicle for Social Progress and Women's Empowerment", is apt as the year 2001 has been declared as the Year of Empowerment of Women. I am very happy that co-operatives are making vigorous efforts to involve women and the youth in various developmental activities. The reservation for women in Panchayats and the success of self-help groups have shown that women-folk are quite capable of playing an effective role in various economic and social spheres once they become active participants in the development process.

The National Agriculture Policy states that "mainstreaming gender concerns in agriculture will receive particular attention. Appropriate structural, functional and institutional measures will be initiated to empower women and build their capability and improve their access to inputs, technology and other farming resources." It is worth considering whether one way of furthering these objectives could be to have separate co-operatives for women in each village.

The success of the co-operative movement would largely depend on the commitment, dedication and sincerity of the co-operative leadership in the country. It is for the leadership to accept the challenge of promoting co-operatives as people's organisations. Perhaps, the best way to start the corrective process is to recognise that Panchayats and co-operatives have yet to realise their full potential as examples of good governance, people's participation and planning and implementation at the grassroots. Till that happens the ultimate beneficiary will never get all that was meant for him in the Plan schemes.

I notice from the guidelines circulated for the celebrations of the Co-operative Week that the co-operative fraternity has highlighted awareness about the co-operative policies, co-operative principles, co-operative values, philosophy and ethos through various programmes, exhibitions, debates in various States, districts and blocks of the country.

I hope that the celebration of the Co-operative week at various levels will help in shaping a new co-operative identity relevant to the requirements of the economic order of the day and the needs of the members. I wish all of you who are involved in the co-operative movement every success in your endeavour.

** Valedictory Address at 48th All India Co-operative Week organised by the National Co-operative Union of India (NCUI) in New Delhi on November 20, 2001*

BOOSTING GRASSROOTS INNOVATIONS*

It gives me great satisfaction to learn about the progress made by the National Innovation Foundation within a year and a half of its existence. When we started discussion in the Planning Commission about making India a "Knowledge Society" we were quite conscious of the need to harness knowledge, innovations and practices that common people produce through their own genius. The NIF has provided a much-needed platform to such unsung heroes and heroines of our society who have solved technological problems unaided, through their own experiments and innovations or by drawing upon traditional knowledge reserve in a creative manner.

I compliment the Department of Science and Technology, whose Secretary Prof V.S.Ramamurthy is present here, on establishing the NIF and supporting its activities in such a wholesome manner. The DST has been having several programmes dealing with science and society to ensure that science and technological inputs do not remain confined only to the formal sector but become accessible to the informal sector. The NIF makes it possible for building further bridges between excellence in formal and informal science and technology, which will strengthen both systems of knowledge and innovations.

Dr. Mashelkar, Director General, CSIR, Secretary, DSIR and Chairperson of the NIF is known to be the best champion we have of indigenous creative and innovative mind of India. His vision for the NIF demonstrates what can be accomplished through a society-wide mobilisation strategy. The support of Honey Bee network built over the last twelve years has provided the NIF an ability to jump-start the process of building a National Register of Grassroots Innovations and Outstanding Traditional Knowledge.

Such a register will reduce transaction costs of potential researchers, students, entrepreneurs, investors, not just in India but all around

the world. Already, I am told that entrepreneurs from Egypt, UK and Malaysia have approached the NIF and Honey Bee Network to license grassroots technologies with appropriate sharing of benefits. Voluntary help from IPR lawyers within India and abroad has helped file patents on behalf of some of the winners of the first annual award function. Students from NID, IITs and even MIT at Boston have started working with grassroots innovators to develop better design, technology, business plan etc. It is obvious that the process of value chain augmentation, triggered by the NIF will require much greater help from a large number of S&T institutions in the country. I have no doubt that with the help of DST, CSIR, ICAR and other scientific and technological institutions, the NIF would be able to facilitate larger-scale replication of grassroots innovations. This will help in improving efficiency, reducing drudgery and widening the livelihood options of people. In some cases innovations for energy conservation may help save the energy costs. I am struck by the fact that larger number of innovations has emerged where irrigation pumps driven by human, bullock, diesel or electricity have been improved with a multi fuel option.

The newly enacted Protection of Plant Varieties and Farmers' Right Act would go a long way in protecting the rights of the farmer breeders. Herbal drugs is another category in which awards have been given and hopefully these drugs will help improve the efficiency of health care system for the masses.

I am very happy to learn that the NIF is setting up four more GIANs (Grassroots Innovation Augmentation Network) in different parts of the country to act as incubators for converting innovations into enterprises. The Planning Commission would certainly be interested in keeping track of this experiment so that it could be replicated more widely in the coming years. We require, not just five, but several hundred incubators all over the country to speed up the pace of technological and consequent socio-economic change.

The Planning Commission has envisaged a very ambitious growth target in the next Five Year Plan. We must encourage involvement of

people. We have to release the creative energies of the people and facilitate their being harnessed productively. That is the real significance of the National Innovation Foundation. I am confident that initiatives like that of NIF would boost the confidence of the society at large in its inherent ability to solve its problems through its own initiative, innovation and institutions. It is this spirit of self-reliance that Gandhiji instilled always in the people of India during the freedom struggle. It is a lesson we must never forget.

The NIF team has put in a great deal of efforts in organising the first National Campaign for scouting innovations. I wish it all success in its campaign and hope that it would succeed even more and help in uncovering more and more technological talent of our country. I also hope that there will be progressively more women among the innovators recognised and awarded for their contribution year after year. Thank you.

** Inaugural Address on the occasion of the First Annual Award Function-2001 organised by National Innovation Foundation in New Delhi on November 29, 2001*

RELEVANCE OF TRADITIONAL VALUES IN MODERN INDIA*

I deem it an honour to be associated with the annual Convocation of Visva Bharati. There are many excellent institutions of higher learning in our country. But there is something special about Visva Bharati, for it embodies the creative genius and lofty ideals of its founder, Gurudev Rabindra Nath Tagore, whose hallowed memory lights up the precincts of this campus even today.

I had the good fortune to see Gurudev at a school function in Delhi. Sixty-five years later that childhood memory has come back to me on this occasion. Though all I can now remember is a luminous figure, gentle and serene, the very fact that this memory has survived all these years is a measure of the powerful visual impact of his personality.

The period of our struggle for Independence and the immediate post-Independence era saw an efflorescence of experiments in integrating modern education with our traditional culture and values. This University is an epitome of these efforts. It is a priceless legacy we must cherish and nurture.

The uniqueness of Visva Bharati lies in the fact that it became a medium through which Gurudev's deeply felt humanistic concerns found expression. With tender and loving care, Gurudev made Visva Bharati a crucible of Indian artistic and cultural renaissance. He was, of course, its biggest asset – a towering figure, who dominated and illumined the landscape of Indian literature and creative and performing arts, and whose magnetic personality attracted to Visva Bharati an outstanding galaxy of scholars and artists from different parts of India and the world.

In Visva Bharati we see the many facets of Gurudev's ever-creative genius, as a builder of enduring institutions, a patron saint of the arts, a bold pioneer in the field of education and a nation-builder involved in the rejuvenation and reconstruction of rural India. Neither space nor time could confine the sweep of his vision. He sought to draw strength

from what was best in India's past. But he also understood the need to harness modern science and technology to propel India into a brighter future. He was a world citizen, who actively promoted understanding and fellowship between East and West, between various religions and cultures. He believed in demolishing the barriers of the mind. He made the process of learning a joyful and creative experience leading to the flowering of the talents of the individual. He sought to create a complete being, whole in every aspect—physical, intellectual and moral—compassionate and socially responsible with a deep sense of commitment towards the community, the nation and humanity at large.

He loved Bengal's countryside and most of all the river Padma, which he observed in all its changing courses with a poet's subtle sensitivity to moods. He felt the ennobling influence of nature and took the classroom to the mango groves. His great love for rural folk found expression in the founding of Sriniketan in 1924. Here we see Gurudev's emphasis on the significance of the organic link between education and life experiences. He attempted to give the kind of all-round education and training to village children, which would enable them not only to earn a decent livelihood but also to improve the rural life of contemporary Bengal in all its aspects. One cannot but marvel at his insight, foresight and vision.

The whole concept was based on the promotion of self-reliance and self-help. It is as relevant today as it was then. The Government of India's present philosophy of development is also based on empowering the impoverished, whether through Panchayati Raj institutions or through social engineering legislation.

Perhaps the most important feature of Gurudev's conceptualisation was his recognition that education must be in consonance with national development needs and his identification of rural reconstruction and rejuvenation as a central pillar of a desirable development strategy for the country. These basic concerns remain as valid today as they were in his time.

Another feature of Gurudev's conceptualisation was the convergence of tradition and modernity. But he was selective and eclectic in his approach, as can be seen from these well-known words: "where the clear stream of reason has not lost its way into the dreary sand of dead habit".

India is one of the oldest civilizations of the world. Its journey over thousands of years has been one of triumphs and tribulations, highs and lows, conflict and peace. At the end of it all, India still stands, proud of its unbroken evolutionary history. It makes one wonder as to what makes India so stable and indestructible in a world of constant flux and change. Does the secret lie in certain eternal values – *satya*, *dharma*, *prema*, *shanti* and *ahimsa*— to which India has retained its loyalty over the centuries? It is our good fortune that these eternal values also constitute the bedrock of what the modern world considers as the central concerns of present-day life.

Long ago, our seers extolled the value of *satya* (truth). Very early, they realised that no one person could hold a monopoly over truth. *Ekam sat, vipra bahudha vadanti*. Truth is one, but the wise ones interpret it differently. Thus we started the eclectic tradition in which it was held that all systems of thought lead to the same truth.

That brings me to *dharma* or righteous conduct. *Dharma* is not religion in the sectarian sense. Indian thinkers realised long ago that political power or physical force alone could not uphold the State. The king held power only as long as he followed the path of *dharma*. *Dharma* also governed other human relationships and enabled a human being to have a clear concept of what was good and bad, moral and immoral, worldly and sacred.

The third ideal was that of *prema* – love— the emotional bond that held together the diverse elements within a family or a social group. At a deeper level, however, this love was the logical consequence of the philosophy that all life was essentially one. From this flowed the all-embracing concept of *Vasudhaiva Kutumbhakam* – the whole world is one family.

This idea is entirely consistent with the fourth value of *Shanti* or peace. If there is no stranger in this universe, how can there be conflict? As our philosophers have maintained, if I harm someone I demolish a part of myself.

This attitude to life is also reflected in the fact that *ahimsa* or non-violence is part and parcel of our national ethos. If Indians are true to this unique element in their cultural tradition they will be solicitous

of the welfare of animals and plants and aware of the unitive basis of the material world, which logically leads to preservation of the environment and ecology as a central desideratum of life.

One may note in passing that India obtained her freedom by pursuing the same ancient values and the mighty British Empire was humbled by the non-violent movement led by one of the tallest leaders of our times, Mahatma Gandhi.

How have these great ideals of *satya*, *dharma*, *prema*, *shanti* and *ahimsa* served us? Can there be any doubt that it was these noble truths, again and again reiterated by a succession of seers, rishis, saints, and kings, which led India to its greatness and made it inclusive, receptive and tolerant?

If we look at the history of the last fifty years, again we are struck by the continuity of the past with our present. Thanks to the legacy of tolerance, India took to democracy as a fish takes to water. Today, we are a bastion of democratic values and one of the greatest forces in our region for democracy.

For this we have to thank the resilience of our polity. If there are conflicts of various kinds, some leading to violence like the Naxalite movement, these are symptomatic of the million tiny mutinies spawned by effervescent regional identities, repressed peasantries or disenfranchised dalits. When a democratic system tries to bring about change without violence, the pace is always slower but the progress is surer. After all, you cannot build a modern nation-state out of the debris of your colonial past without a measure of resistance and even pain.

There is, however, one aspect of our colonial legacy, which represents, to my mind, one of the most important challenges facing us even today. And that is the divisiveness that has been engendered in our people through the policy of "divide and rule". The unity of our country demands a re-establishment of our historical ethos. The rich tapestry of India is woven from its numerous languages, religions, ethnic groups and ways of life. Its variety lends it beauty and strength. It is our duty to preserve it.

In the end, I invite you to share with me a vision of the future.

When I look at the next fifty years, I see a prosperous India emerging and taking its rightful place in the comity of nations. I see an India, which is fully capable of defending its borders, a nuclear power committed to peace, a bulwark for a just and co-operative world order. I see an India in which democracy has taken deep roots, in which the disadvantaged sections have been empowered politically, socially and economically. I see an India, which is great in terms of literacy and education with its universities and technical institutions being converted into centres of excellence and professionalism with its manpower making its mark all over the globe, enriching the countries of adoption as well as the mother country. I see a large nation joined together by a network of transport, communication, culture, technology, trade and commerce. I see a people who have material riches but do not consider their worldly possessions to be their greatest achievement— a people who are proud of being civilized human beings, caring, compassionate, tolerant and industrious. I see a nation of Indians who are citizens of the world, yet have not forsaken their traditional values. In short, I see a great and vibrant India in the making. Friends, in the making of this great nation each one of us has to play his allotted role. That role may be exalted or humble but it can never be negligible, for it is the combined effort of all that makes up the glory of the whole. It is my fervent hope that each one of you plays his role to the best of his ability and contributes to the greatness of this nation.

That is the only way to prove worthy of the glorious vision of the guiding spirit of *Visva Bharati*. *Jai Hind*.

* Address at the Annual Convocation of *Visva Bharati* in Kolkata on December 15, 2001

EFFECTIVE MANAGEMENT OF NATURAL RESOURCES*

I am very glad to be here with you at this important Workshop on "Natural Resources Management and Watershed Development Programmes" organised by the Planning Commission. On the face of it, India is endowed with rich natural resources— land, water and bio-diversity. But, the fact is that now these resources are under tremendous pressure. Our per capita availability of land is declining progressively with rising population. It was 0.89 hectare per capita in 1950-51. Now it is only 0.33 hectare per capita. With 16% population, India has to manage with 4% share of global water resource. A major challenge for us is how to conserve and maintain our natural resources and utilise them in a sustainable manner.

The average foodgrains production has now crossed 200 million tonnes. However, its current growth is less than even 1% (TE 2000-01). If everybody had adequate purchasing power, the current volume of food production would hardly be adequate. Enabling the lower 3 deciles of population with adequate purchasing power is also a challenge. We need to take care of both these concerns simultaneously.

A sizeable portion of our arable land, forests and wastelands is highly degraded, which in the present form cannot be utilised productively. As per the estimates of the Ministry of Agriculture, about 107.4 million hectares of our land resources are degraded. However, the estimates of different agencies with regard to degraded land vary widely from 53 million hectares to 239 million hectares. It seems that we don't have a correct assessment of the extent of our degraded land and waste. Statistics apart, it is important that the degraded lands are either improved or reclaimed and then put to economical use for producing bio mass according to its capability. A sizeable landmass is highly eroded, saline or alkaline or waterlogged. About 31 million hectares of the 63.73 million hectares of total forest area are degraded.

About 15.5 million hectares of the so-called forest do not even have any rootstock left for regeneration or are totally degraded and treeless. About 63.8 million hectares of wastelands are lying unutilised or underutilised.

The water resources in the country are unevenly distributed, spatially and temporally. Rainfall is erratic and most of the rain falls in four months of the monsoon season. The problem is compounded by the policies of some States, which have encouraged unnecessary and inefficient use of water, both surface and groundwater. This has led to water logging and soil salinity. The groundwater table has fallen in many areas and the number of dark blocks or areas has increased. The challenge before us is how to conserve and relocate rainwater so that the four months' rainwater can be utilised during twelve months for multiple uses. Rainwater harvesting is perhaps the only option which can push agricultural productivity, create employment and hence eradicate poverty.

The natural resources management and watershed development programmes are being implemented in the country since long. Such programmes were started in the 1950s. Presently, three Ministries—Ministry of Agriculture, Ministry of Rural Development and Ministry of Environment & Forests—are implementing such programmes. Besides, the Planning Commission is also implementing programmes like Western Ghat and Hill Area Development, though on a limited scale. The implementing agencies have been raising their voice, rightly so, regarding lack of coordination and synergy among programmes of different Ministries. The need to have a single national initiative is being felt increasingly. States like Orissa have on their own taken such an initiative at the State level but at the national level the programmes are implemented by different Ministries with different sets of norms.

It has been assessed that by the end of the Ninth Five Year Plan, a total area of only 27.5 million hectares would have been covered under the watershed development programmes implemented by all the Ministries and under the programmes taken up by the States with

external assistance. The reason for the slow progress needs to be identified. Is it inadequate resources? Even the quality of the programme implemented leaves much to be desired because of poor participation of the people. Although the need to give a thrust and accord priority to the development of natural resources is being increasingly felt, we should devise a better cost-effective design as the current schemes do not seem to have delivered as per expectations. As you know, the natural resources programmes have generally remained dependent on assistance from the government. The contribution from the participants has remained negligible except some contribution in the form of labour on their own land. Now the time has come to ensure that the Watershed Development Programme, which hitherto has remained a government programme, becomes a 'People's Programme' with government support. The beneficiaries should also contribute for the development of their resources. Of course, there has to be consideration for the poor, owning small pieces of land and those who do not have adequate resources. This should be an important issue to be considered as the contribution from people can help augment investment and increase the pace of development of degraded land, rain-fed land and help in efficient utilisation of resources.

There is need to have a perspective plan for the reclamation and sustainable development of all degraded and rain-fed lands through watershed development programme. To augment the resources for such an important activity, a credit-linked subsidy programme could be taken up as has been suggested by the Planning Commission for the development of all such lands. There are large areas of unutilised wastelands, which could be allotted to landless and BPL families by parceling them out in units of viable size, for instance two hectares each or so, for agriculture and agro-forestry purposes. This could also help in increasing the tree cover if a condition is laid down that the beneficiaries should utilise at least 50% of the land, after its development, for agro-forestry or tree cropping, with the freedom of felling the trees after they attain economic size or age.

There is also the issue of equity with regard to government assistance and the sharing of the benefits, which may accrue after the

development of a watershed. The benefits of such development programmes have to flow also to the landless families living in the watershed areas, as they are generally dependent on the public land for their bio-mass needs, be it fodder for their cattle, fuel wood, raw material or cottage industry. The equitable distribution of usufruct, especially the water, will ensure the active participation of landless families in watershed development activities. There are several other issues like capacity building of implementing agencies, especially the Panchayati Raj system, attention on the production of bio-mass needed by landless and BPL families, leasing of public land to landless and BPL families for reclamation development, etc.

I hope that the deliberations during this Workshop and its outcome will enable us to formulate concrete recommendations so as to accelerate the pace of development of natural resources, increase the income of rural families by providing them livelihood support and put the unutilised and under-utilised land to optimal use.

** Keynote Address on the occasion of Workshop on "Natural Resources Management and Watershed Development Programmes" on December 21, 2001*

हिन्दी में मौलिक पुस्तक लेखन पर बल

प्रिय अजीत कुमारजी और मित्रों !

मुझे बड़ी प्रसन्नता है कि आज के समारोह में आपने मुझे दो शब्द कहने का अवसर दिया है और उन लोगों से मिलने का अवसर दिया है जिन्होंने आज पुरस्कार और प्रमाण-पत्र प्राप्त किए हैं। आप जानते हैं कि हमारे देश में हिन्दी का जो स्थान संविधान में है वह, चाहे राजभाषा के रूप में देखा जाए चाहे जनभाषा के रूप में देखा जाए, ऐसा है जिससे देश एकता के सूत्र में बँधता है और आज यह खुशी की बात है कि उन प्रान्तों में भी जहाँ किसी समय हिन्दी का विरोध होता था, आज विरोध नहीं है। इसका मुख्य कारण मैं यह मानता हूँ कि हिन्दी स्वाभाविक रूप से बढ़ी है उसका प्रचार-प्रसार एक स्वाभाविक रूप से हुआ है, सरल रूप से हुआ है, उसको थोपा नहीं गया, किसी से जोर-जबरदस्ती नहीं की गयी। सबको अपनी भाषाओं को विकसित करने का पूरा अवसर दिया गया है। इससे हिन्दी का हर जगह फैलना स्वाभाविक था। इसमें हिन्दी में जो फिल्में बनती हैं उनका भी योगदान है, बहुत बड़ा योगदान है। लेकिन जहाँ अभी कमी है वह इस बात की है कि हिन्दी में आज बहुत सारा काम हो रहा है, बहुत साहित्य का सृजन हो रहा है, बहुत सी तकनीकी पुस्तकें भी हिन्दी में निकलने लगी हैं और हिन्दी के अच्छे लेखक, विद्वान आज जगह-जगह से सामने आ रहे हैं। लेकिन, अनुवाद के अभाव में उनकी जानकारी दूसरे अहिन्दी-भाषी प्रान्तों में उतनी नहीं है और मैं यह भी कहूँगा कि हिन्दी-भाषी प्रान्तों में भी उन प्रान्तों के लेखकों के बारे में जानकारी कम है। आज यह एक बहुत बड़ा प्रश्न है कि किस तरह से इतनी सारी भाषाएं जो हमारी हैं, जिसमें इतना एक समृद्ध साहित्य है। बंगाली साहित्य से कुछ हद तक, कुछ लेखकों से हिन्दी साहित्य के जो पारखी हैं उससे वे बहुत अच्छी तरह से जानकार हैं, उसका इस्तेमाल किया है उन्होंने, उसका प्रयोग किया है अपने लेखन में भी। लेकिन, तमिल के कितने लेखक हैं जिनके बारे में हम जानते हैं या मलयालम के कितने लेखक हैं या असमिया के कितने लेखक हैं या उड़िया के कितने लेखक हैं। इसलिए, यह प्रश्न आज हमारे सामने एक व्यापक रूप में है। लेकिन, जहाँ तक आज हमारे समारोह का प्रश्न है, इसका संबंध तो इस

कौटिल्य पुरस्कार से है। इसका उद्देश्य है कि हिन्दी का प्रयोग बढ़े, सरकारी कामकाज में उसको प्रोत्साहन मिले और जो भी इस तरह का मौलिक लेखन का काम हिन्दी में हो, जिसका उदाहरण हमारे सामने है, उसको पुरस्कृत किया जाए। तो, मुझे बड़ी प्रसन्नता है कि आज पुरस्कार देने का मुझे अवसर मिला। जो पुरस्कार विजेता हैं मैं उनको बधाई देता हूँ और आशा करता हूँ कि इसी तरह से वे आगे भी हिन्दी में मौलिक लेखन करेंगे। तकनीकी विषयों पर भी उन्होंने किया है जैसे बायो-गैस पर है, भारतीय नियोजन पर है, भारतीय अर्थव्यवस्था पर है। तकनीकी विषयों पर लिखना आवश्यक इसलिए है कि तकनीकी जगत में आज अंग्रेजी बहुत तेजी से अपनायी जा रही है सारी दुनिया में। हमको फँसला करना होगा कि तकनीकी शब्दों में कौन से शब्द हम नए इस्तेमाल करें। जो विषय आज सामने आ रहे हैं जैसे इन्फार्मेशन टेक्नालाजी (Information Technology) आ रही है या ऐसे कई disciplines हैं जो पहले नहीं थे आज वे सामने आ रहे हैं। हमारे सामने दो रास्ते हैं ३ या तो हम संस्कृत के आधार पर इन नए शब्दों को बनाएँ, बनाना पड़ेगा उनको क्योंकि वे शब्द आज हैं नहीं, जैसे "space" है। "space" के लिए शब्द है लेकिन कई और उसमें से चीज़ें निकलती हैं। मैंने देखा जापानियों ने जैसे अब कैमिस्ट्री में सल्फेट है, सल्फाइड है, सल्फाइड है, यूरिक एसिड है ३ कई ऐसी चीज़ें हैं। अब तो कुछ शब्द हिन्दी के तो हैं, हरेक के उसमें कर सकते हैं और किया है, लेकिन कई चीज़ें ऐसी हैं जिसको कि आज भी अपना सकते हैं। मैंने देखा कि रूस में भी उन्होंने जो नए विषय हैं उनसे कई ऐसे शब्द ले लिए हैं तो उससे जो उन विषयों का अध्ययन करते हैं उनको आसानी हो जाती है या उसमें जो प्रयोग करते हैं, रिसर्च करते हैं उन्हें आसानी हो जाती है। तकनीकी विषयों का यह एक पहलू है जिस पर बहुत ध्यान देने की आवश्यकता है और नियोजन एक ऐसा विषय है और यहाँ योजना आयोग में जो कार्य होते हैं वह करीब-करीब सरकार में जितने काम है या कहिए देश में विकास के जितने काम हैं उनसे संबंधित हैं, किसी न किसी रूप में।

शब्दों की रचना का प्रश्न भी हमारे सामने रहना चाहिए और इसमें कौटिल्य पुरस्कार विजेताओं का अपना योगदान रहेगा क्योंकि हमको उसमें मदद मिलेगी। जब तकनीकी विषयों पर लिखेंगे तो हम उसमें उनकी सौच का भी फायदा उठा सकते हैं। यह प्रसन्नता की बात है कि ऐसा संशोधन इस योजना में हुआ है जिससे योजना आयोग में जो कार्यरत हैं या सेवा-निवृत्त हैं वे भी अब इस पुरस्कार के लिए लेखन प्रस्तुत कर सकते हैं। मैं समझता हूँ यह एक अच्छी चीज़ है लेकिन साथ-साथ आप लोग जो बाहर से आए हैं वह भी एक रिस्ता जुड़ा रहना

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चाहिए। केवल योजना आयोग के लोगों को पुरस्कार मिलें, शायद वह ठीक नहीं होगा, पुरस्कारों की संख्या बढ़ानी पड़े तब भी योजना आयोग से भी और बाहर से भी लोग आएँ और हमारा यह नाता उनसे बना रहे, इसकी आवश्यकता है और इसमें लाम है। मैं फिर आपको एक बार बधाई देता हूँ और आशा करता हूँ कि इसी तरह से हिन्दी के प्रचार-प्रसार का कार्य बढ़ता रहेगा।

उपाध्यक्ष योजना आयोग का "कौटिल्य पुरस्कार वितरण समारोह" के अवसर पर दिया गया भाषण

PROMOTING RURAL INDUSTRIALISATION*

It is a privilege to participate in the Foundation Day celebrations of the National Institute of Rural Development (NIRD). The NIRD is a leading institution of this country, which has contributed immensely to the formulation of development policies for poverty alleviation through its research, training and consultancy efforts. Many of you may be aware that NIRD was set up in the year in which the institutional architecture that underpinned the spread of the Green Revolution in the country was put in place. The NIRD, Agricultural Prices Commission and Food Corporation of India were all set up in the same year, i.e.1965. The contribution of these institutions to agricultural and rural development and to provision of nutritional and food security in the country is widely acknowledged. I am happy that 'Rural Technology for Poverty Alleviation' has been chosen as the theme of the Foundation Day Celebrations.

We are in the process of finalising the Tenth Five Year Plan. Our planning exercise has been facilitated by the availability of data on poverty, based on the 55th round of survey of the National Sample Survey Organisation (NSSO). Though it is heartening to note that poverty in the country has declined substantially over the years, the battle against poverty is far from over, as more than 26% of the country's population continues to be categorised as poor. Nearly 75% of the poor live in rural areas. The incidence of rural poverty is high in drought-affected and desert-prone areas as also in areas dependent on rainfall for agricultural activities. The Scheduled Castes and Scheduled Tribes form the bulk of the poor population and within a family the women are more vulnerable. The Government of India has initiated a number of schemes for diversification of employment opportunities in the rural areas. Many of these schemes have been in operation for over 30 years. In spite of these efforts, the extent of poverty remains a matter of serious concern. The problem of poverty is complex and

multidimensional and its solution requires that we harness and synergise our resources to tackle poverty in its myriad dimensions.

As you all know, in spite of 50 years of planned development, with special focus on development of industry and manufacturing, 59% of our population continue to depend on agriculture. Over 71% of the country's population continue to reside in rural areas. The contribution of agriculture to the GDP is declining continuously while the population deriving its sustenance from agriculture remains stagnant at about 60 per cent. Though the decadal population growth rate during 1991-2001 has dipped below 2% for the first time since Independence, the labour force is expected to grow at a peak level of 2.5% per annum for a few years before declining. Literacy rates have also risen and thereby expectations. A major challenge facing us today is to provide productive employment opportunities to the increasing labour force. The need to rapidly industrialise the rural areas for providing employment and alleviating poverty, therefore, cannot be over-emphasised.

The schemes for self-employment, which involve direct asset transfer, continue with modifications. During the Ninth Plan period, several schemes were merged under Swarnajayanti Gram Swarozgar Yojana (SGSY), which aims at holistic development of micro enterprises. The scheme lays special emphasis on the cluster approach while focusing on organisation of the rural poor in self-help groups. The capacity building of beneficiaries, planning of activity clusters and provision of credit, technology and marketing linkages, are the important components of the SGSY. Programmes of similar nature are implemented by other government departments and development finance institutions. The NABARD, Rashtriya Mahila Kosh, SIDBI and many NGOs have done pioneering work in the promotion of self-help groups. Self-help groups have not only proven to be effective instruments for economic upliftment, they have also provided a vehicle for articulation of the legitimate rights and aspirations of the erstwhile dispossessed. We have to make the self-help movement into a mass movement in the country to empower the rural poor.

Skill development and training of rural youth to enable them to participate in the growth process forms an integral part of the self-employment programmes. The training centres of the Government, semi-government and non-government organisations can be utilised for imparting training. It must be stressed that there should be regular upgradation of the training centres to meet the changing market needs. The trainees should be imparted basic entrepreneurial skills as well. Non-government organisations and community-based organisations have been closely associated with the implementation of the schemes not only for training but also for providing pre-project and post project assistance to self-help groups in setting up micro enterprises. Such collaboration between Government, NGOs and the rural poor needs to be further strengthened.

You may be aware that the incidence of poverty strongly correlates to degradation of land and water resources. The majority of the people reside in drought-prone or desert areas and regions dependent on rainfall for agricultural activities. Augmentation of the carrying capacity of these lands by taking up projects for development based on a watershed approach has been given priority by the Government. The watershed projects emphasise water harvesting and conservation and agricultural practices that are consistent with the soil and climatic conditions of the area and involve active participation of rural communities. Many non-governmental organisations and individuals have done commendable work in the regeneration of degraded lands. Only a fortnight back, we in the Planning Commission had called a national conference on 'Natural Resource Management' to discuss this very aspect.

In spite of all these initiatives, the rural non-farm sector continues to lag behind. Only 16% of the rural population are engaged in the non-farm sector largely in village or cottage enterprises. As per the economic census data, about 77% of rural enterprises belong to "own account" enterprises, which do not engage hired labour. These enterprises are unable to attract capital and technology due to the inherent constraint of being small family-based enterprises. Many of

these rural enterprises use obsolete technology and, therefore, are highly vulnerable to market fluctuations and competition from products of the organised sector. This situation will have to be changed in order to create an environment conducive to the growth of the non-farm sector. Given the inability of agriculture to absorb incremental additions to the labour force, rural industries provide the only avenue for employment generation in the future.

I am of the firm opinion that rural and village industries have immense potential to generate new employment opportunities with relatively low direct investment. They utilise local skills and resources and meet local demand by adoption of simple technologies. Development of this sector would go a long way in preventing migration of able-bodied men to urban centres in search of employment. If sufficiently attractive opportunities for employment are generated in rural areas through rural industrialisation, it will also have a significant impact on agricultural development. Creation of better rural infrastructure under different programmes could raise agricultural productivity; creating in turn surpluses for agro-processing industries. Rural industrialisation would also help in reducing regional disparities through location of industrial units in backward areas.

One of the major shortcomings, which has affected upscaling of the watershed programmes, is lack of trained manpower to take up such projects. I am given to understand that the Director General of NIRD is heading a Committee, which is looking into training and technological aspects of watershed projects. Infusion of technology, suitable to local conditions in our watershed programmes, is critical to their successful implementation and I am sanguine that NIRD would take up this challenge in right earnest. I would only like to mention that considerable wisdom and knowledge exist among our farming communities and that these should be tapped in order to ensure that our interventions are consistent with local geo-climatic conditions.

Technological interventions are also required in the agricultural sector not only to raise agricultural productivity and incomes but also to

facilitate diversification of occupational structure in the rural areas. Agriculture-related activities provide ample opportunities for productive employment and increased incomes. Our efforts to exploit these opportunities, however, continue to lack cohesion and vigour. Dairy development has succeeded in some parts of the country. It needs to be extended to other areas. Similarly, agro forestry can become an attractive economic proposition, if farmers could be exposed to the newer techniques such as tissue culture. Horticulture and fisheries also have potential for increasing employment and incomes. In this regard, dissemination of agricultural technologies developed by the National Agriculture Research System and innovations adopted by progressive farmers assume importance. Efforts will have to be made for improvement in the technology dissemination methodologies to ensure a rapid rise in agricultural productivity.

The programmes for self-employment and wage-employment and schemes for area development have been supported by the creation of rural infrastructure. The Jawahar Gram Samridhi Yojana (JGSY) and the Employment Assurance Scheme (EAS) have enabled rural communities to provide the infrastructure as per their requirements, be it a school building, a panchayat ghar or any other facility that the village may require. The Pradhan Mantri Gramodaya Yojana has carried this programme even further. Rural connectivity has been given greater impetus under the Pradhan Mantri Gram Sadak Yojana. These facilities are expected to help rural communities in their quest for sustainable livelihoods.

The Government has also focused on rural industrialisation by strengthening organisations like Khadi and Village Industries, District Industries Centres and promotion of handloom and handicrafts in rural areas. Under the recently launched rural industries programmes, 100 rural clusters are to be set up in the country to give a boost to rural industries and provide benefits to rural artisans and unemployed youths.

However, rural industries need technology support in areas of research, product development, quality improvement and standardisation. India is fortunate enough to have large research and development facilities

in our national laboratories, universities and other specialised institutions. What is needed is to develop suitable linkages between the rural enterprises and these institutions so that technological assistance can be extended to rural enterprises. Provision of adequate credit to rural enterprises is another major issue that has to be addressed. It is common knowledge that village industries do not get adequate credit facilities from commercial banks or financial institutions. Forty per cent of the total priority sector lending has been earmarked for small-scale and tiny units as per the recent policy guidelines given by the Government. It is expected that this would result in greater flow of bank credit to industrial units in rural areas. Marketing of products is another area requiring attention. In this context, product standardisation, brand name, attractive packaging, competitive pricing and positioning of products will have to be ensured. Even in a situation where these industries face competition from the organised sector, the fact that they use local resources and have generally lower capital and other related costs, should enable them to compete with the products of the organised sector provided they can access appropriate marketing channels.

I had recently chaired a Task Force on 'Development of India as a Knowledge Society', which has come up with certain suggestions as to how knowledge can be used both for wealth generation as well as societal transformation. Only the other day, I was presenting awards to some grassroot innovators – ordinary men and women who by their own efforts were uncovering traditional knowledge and were also able to bring about substantial difference in the efficiency of the production processes that are being used in rural areas.

The NIRD has the resources and the outreach to play a major role in technology transfer to the rural areas. It can build up a network of research institutions, collect information on technologies developed at other rural research centres and technologies propagated by CAPART and facilitate their transfer to rural entrepreneurs. It could also network with the Government and Government-funded institutions and other civil society organisations in this endeavour.

Finally, I would like to say that large sums of money are flowing to rural areas from different Central Government Ministries and Departments largely for the benefit of the poor and other marginalised sections of our society. Yet the impact on the living conditions of our people is not commensurate with the expenditure. The condition of women is a greater cause for worry. I am of the view that the segmented approach adopted by various government agencies is one of the main reasons for the limited impact of government initiatives. We seem to address specific concerns without looking at the larger picture. Science and technology could be harnessed in many ways to improve the lot of the poor. Such efforts, however, will require considerable familiarity with the conditions of life in our rural areas and a great deal of sensitivity to cultural and social dimensions. Technology, which is divorced from the cultural milieu, has little chance of success. This is a dimension, which our R&D organisations are not readily familiar with, and it is incumbent on institutions like the NIRD to bridge the gap. Therefore, I would like to take this opportunity to ask you all, especially the NIRD, to play a broad-based and proactive role in evolving strategies for rural development with a focus on creation of an environment that is conducive to providing sustainable livelihoods for those who are struggling to eke out an existence.

It is my firm conviction that a greater involvement of people in the planning and implementation of our programmes will improve their efficacy. Therefore, I would urge you all to ensure that PRIs are also strengthened and empowered through devolution of funds and functions, as also through training of functionaries and made active partners in the process of development. Only then will we have sustainable economic growth and development of our people.

I wish NIRD all success in their endeavours.

** Keynote Address on the occasion of Foundation Day Celebration of National Institute of Rural Development (NIRD) on "Rural Technology for Poverty Alleviation" on January 2, 2001 in Hyderabad.*

MEASURING POVERTY LEVEL*

It gives me great pleasure to be here with you at the inaugural session of this Workshop on Poverty Measurement, Monitoring and Evaluation. The timing of this Workshop is most appropriate since issues of human development in general, and poverty in particular, have re-emerged as an area of particular focus in recent years after a long period of oblivion. The international community has at long last recognised that poverty and deprivation are matters of concern not merely to national governments but for humanity at large. In this *milieu*, issues of measurement and monitoring of poverty and related matters have assumed great significance.

In India, as you are all aware, poverty has been the focus of our development planning for at least the last quarter century. Even so, reduction in the poverty ratio as a specific target of our five-year plans has found a place only in the Approach Paper to the Tenth Five Year Plan. I would like to touch briefly on the reasons for this inclusion and its implication for policy formulation.

It is well recognised that India has done pioneering work in the field of defining poverty and of its measurement. For fifty years now, we have had an institutional mechanism for collecting appropriate household data. As a result, we have possibly one of the longest continuous time series of estimates of poverty in the world. The measurement of the incidence of poverty has not remained a matter of mere intellectual curiosity but has been translated into an integral part of our planning and development programmes.

Since the mid 1970s, we have recognised that poverty reduction needs to go beyond merely generating sufficient economic growth. There are structural features in our economic system, which prevent segments of our people from taking adequate advantage of the aggregate growth impulses of the economy to better their conditions of living. Thus, targeting the poor specifically has been a part of public policy for

many years now. To this end, we have had a number of specific programmes consisting of direct anti-poverty schemes. We have also recognised that the very existence of such schemes has macroeconomic implications that need to be taken into account within our planning framework. As a result, our planning models specifically distinguish between the consumption needs of the poor and the non-poor.

The implementation of targeted anti-poverty programmes necessarily requires accurate measurement of poverty, not merely at the national level but at sub-national levels as well. The distribution of funds for such programmes must clearly be contingent on such poverty estimates. Although we believe that both the data and the methodology that we use for poverty estimation are reasonably accurate, there is always scope for improvement. It is incumbent on us, therefore, to constantly refine our techniques so that the information on which we base our decisions becomes progressively more accurate. Such improvements cannot come about without continuing research and experimentation. We welcome all efforts in this direction, both within India and abroad.

Although our poverty estimates are reasonably accurate, our understanding of the linkage between growth patterns and poverty are still inadequate. This is perhaps the principal reason why poverty reduction has not been made a specific target in our Plans until now. However, we are today in a situation where it is not enough for us to merely assess our progress on the poverty reduction front in an *ex-post* sense. With the direct role of government in the economy progressively declining, it becomes necessary for us to be able to evaluate the extent and manner to which the growth trends are likely to impact upon the poor. At present, such evaluations are done primarily on the basis of intuition and experience but, useful as they may be, they cannot be substitutes for rigorous theoretical and empirical analysis. The methodological and data requirements for carrying out such analysis are not yet available in any satisfactory manner, and I believe that these are issues which should be taken up for focused research.

The shift in poverty analysis from the purely descriptive to the diagnostic and finally to the prescriptive presents an enormous

challenge not merely to our academic establishment but also to the nature of the data that we collect. Whether our data collection framework is suitable for meeting this challenge is an open question. It appears to me that, as with most other things, changes in the nature of data would need to get reflected in the institutional structure of the data collection mechanism. Since the responsibility for accelerating our growth and development processes is increasingly shifting into the domain of the private sector, the data collection mechanism and dissemination system will have to explicitly take into account the requirements of the private sector so that they can not only cater to their individual needs of decision-making but also to understand the manner in which they fit into the national effort.

In recent years, the concept of deprivation has gone beyond merely economic measures. In the Planning Commission, we have, therefore, embarked upon a process by which poverty eradication in its wider sense can be incorporated into the planning process. The first step in this endeavour is to bring out a National Human Development Report, which is presently at an advanced stage of preparation. One of the factors that was at the forefront of our minds in conceptualising this report was that there is a need to evolve a human development index which can adequately reflect inter-temporal changes and policy-sensitivity in the various dimensions which determine the quality of life. We believe we have succeeded to a significant extent in this endeavour and that our proposed human development index will reflect the changing conditions in different parts of the country more sensitively and accurately than other such indices. No doubt this index will form the matter of considerable debate in the coming years and we will certainly make all efforts at refining it.

But there is another dimension to which I would like to draw your attention. A human development index would really become a useful tool for policy formulation when it can be integrated into the planning framework in much the same manner in which the growth rate of the GDP is used today. To the best of my knowledge there are no successful examples of such integration and most human development indices are used primarily as descriptive statistics. I would suggest that this

too should become the subject of intense research in the coming years. Finally, I have wondered whether we have used the data that we collect as efficiently and intensively as we could. Let me only take the example of our poverty estimates. The volume of data collected is enormous and what is generated in terms of its current use is fairly limited. Surely there must be other uses to which this data can be put, provided we are aware of such uses and are able to provide the necessary statistics in time. How such an improvement in the use of our data can be achieved needs consideration.

I see that this Workshop has before it a most impressive agenda covering some, or perhaps all, of the issues that I have raised. I sincerely hope that the deliberations would shed light on how we can move forward both in improving the accuracy of our estimates and the manner in which we can integrate them with our development strategy. I wish the Workshop all success and I look forward to its proceedings and conclusions.

Thank you.

** Keynote Address at a Workshop on "Poverty Measurement, Monitoring and Evaluation" held in New Delhi on January 11, 2002*

RELEVANCE OF GANDHIJI'S ECONOMIC PHILOSOPHY*

I feel privileged to be with you on the occasion of the launch of a full-time post-graduate diploma course on "Gandhian Strategies in Management". I congratulate the S N Sinha Institute of Business Management and Gandhi Smriti and Darshan Samiti for starting the full-time post-graduate diploma programme on this theme. Management education in this country has been largely modeled on management practices and education imparted in the western countries. There have been some attempts in the past to adapt the western management practices to the realities of Indian situation. The setting up of Indian Institute of Rural Management in Anand is one example, which easily comes to mind. To the best of my knowledge, the ideas of Gandhiji on business and economic organisation do not form part of curricula in any university. This diploma programme would fulfil a major gap.

Gandhiji not only fought for our freedom and Independence but he was also a champion of reforms in social and economic spheres. Political activity was only one of the facets of the Gandhiji's work. I am more fascinated by his attempt to restructure the social and economic life of the country. There has been a general feeling that Gandhiji's ideas have become outdated and lost relevance in the present context. Nothing could be farther from the truth. In fact, the inadequacies of capitalist and communist forms of economic organisation make it imperative that a better system is evolved to structure the economic and social relationship of the people. I would cite only a few examples of his economic and social ideas to indicate how relevant they are even in today's globalised world.

Take for example Gandhiji's views on industrialisation and its relation to employment and poverty. Even after more than 50 years of Independence and planned economic development, over 1/4th of the country's population continues to be mired in poverty. These people do not have income to access to a very moderate consumption basket.

Health, educational facilities and other amenities that are crucial to the well-being of a person are out of the reach of even greater numbers. Unemployment and under-employment are widespread in the country. The poverty has forced people to seek refuge in employment to somehow keep their body and soul together. Gandhiji was very anxious to provide full employment to every able-bodied citizen of the country. He believed that this could be achieved only by organising village and cottage industries in the countryside in an efficient manner. For him any economic planning, which did not fully utilise the idle manpower in rural areas, could not be termed sound or rational. He had said, "to a people, famishing and idle, the only acceptable form in which God can dare appear, is work and promise of food as wage" The ideal of full employment is now widely recognised all over the world.

In the Indian context, the ideal of full employment and sustainable livelihood has been sought to be achieved by a growth process, which is pro-poor and inclusive of provision of basic minimum services including health, education, sanitation, rural connectivity and food security and specifically targeted anti-poverty programmes for self-employment and wage-employment. The Government has sought to promote rural industrialisation. Rural Industries have immense potential to generate new employment opportunities with relatively low direct investment. These industries depend on local raw material and labour force and meet the demand of the area by adopting simple technologies. Rural industrialisation has also been pushed by the Government as a strategy to reduce regional disparities. In spite of promotional measures initiated by the Government, rural industries continue to suffer. Gandhiji's ideal of dispersed rural industries providing employment remains only a dream. Only 16% of the rural population is engaged in village and cottage industry. These are largely family-owned enterprises with little capital and virtually no investment in technology. They are highly vulnerable to market fluctuations and competition from products of the large-scale sector. This situation has to change if people have to be provided meaningful employment opportunities, which provide them enhanced incomes.

Gandhiji gave the idea of trusteeship for business organisation. By propagating an ideal of trusteeship for business organization, he attempted to evolve a comprehensive system of economic arrangement, which eliminated ills of capitalism and State bureaucracy. He was attacked by the proponents of both the Marxist and capitalist schools for propagating this idea. They both thought that it was a smoke screen for supporting the other point of view. Trusteeship in Gandhian philosophy was derived from three basic concepts – non violence, swaraj and equality. All three are interlinked. He was of the view that a society based on non-violence cannot have any other ideal but that of equal distribution of wealth as its long-term objective. Under trusteeship he rejected both capitalism and statism as a form of economic organisations as both were exploitative and based on violence. Trusteeship was in a way a resolution of the irrevocable conflict between labour and capital. With trusteeship, he aimed at coordination between labour and capital in production of goods and services and in ownership of wealth. In fact, his idea of trusteeship was not only relevant to the industry but to the entire economy. It was a method of socialisation and community ownership of wealth.

Though the ideal of trusteeship has not been practised on a large scale, many variants of the theme have come to the force in recent years. The social responsibility of the corporate sector is widely discussed and debated these days. Worker's organisations have stepped forward to take over sick industries. Employee's stock options could be considered a take-off of this ideal. Many industrial houses and industry associations have also expressed their willingness to take up social responsibilities.

Gandhiji lived for Gram Swaraj. For him Gram Swaraj was a practical embodiment of non-violence in the spheres of political, economic and social relations. He had observed, "true democracy cannot be worked by 20 men sitting at the Centre; it has to be worked from below by people of every village". He had further stated that Independence must begin at the bottom. Thus every village will be a republic or a Panchayat having full powers. For him, self-government

meant continuous efforts to be independent of government control whether it was foreign government or a national government. In the present age of world as a village, a parallel process of decentralisation of powers to the local levels has also gathered momentum. In fact, decentralisation is being increasingly seen as counter-poise to the ills of globalisation.

In this regard, Gandhiji's ideas on Panchayati Raj assume greater significance. As you all know, Panchayati Raj institutions have been given a Constitutional status with the 73rd and the 74th Constitution Amendment Acts. These institutions have to be empowered with functional responsibility, administrative support and financial devolution to emerge as true institutions of self-governance. The process of strengthening and deepening Panchayat democracy in the country has had a mixed response. In States like Kerala, West Bengal, Tripura and few others, devolution to Panchayats has been fairly satisfactory. In many other parts of the country, there is reluctance on the part of the political leadership to transfer powers and functions to the Panchayats. Empowerment of Panchayats in all parts of the country is a major challenge, which would have to be faced in the coming years.

Gandhiji devoted a considerable part of his life to awakening and empowering the suppressed classes. His indignation at the social inequity of the Hindu society is well known. The development of oppressed classes was dear to his heart. The scourge of untouchability in his view was the main cause of enfeeblement of India. He had stated, "So long as Hindus willfully regard untouchability as a part of their religion, so long Swaraj is impossible of attainment". The economic and social condition of Scheduled Castes and Scheduled Tribes has received special focus through successive Five Year Plans. Affirmative action by the State in political, economic and social life for these sections has contributed significantly to their economic and social emancipation. We can be rightly proud of our achievements in bettering the living conditions of these sections. However, we have a long way to go before we fulfill Gandhiji's expectations. The bulk of Scheduled Castes and Scheduled Tribes continue to be categorised as poor. Majority of the agricultural labourers in India belong to these

sections. They also lag behind in educational attainments compared to other sections of the society. The inhuman and abominable practice of scavenging still exists in certain parts of the country. We have to devote our energies to the upliftment of our more disadvantaged sections.

The economic and social agenda of Gandhiji continues to be relevant even today. I am told that in many universities in the West ethics is being taught in management courses. This is a welcome development. For Gandhiji purity of means was as important as the attainment of the goal itself. I am confident that the new course that is being launched today would have strong focus on business ethics and it would go a long way in our quest to find lasting solutions to many of the concerns for which Gandhiji fought for and paid with his life on this day 53 years ago.

"Speech at the launch of PG Diploma Course on "Gandhian Strategies in Management" on January 30, 2002 in New Delhi

PRESERVING OUR CULTURAL HERITAGE*

It is a pleasure for me to be here at the inauguration of this two-day Workshop on National Policy for Heritage Conservation and Management organised by INTACH. I find that eminent national and international experts, including those from the Archaeological Survey of India, are participating in this Workshop. I am certain that your deliberations can be counted upon to contribute significantly to the formulation of a policy designed to recognise and conserve our culture and heritage.

It is culture, deeply rooted in a pluralistic ethos, that continues to provide the values and belief patterns that have sustained our society through the ages. It is also the wellspring of creative expression. India occupies an important place on the cultural map of the world. We are justly proud of our rich and varied cultural heritage. Under fundamental duties, the Constitution of India enjoins that "it shall be the duty of every citizen of India to value and preserve the rich heritage of our composite culture". We have, therefore, a special responsibility for the preservation of our heritage. But lack of resources seriously hampers our efforts to conserve the physical manifestations of our cultural wealth. Constraints of space and livelihood opportunities are a source of growing pressure on our cultural and natural heritage sites.

Here, I would like to mention that according to the provisions in the Constitution of India the responsibility for the preservation of monuments, which are declared to be of national importance, vests with the Central Government, directly under the supervision of the Archaeological Survey of India. This is both a strength as well as a weakness. On the one hand, it provides a clear allocation of authority and accountability. On the other, it dilutes the responsibility of the common citizen. I do not believe that it is possible to preserve our heritage through the exercise of the power of the State alone. Until each one of us is imbued with a deep love and respect for the patrimony

left to us by our ancestors and resolves to preserve them for the future generations, we will be fighting a losing battle. A policy, therefore, needs to be prepared to ensure that the archaeological and other heritage sites are preserved and protected as a joint endeavour of the State and citizens. There is a need today to deliberate upon minimum standards for conservation techniques, site presentation, site access, community involvement, site management and promotion of heritage tourism amongst other aspects affecting our heritage.

In the Tenth Plan special attention is being focused on evolving comprehensive plans for preservation of the archaeological heritage and development of the monument complexes and museums in the country. Further, efforts have also to be directed towards the preservation of archival heritage and the promotion of classical, folk and tribal arts, crafts and oral traditions, which are threatened with extinction.

The Department of Culture executes major schemes and programmes of the Government of India for promoting art and culture in the country and its Plan programmes relating to promotion, preservation and conservation of the cultural heritage of the country are being implemented through a network of 34 attached, subordinate and autonomous offices and organisations and cultural institutions under its control. The Department itself executes a number of schemes directly for the promotion and dissemination of art and culture. The Government, on its part, would be prepared to provide the necessary guidance, support and assistance to enable voluntary agencies to undertake appropriate measures for the preservation and conservation of historic buildings, artistic craftsmanship, documentation of cultural and natural heritage etc.

The Department of Culture, in its attempt to build bridges between the past and the present, has often come across varied responses from people. Those seeking security in 'traditional cultures' feel that exposure to other cultures is a threat to the existing patterns and ways of life. They fear the loss or transformation of traditional values. There are others who believe that traditional cultural patterns cannot be preserved when the entire social and economic framework is undergoing change.

These people are stimulated by new challenges, changing and adapting to new ways of life. The management of these challenges would define the manner and context in which support to art and culture will flow from the Government.

In fact, there are three dimensions of culture, namely, national identity, mass media and tangible and intangible heritage. National identity raises a host of questions: Who are we? What is our national identity as Indians? What is our shared perception of history, lifestyles, values and beliefs? These are not questions of mere academic curiosity but serious issues having a bearing on the life and well-being of the nation and its people. Mass media comprises cinema, radio and television besides newspapers. They not only inform but indeed shape our attitudes. Tangible and intangible heritage have several strands and, among other things, include monuments, sites and archaeology, anthropology and ethnology; folk and tribal art; literature, handicrafts, archives, libraries, performing arts including music, dance and drama and visual arts in the form of painting, sculpture and graphics.

These three strands of culture are deeply inter-woven, whether we explicitly recognise it or not. It is the nature of this inter-weaving that we need to consider carefully. Are they mutually supportive? Or do they work at cross-purposes, thereby weakening the fabric? Governmental systems typically tend to work in a compartmentalised manner and that is a serious weakness. It can be nobody's case that the sole responsibility for preserving and promoting our culture and heritage vests in the Ministry of Culture. Surely, other organs of the State also have a role to play. The Ministry of Information & Broadcasting and the Ministry of Environment & Forests come to mind. But there are others as well. Our efforts must involve all of these in a coordinated and mutually reinforcing manner if we are to succeed in our efforts.

I would urge all the institutions, the civil society at large, the Central Government Ministries and Departments, State Government Departments, Panchayats and the private sector to come forward in creating and stimulating awareness among the public for the preservation of the cultural and natural heritage of our country.

I am aware that over the years INTACH has undertaken a number of projects to restore our heritage buildings, which were in danger of major damage and even destruction. I am happy that INTACH has, from its inception, played a leading and pace-setting role in promoting the major objectives of the organisation, which are creation of awareness and advocacy. Through the voluntary efforts of INTACH and its focus on local issues, sustained public opinion has influenced public policy. They have also assisted the Government and local authorities in the implementation of projects and funded small projects by raising contributions through their own initiative. INTACH's catalytic role in matters relating to the preservation of cultural and natural heritage is noteworthy. While generally working with governments, it becomes necessary at times to take a public stand against actions that are detrimental to preservation of heritage. Time has now come for organisations like INTACH to become a people's movement by tapping the body of knowledge developed over the years and go about motivating people and influencing decision makers to promote the cause of heritage conservation. It should play a proactive role and provide the Government with policy inputs, which should reinforce and supplement Government's efforts and initiative in preserving our heritage. I would only urge that its activities are intensified so that all other neglected areas, like listing and documentation of heritage sites, encouraging local crafts persons in their respective skills and preparing a comprehensive database of the buildings of architectural and historical interest in each State are taken care of with a view to preserving and enhancing the heritage of our country.

I look forward to the recommendations of this expert group, which, I am confident, would give practical suggestions that could be considered positively while formulating the national policy.

I have great pleasure in inaugurating this Workshop and wish it all success.

Inaugural Address at the Workshop on National Policy for Heritage Conservation and Management held on February 14, 2002 in New Delhi

EXPORT PROSPECTS FOR SOFTWARE & IT-ENABLED SERVICES

Ms. Rini Suwandi, Hon'ble Minister for Industry & Trade, Republic of Indonesia, Shri Singhal, Chairman, ESC, Shri Kohli, Shri Sareen, our overseas guests, leaders of IT industry; friends from the media, ladies and gentlemen,

It is a matter of great pleasure for me to be here at the inaugural function of INDIASOFT 2002. Here, in this august gathering, I can see many guests from overseas. May I extend my welcome to you all. Your presence here reflects the success of the Indian information technology industry and its entrepreneurs and I hope that you will continue to support our efforts.

This is the second year of the new millennium and the second of the INDIASOFT programmes in India. With the beginning of the millennium, the Electronics and Computer Software Export Promotion Council (ESC) initiated the idea of organising INDIASOFT exhibition and conferences. I congratulate the ESC for initiating this effort. I take this opportunity to assure the captains of the Indian IT sector and our international partners present here that the Government of India is committed to creating and improving a conducive business environment.

The Electronics and Computer Software Export Promotion Council (ESC) is doing impressive promotional work. The ESC has contributed its mite in pushing India's electronics and software exports from US\$ 200 million in 1989 to over US \$ 8.08 billion in 2000-2001. The organisation's global vision has helped Indian electronics and IT exports to reach 130 countries the world over, thereby establishing the hallmark of India's quality and competitiveness. I compliment ESC for all its efforts to realise our Prime Minister's aim of achieving US\$50 billion IT exports by 2008.

I am glad to learn that ESC has been adjudged as the best export promotion council by the Government among the 19 export promotion councils. Also, the ESC has been awarded FIEO's prestigious Niryat Bandhu Award for outstanding export supporting activities consecutively for three years. I assure the ESC that the Government will support its initiatives and its future endeavors to help Indian IT entrepreneurs in accessing the emerging IT markets of the world.

The rapid progress made by the Indian software sector over the last decade is a matter of great pride and high expectations. We confidently expect our software industry to go from strength to strength in the coming years. It is often said that India's advantage in software arises primarily from its large pool of English speaking professionals. While this is certainly true, I believe it understates the real potential of our talent. India, as you know, is a large multilingual country. Most educated Indians are comfortable in at least two languages, if not three and even more. Early exposure to a multilingual environment endows them with the facility to pick up languages relatively easily. I am certain that as markets open up for software in languages other than English, our software industry will be able to leverage our linguistic skills effectively.

The greater challenges lie in developing the requisite domain specialisations. Although some of our universities and institutions of higher education are at par with international standards, it is quite likely that the demands from the software sector may outstrip the ability of these institutions in numerical terms. It is, therefore, imperative that we significantly expand our capabilities for producing highly qualified people in different knowledge domains. We are seized of this problem and efforts are continuously being made to upgrade and widen the ambit of our higher educational system. Insofar as the specific domain and application knowledge is concerned, the greater exposure to international developments that is coming about through our steady process of integrating into the world economy will certainly help matters considerably. Nevertheless, every effort needs to be made

to ensure that Indian professionals in every conceivable field are brought to the frontiers of their subject. Given the potentiality that exists in this country, it would be in the enlightened self-interest of our potential customers and partners to help us in this process.

Software apart, the most exciting areas for the future are in IT and e-enabled services. I would submit to you that India's potential in these areas may be even higher than in software. The software sector necessarily requires a certain degree of mathematical and algorithmic ability, which does place some limitations on the number of people with appropriate skills. The IT-enabled services, on the other hand, are considerably less specific in their requirements. The large and expanding pool of highly educated Indians in diverse fields provides a huge catchment area for this activity. Already, a number of such services have commenced operations from the country and have recorded significant success. Training facilities, which were practically non-existent until just a couple of years ago, have started to come up in different parts of the country. I am confident that in the coming years we will witness tremendous growth in the diverse areas of IT-enabled services, and India will become the preferred destination for investment in these activities.

However, I am quite aware of the fact that our ability to tap the huge international market for software and IT-enabled services will depend largely upon our success in providing the requisite infrastructure, particularly in telecommunications. Even as recently as ten years ago I would have been less than sanguine about our prospects. But the recent developments in our telecommunication sector give me great confidence that telecommunication infrastructure will not be allowed to act as a constraint to the growth of software and IT-enabled services, at least insofar as our exports are concerned.

However, we must never lose sight of the importance of the domestic market. Application of information technology in its myriad forms for improving the quality of life of own people and the efficiency of our enterprises is just as important as the foreign exchange that is earned through its export. There is a great deal of talk about the digital

divide and it is today a reality. Despite the trebling of telephone penetration in the country during the last decade, probably only about 10 to 15 per cent of our people are electronically "connected". Even of these, most have access only to relatively low quality connectivity. With the passage of time, the necessity of broadband connectivity is bound to increase. Unless we can provide such facilities to our people expeditiously, the digital divide will only widen. We are fully conscious of this possibility and the prospects that exist for bridging the gap. We have, therefore, proposed a Convergence Bill, which, among other things, seeks to bring about broadband connectivity through a range of options. Hopefully we will succeed in our endeavour.

A major constraint to a faster growth of our software and IT-enabled services sectors has been want of access to sufficient financial resources. Our domestic financial sector, like most others the world over, is geared primarily to funding the production of physical goods. It looks for physical investment and hard collateral security. The software and services sector, on the other hand, has human capital as its primary asset and is relatively thin on physical assets. Bridging this divide has been a difficult task. Venture capital has not been readily available in the country but there are signs that international venture capital companies have begun looking towards India. This is a trend that needs to be encouraged and I am certain that in the coming years we will also see the emergence of effective Indian venture capital funds. But this is only part of the problem. Services sectors tend to have very high requirements of working capital, which is primarily available from banks. Since collateral-based lending has only limited applicability in these sectors, innovative methods of finance have to be sought. Collateralisation of future income streams has started to gain momentum in India and I believe that as the banking sector becomes more comfortable with this form of financing, the funding problems of the software sector will ease significantly. Nevertheless, there will continue to be problems for the new companies entering into this field. How this issue is best tackled is something to which we still need an answer. I sincerely hope that the deliberations of this conference will suggest new and innovative methods by which the

financing requirements of our software and IT-enabled services can be met.

In order to expand the domestic market base and to bring the benefits of IT to the common man, the Indian Government has decided to accelerate the process of incorporating IT into government functioning. Most of the State Governments in India have earmarked about 2 to 3% of their annual budget for IT spending in order to spread the IT culture to cover a cross-section of the civil society. In this regard, the Government's initiative on e-governance in rural development and in establishing a direct citizen-IT interface merits special mention. One can see a futuristic trend of an ever-increasing role of IT in local and rural governance, which in turn will provide tremendous opportunities to the companies establishing a manufacturing base for PCs in India.

Friends, India lives in villages and we want our villages to be as well equipped and wired with all technological advancements as our cities. If we really want India to be developed then we will have to ensure the development of our rural areas. Our Prime Minister is keen to uplift the rural sector in all fields and I feel that if any technology can help to speed up the development process, it is information technology.

I hope that INDIASOFT 2002 will provide a good platform for forging global alliances and networking of thoughts.

With these words, I inaugurate the Conference and wish it all success. Thank you.

** Inaugural Address at INDIASOFT - 2002 organised by the Electronics and Computer Software Expert Promotion Council (ESC) on February 20, 2002 in New Delhi*

WOMEN EMPOWERMENT THROUGH GENDER BUDGETING*

It gives me great pleasure to be with you all today to listen to the views about an important and emerging concept of 'Gender Budgeting', which is very crucial for fulfilling our promise of empowering women of India.

I deeply appreciate the efforts of the Parliamentary Committee on the Empowerment of Women in organising this Workshop and for providing an opportunity for the women parliamentarians to understand more about budgets with gender perspectives.

As you have heard, the nodal Department of Women & Child Development, in collaboration with UNIFEM, Delhi has taken the initiative of starting a gender budgeting exercise of the Annual Plan of 2001-02 and entrusted the project of implementation of National Gender Budget to the National Institute of Public Finance & Policy (NIPFP) New Delhi. The already completed first phase of the Project viz., the pre-budget assessment on the status of women in India provided inputs for inclusion of an exclusive section on gender inequalities in the Economic Survey for the year 2001-02. I hope that this exercise will continue in future with much more meaningful analysis of the gender perspective of the budget and its impact on the status of women. I also understand that the Department of Women & Child Development is also making an attempt to analyse the budgets of all States and Union Territories, while the NIPFP will soon bring out the results of the second phase of the Project, which is the post-budget analysis of the Union Budget for the year 2001-02, besides completing the analysis of the State Budgets in three selected States. These are indeed important initiatives.

Now, coming to the specifics, gender budgeting, as we all know, does not imply a separate budget for women *per se*. In fact, it is an exercise

of analysing the general budget from a gender perspective. Thus, the major objective of gender budgeting is to improve the analysis of the budget in terms of more effective targeting of public expenditure and revenue towards women and to offset any undesirable gender-specific consequences of previous budgetary measures. It is therefore an enabling process to allow women to enjoy their rightful share in the socio-economic development of the country.

May I submit to you that a meaningful gender budgeting exercise can happen only when our official accounting methods explicitly capture the gender dimensions of our expenditure patterns? In other words, gender budgets must be rooted in hard data generated by the delivery system and not on any a-priori assumptions or rules of thumb. The alternative is to make specific allocations for women-centric programmes and assume that all other expenditures would go primarily to men. This approach no doubt has validity as a transitional arrangement and our Women's Component Plan rightly falls into this category. Over the longer term, however, this approach runs counter to our basic objective of mainstreaming the gender dimension in government programmes.

Mainstreaming the gender dimension in Government programmes does not mean making them less gender sensitive. This underlines the importance of collection and flow of the necessary data related to the impact of the programme. Such information will have two significant benefits. First, it would enable us to formulate budgets on the basis of realistic ratios regarding the flow of benefits. Second, and more important, it would enable us to assess the degree of gender bias in each programme. This would be extremely valuable for redesigning the guidelines and modalities of implementation to make our various programmes more gender sensitive.

Let us, however, be under no illusion. Introducing gender accounting will not be easy. In the first place, it does involve an increase in the workload of the government functionary, which is likely to be resisted. The more difficult problem is that often it is very hard to clearly identify who is the ultimate beneficiary. In such situations, the

knowledge and motivation of the government functionary becomes critical. Whether the average government functionary is sufficiently sensitised to the importance of this task will ultimately determine the accuracy and validity of such an exercise. I am afraid that mere exhortations or routine office orders are unlikely to have the desired effect. The role and attitude of the elected representatives of the people is central. I would therefore request you to think about this issue very carefully so that we can together develop a suitable and effective modality for gender budgeting.

Having said this, let me take stock of where we stand. I would like to mention here that there is a general impression amongst the public as well as some experts in this field that the budgeting process in our country is gender neutral and almost all the programmes are composite ones for both men and women without being gender sensitive in terms of benefits and expenditure. This perception is not true. India, as you have probably learned, is one of the few countries, which have in a very defined manner formulated gender-specific policies and programmes with adequate budgetary support. Our Budget, as you all might be knowing, has been very responsive to the gender needs right from the beginning, not only in shifting the development paradigm from "welfare" in the Fifties to "development" during the Seventies and to "empowerment" in the Nineties but also in enhancing Plan outlays for gender-targeted programmes from Rs. 4 crore in the First Plan to Rs. 7810 crore in the Ninth Plan.

Further, as you might be aware, the concept of gender budgeting is also not a new one in India, although perhaps we have not termed it as such. We had initiated a few concrete steps in this direction as early as in the early Nineties, when the Eighth Five Year Plan made a policy commitment to ensure that "the benefits of development from different sectors do not by-pass women and special programmes are implemented to complement the general development programmes". It further stated, "The latter in turn should reflect greater gender sensitivity. The flow of benefits to women in education, health and employment need to be monitored". This was further followed up in the Ninth Plan by announcing a landmark strategy of 'Women's

Component Plan', re-affirming the earlier commitment, which directed that both the Centre and the State Governments should ensure that not less than 30% of the funds and benefits is earmarked in all the women-related sectors. It also suggested a special vigil to be kept on the earmarked funds and benefits through an effective mechanism to ensure that the proposed strategy brings forth a holistic approach towards empowering women.

You will be happy to know that this commitment of the Ninth Plan has already begun to show positive results in the flow of funds and benefits to women under various Ministries and Departments. Information collected as a follow-up from various Ministries and Departments reveals that there is a quantifiable flow of funds and benefits to women from 16 Central Ministries and Departments within a range of 25 to 70 per cent of their total budgets. While the Department of Family Welfare stands with the highest ranking of 70%, the Departments of Health and Indian Systems of Medicine and Homoeopathy stand with 50%, the Department of Education with 50%, the Department of Rural Development with 30-50%, the Department of Urban Development 30% and so on. Apart from the above tangible benefits, the Women's Component Plan has definitely generated considerable awareness among the planners, policy makers, administrators and financial managers in the Government set up.

In fact, the Planning Commission has also done a follow-up exercise in identifying the schemes and quantifying their outlays in the Ninth Plan under various Central Ministries and Departments, which can be flagged under 'gender budgeting'. The outcome of this exercise is quite encouraging as the total amount allocated under various developmental programmes catering to women in the Ninth Plan stands roughly at Rs.51,942.53 crore, which accounts for about 42.9% of the gross budgetary support of those women-related Ministries, which is much higher than the accepted share of 30% for women. When it comes to the share of women in the total GBS of all Central Ministries and Departments in the Ninth Plan, it comes down to around 25.5 per cent. No assessment could be attempted in the State Sector as there is no data readily available.

Thus, already there exists a definite flow of funds with a gender dimension from various developmental sectors. It is necessary for all of us to think at this stage as to how best we can make use of these funds for empowering women. Although important, it is not the quantum, nor the percentage of outlays, which really matter for gender budgeting. What one should look into is how to ensure that the funds already flowing for the good of women is effectively converged, efficiently utilised and better monitored through a systematic process of identifying the existing gaps in the services and facilities available and ensuring adequate resources to fill those gaps.

There are still a number of gaps, which need to be addressed, namely the increasing burden of poverty on women, inaccessibility and unequal access to health, family welfare and educational services, inequality in access and control over assets and resources both within and outside the family, inequality and inaccessibility to work, employment and decision-making, violence against women including domestic and otherwise etc. Some of these can perhaps be addressed through a larger flow of resources but there are many other effective actions, such as introducing affirmative policies, women-supportive legislations and regulatory measures, which need to be taken for effectively empowering women. For example, one single action of amending the Constitution to provide reservation in Panchayats and Local Bodies has brought a sea-change in empowering women by bringing them around to enter into the grassroots democratic institutions as leaders and as decision-makers. Therefore, it is necessary for all of us to give serious thought at this most critical juncture as to where to strike a balance, especially considering the present-day budgetary constraints that the country is facing.

From the current year the Department of Family Welfare will fund salaries of all the 1.4 lakh auxiliary nursing midwives in the country. The States will take over the funding of Rural Family Welfare Centres, which have been functioning as a part of primary health centers. This step will streamline the functional units and improve efficiency. It is expected that these will ensure improved coverage under immunisation, antenatal and child health as well as contraceptive care and enable the country to reach the goals set for reduction in infant and maternal mortality as well as population growth.

A National Policy for the Empowerment of Women has been adopted by the Government, which will integrate women's concerns and perspectives into all macro and micro-level initiatives. This Policy reiterates our commitment to the hopes, aspirations, needs and visions of women. Ensuring the participation of women in the development process on equal terms with men, mainstreaming women's perspectives, eliminating all forms of discrimination against women throughout their lives, creating equal capabilities and opportunities for women, changing the social mindsets and discarding stereotypes, which perpetuate discrimination, are the goals of the Policy. The National Development Council will review at its meetings all the programmes and targets on the basis of gender disaggregated data to be compiled by the Planning Commission, thereby ensuring flow of adequate funds for programmes undertaken for women in various sectors.

The Integrated Child Development Services launched in 1975 aims to promote holistic development of children below 6 years and the expectant mothers through supplementary nutrition, immunisation, health checkup, referral services, informal pre-school education and health and nutrition education. The ICDS is presently in operation in over 5000 blocks to benefit around 30 million children and 6 million mothers. The ICDS delivers the services for women and children by women through a single window of grassroots-level institution of Anganwadi Centres manned by Anganwadi workers and Anganwadi helpers. It has now been decided to universalise this service in all blocks of the country by the end of Ninth Plan. It has also been decided to raise the honorarium of Anganwadi workers and Anganwadi helpers. This will go a long way in improving the delivery of services through these functionaries because they are one of the visible government functionaries at the village level, whose services are being made use of by both governmental and non-governmental organisations working for the well-being of children and mothers.

BIOTECHNOLOGY & ECONOMIC DEVELOPMENT*

Over the past two decades new advances in frontier technologies such as information communication technology (ICT), biotechnology and new material sciences have thrown up many challenges not only for the science and technology experts in developing countries but also for policy-makers. Growth in biotechnology, in particular, has raised several hopes about its potential on the one hand and anxieties over its implications on the other.

At this point, almost all the developing countries have recognised the recent advances in the field of biotechnology and the possible economic advantages that could flow from them. A large number of countries have already set up an elaborate institutional infrastructure to develop and diffuse this premier technology at various levels of agricultural and industrial production.

In the field of agriculture, biotechnology has given new tools for effectively ensuring food security for the developing countries. Several of these tools are being widely explored. This has become more relevant, especially as the Green Revolution varieties, widely used since the late sixties, seem to have reached a plateau in terms of crop productivity. In order to protect and increase agricultural productivity, more sustainable agricultural techniques have been introduced, including conservation agriculture to conserve soil and water while reducing time and labour in land preparation, consuming less fuel and reducing the need for chemical inputs.

Another major success has been the development and adoption of integrated pest management techniques that have contributed to sustainable agricultural intensification while minimising the negative environmental impacts. By reducing the need for pesticide applications through the use of pest-resistant crop varieties, natural enemies and cultivation techniques, integrated pest management has increased the

sustainability of farming and ecological systems at minimal cost. Another important challenge before policy formulating agencies across Asian countries is to create avenues for integration of traditional techniques like breeding processes and modern technologies for optimum economic gains.

In the field of medicine and pharmaceuticals too the potential of biotechnology is immense. Whether it is preventive, curative or drug delivery systems, I believe, there is a revolution in the offing. Surgical procedures and organ transplants may be easier and more affordable in the future with biotechnology techniques.

Biotechnology also offers new opportunities for global partnerships, especially between the countries rich in biological resources, which include genetic resources, but lacking the expertise and investments needed to apply such resources through biotechnology and the countries that have developed the technological expertise to transform biological resources so that they serve the needs of sustainable development.

The success of the fourth ministerial meeting of the World Trade Organization (WTO), held in Doha in November 2001, in putting development at the centre of further trade negotiations, augurs well for the future of the trading system and the potential it offers to developing countries. One of the important issues, which would be taken up at the next WTO Ministerial Meeting pertains to labeling of the genetically modified organisms (GMOs). This issue has attracted diverse opinion and has also generated a vigorous debate. In the next few months this issue would be addressed at various international fora. In this context, the developing countries would have to do a lot of homework and prepare themselves for an emerging regulatory regime so that the trade interests of the developing countries are not adversely affected. Moreover, one would also have to see compatibility between WTO trade agreements and commitments at other international fora. For instance, the Cartagena Protocol refers to advanced informed agreement while the agreements on sanitary and phyto-sanitary measures (SPS) and technical barriers to trade (TBT) at WTO still

have to create scope for such provisions. Most developing countries have yet to pass adequate legislations in this field of bio-safety. I believe that they all need not only technical support to identify genetic manipulation but also need financial support to upgrade their quarantine and other agencies to meet these challenges. In this regard cooperation among Asian countries becomes very relevant.

In August this year the international community would meet at Johannesburg at the World Summit on Sustainable Development. This would bring together thousands of participants, including Heads of State and Government, national delegates and leaders from non-governmental organisations (NGOs), businesses and other major groups. They would focus the world's attention and direct action toward meeting difficult challenges, including improving people's lives and conserving natural resources in a world that is growing in population, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security. As you all are aware, at the 1992 Earth Summit in Rio the international community adopted Agenda 21, an unprecedented global plan of action for sustainable development.

The report from the Secretary General for the Johannesburg Summit has rightly raised the concern that the financial resources required for implementing Agenda 21 have not been forthcoming and mechanisms for the transfer of technology have not improved. Since 1992 official development assistance (ODA) has declined steadily, the burden of debt has constrained options for poor countries and the expanding flows of private investment have been volatile and directed only at a few countries and sectors. Therefore, at this point, it is very important to evolve mutually coherent policies or approaches in the areas of finance, trade, investment, technology and sustainable development.

I would like to recall that Agenda 21 advocates various mechanisms to support access of developing countries to biotechnology and their rights over their own genetic resources. In this regard Article 19 of Convention on Biological Diversity (CBD) becomes very relevant. It says, "Each Contracting Party shall take legislative, administrative or

policy measures, as appropriate, to provide for the effective participation in biotechnology research activities by those Contracting Parties, especially developing countries, which provide the genetic resources for such research". It is against this background that I look forward to the deliberations and recommendations of these Conferences with great expectations.

I am very glad that RIS has thought of extending its focus of work on biotechnology so as to involve Asian countries in a policy dialogue. The RIS has a strong background of research and analysis in this field. It was way back in 1988 that RIS brought out a seminal volume titled "Biotechnology Revolution and the Third World: Challenges and Policy Options". Subsequently it launched the RIS Biotechnology and Development Review in 1992, which now has been re-launched as Asian Biotechnology and Development Review (ABDR). I hope that ABDR would act as a forum to deliberate on policy challenges before Asian countries in terms of governance, financing and adoption. While doing so, adequate insights from experiences of other regions and countries may also be harnessed, so as to make diffusion a cost-effective process.

I am sure that the scientists and policy makers, who have gathered here from different countries and different parts of India for this conference, would not only come out with policy-relevant recommendations for different public agencies but would also evolve a strong network of Asian institutions to regularly interact on various intricate issues pertaining to biotechnology.

"Inaugural Speech at International Conference on "Biotechnology and Development: Challenges and Opportunities for Asian Region" held on February 26, 2002 in New Delhi

ROLE OF VOLUNTARY SECTOR IN NATION BUILDING*

Dr. Swaminathan, Ms. Susan Berresford and other members and partners of NFI,

I am happy to be here today on the occasion of the 10th anniversary of the National Foundation for India. The ten-year track record of NFI is full of achievements and I am sure this good work by the dedicated team of NFI will continue in the coming decades. No country can progress without the active involvement of its people in the tasks of nation-building and development.

At the time we got our Independence in 1947, given the backdrop of 200 years of colonial domination and the disruption caused by partition, the focus of the Government then functioning was on the implementation of law and order and on regulation and control. With the planning process put in motion, a significant shift took place in the Government's goals and priorities. Development and welfare of the people came into focus. It was realised that the economically and socially marginalised, disadvantaged and deprived sections of the society needed attention. Poverty alleviation, literacy, health, nutrition, population control and general well-being of the people were the priorities.

The Planning Commission, which was set up in 1950, attempted to address these issues through various Plan schemes in successive Five-Year Plans. The magnitude of the task was mind-boggling. It was realised that the Government alone could not undertake and implement all the development schemes. It needed the help of other organisations so that the outreach could be expanded and the benefits of the welfare schemes percolated to the most needy people of our society.

Right from the First Five Year Plan it was recognised that public co-operation and public opinion constitute the principal force and sanction

behind planning. A democracy, working for social ends, has to base itself on the willing assent of the people and not the coercive power of the State. But the will and desire of the people need articulation beyond the standard political processes of a democracy. They must be manifest in each of the many dimensions that constitute our social existence. For this to happen there must be organisations and institutions, which effectively project and bring to reality the aspirations of the people. Today such organisations are known by various names but by what name we call them does not really matter.

Voluntary organisations, non-governmental organisations, civil society organisations or self-help groups are contributing significantly to the development process in diverse settings. Dedicated people from different walks of life have joined together to form associations or societies and they have not only spread the message of development but have also assisted people to achieve their objectives in innovative ways.

Several private trusts and foundations have come up to cater to the various needs of society. Among them could be named the National Foundation for India, which emerged in 1992 under the able stewardship of one of our top-ranking nation-builders Shri C. Subramaniam with the aim of mobilising public opinion and generating resources for supporting developmental action.

The Founders of NFI recognised the right of every Indian to lead a life of dignity and self-respect in a just and equitable society. However, unlike many other organisations, which focus their efforts on sectoral programmes, this Foundation, I am told, supports long-term development initiatives designed to respond to the felt needs of the people. The Foundation recognises that the process of development is as important as the outcome. Within this framework, the NFI is committed to working towards a synergy of different inputs as a necessary ingredient of a people-centred development strategy.

Based on the above mission and objectives, I am pleased to note that the National Foundation for India has identified four core areas for

support. These are gender equity and justice; public affairs and urban governance; remedying regional imbalances; and development communications. In the area of gender equity and justice, I am glad to note that NFI's role in arresting the trend of female infanticide and foeticide in Tamil Nadu and Bihar has been widely acclaimed.

Voluntary organisations have done yeoman's service in times of natural disasters like the Gujarat earthquake and the Orissa cyclone, particularly with the help of a large number of volunteers. It is unthinkable how the stupendous task of rehabilitation could have been done without the active support of these organisations and volunteers. However, I feel that the voluntary sector has to play a much larger role in the nation-building process in the coming years. Two areas in particular come to mind. These are (a) population stabilisation in the regions identified for high fertility and (b) promoting peace in regions affected by terrorism and ethnic strife. I know that some of you are already doing pioneering work on these issues and I look forward to information on the innovative steps taken in these two areas and any other suggestions you may like to make.

To create an enabling environment for the voluntary sector to collaborate with Government, a number of steps have been taken recently by the Government. As most of you are aware, the Planning Commission has been declared as the nodal agency for the interface between government organisations and non-governmental organisations in the year 2000. This step was needed to have a focal point from where an integrated and holistic view of the voluntary sector could be taken. The first task taken up by Planning Commission, as the nodal agency, was to build a comprehensive database on the NGOs. The NGO database, available on the web site of the Planning Commission, provides information on NGOs getting funds from different Departments or Ministries. It also has a list of NGOs considered as good or valid by various bilateral, multilateral and intermediary agencies. Information on allocation and expenditure through the voluntary sector during the Ninth Plan by various Departments and Ministries is also being put on the website. A study

titled "Voluntarism and Government—Policy, Programme and Assistance", supported by the Planning Commission and put up recently on its web site, provides information, guidelines and formats of almost all schemes being implemented by the Government through the voluntary sector. The NGO database is continuously being updated to provide useful information on, and to, the voluntary sector and the Government.

As you may be aware, a Steering Committee on the Voluntary Sector was constituted for the Tenth Plan. The NFI was one of the members of this Steering Committee and contributed significantly to its deliberations. The Report of the Steering Committee has been finalised and is now available on our web site. I understand that NFI is already taking initiatives related to some of the issues considered by the Steering Committee.

It has been observed in the Approach Paper to the Tenth Plan that in many States there are hospitals, dispensaries and school buildings but without the concerned personnel and teachers, who remain absent. To rectify these anomalies and to achieve the targets set out in the Tenth Plan, the need to promote involvement of the voluntary sector has been recognised. In the words of the Approach Paper to the Tenth Plan, "In view of the continued importance of public action in our development process, increasing the efficiency of public interventions must also take high priority". The essential requirement for this is good governance.

In this context, I am glad to see that in order to encourage partnership in local governance and to promote the spirit of volunteerism the NFI is conferring two awards. One is called Award on Partnership in Local Governance and the other is Acharya Vinoba Bhave National Award for Volunteers. Such awards act as an incentive for constructive social action. I congratulate the awardees and wish them well.

The voluntary sector has to contribute to systematic building of institutions at various levels, strengthening of present institutions and facilitating new and viable ones, wherever needed. In the process, it has to overcome its weaknesses and challenges. It has to be seen to

adopt and adhere to the best standards of governance, based on the principles of transparency and accountability.

The subject of validating or accreditation of NGOs is getting a lot of attention nowadays. It would be in the interest of the voluntary sector itself not only to evolve best standards but also to help actively in separating the grain from the chaff.

I understand that the Ford Foundation was the moving spirit behind the setting up of this Foundation. I am happy to note that the Ford Foundation's partnership with NFI is continuing and growing. The presence of Ms. Berresford today is illustrative of this enduring partnership.

The Foundation has grown in stature and eminence under the able chairmanship and guidance of Dr. Swaminathan. It stands today as a leading, professionally managed, philanthropic organisation, which can be proud of its achievements. I hope that the National Foundation for India will grow from strength to strength and wish it all success in the years to come.

I understand that as part of the 10th anniversary celebrations of NFI a two-day Workshop has been planned to discuss various development issues. I am confident that the deliberations of the Workshop will help you and your partner organisations to charter a new and dynamic course of action measuring up to the ever-growing challenges and responsibilities of a people-centric development strategy.

With these words, I wish the NFI team all success. Thank you.

** Address as Chief Guest on the occasion of the tenth anniversary function of the National Foundation for India (NFI) held on March 4, 2002 in New Delhi*

APPLICATION OF I C T FOR E-GOVERNANCE*

Dr. Murli Manohar Joshi Ji, Hon'ble Union Minister for HRD, Shri Sanjiv Goenka, President, CII, Shri Tarun Das, Director General, CII, leaders of industry, eminent thinkers, our overseas partners, friends from the media, ladies and gentlemen,

It is a matter of great pleasure for me to be here with you at the inaugural function of the Seminar on "ICT Applications in Education, Health, Governance & Social Infrastructure" for enhancing the Human Capital Index. The revolutionary impact of technological advances in information and communication technologies (ICT) on the quality of human life is well recognised globally. I compliment the Confederation of Indian Industry and its co-sponsors for having chosen a theme for the Seminar, which is of particular relevance at the present phase of the development of information technology. Widespread and rapidly growing use of modern telecom facilities by people everywhere has minimised the limitations and constraints of time and distance in human life. However, the degree of penetration of ICT in societies varies from nation to nation, depending on its stage of development and availability of technical professionals. India has experienced exponential growth in ICT in the last decade, thanks to our scientific professionals, educational and research institutions, good physical infrastructure, our international partners and progressive policies.

Generally speaking, technological penetration in most countries has to overcome the barriers of high cost, lack of awareness and absence of customer education. However, in the case of India these issues have been addressed to a large extent in the telecom sector after the implementation of the National Telecom Policy 1999 and massive expansion of the infrastructure. Even so, one issue, which will remain in the public eye, is that of affordability of different applications of information technology.

The ultimate objective of any technology is to improve the quality of life. Raising the Human Capital Index through various means is the need of the hour. In a civil society, broadly, the key indicators of development are health, education, social and civic infrastructure, environment, sound economy and quality of governance. The Planning Commission is very much concerned with these vital issues and has accorded priority to these sectors in the Tenth Five Year Plan. However, it is our collective responsibility to put in the extra effort essential to enable all our people to attain a minimum standard of life.

In the new millennium knowledge will dominate. The new technologies acquired through knowledge will play a key role in improving human skills. Increasing use of ICT in education has improved the learning process and enhanced the competency level of students. Distance and online education are gaining greater acceptance. According to an estimate, the IT-based education and the e-learning market across the globe are projected at US\$ 11.4 billion in 2003. More than 1,600 companies, including nearly half of the Fortune 500 ones, have built corporate universities. Nearly all of them have gone virtual, offering at least some classes online, primarily through the Web, but also via video-conferencing, CD-ROM and other technologies. In India too, online education is showing marked potential.

The quality of e-learning will have to be intensified through a combination of technology, relevant course content, institutions and cost-effective delivery management system. Other critical issues in adopting IT-based education are the shift from teaching to interactive learning and the training of teachers in new ways of teaching. Accreditation of courses at par with formal courses is also an equally important aspect in popularising e-learning.

Keeping in view the importance of promoting ICT-based education, the Tenth Five Year Plan will see the Government pursue the projects "Gyan Vahini" and "Vidya Vahini", which are networks designed to provide connectivity to senior secondary schools and upgrading the IT infrastructure at higher learning institutions. The goal is to have an integrated voice, data and video network extended to every school

and educational institution to enable students to acquire multifaceted basic skills to manage information and communicate. A pilot project in this regard is likely to be taken up soon. I invite our private sector to suggest ways and means of funding and implementing this major project.

I now turn to health, which is an important index of a good society. Applications of ICT at individual level and in hospitals in diagnosing illness and in providing quality treatment is well established and well accepted. But wider use of ICT in community health support system has little penetration. The ICT applications have the potential to support health care services including the dissemination of information about epidemics and preventive measures, data collection and analysis and training of community health workers. Traditional electronic media should play a more significant role in spreading health education, training and awareness in the society. Options for adopting higher technologies in community health care including telemedicine will have to be evaluated in the light of their practical significance.

Friends, the Approach Paper of the Tenth Plan has noted the deterioration in the governance process. The Planning Commission has identified e-governance as a thrust area in the Tenth Five Year Plan. We have asked all government departments at the Centre and States to incur 2 to 3 % of their budget on information technology. In fact, development is an outcome of efficient institutions rather than the other way round. Good governance has entered the development lexicon even though how to achieve good governance remains a debatable issue. The government system should not only be administration-oriented but must also be sensitive to the views and perceptions of the citizens they are meant to serve. Good governance must aim at increasing efficiency by doing away with multiple layers. Too much discretion at every level, lack of transparency and accountability and cumbersome record management make the system totally user-unfriendly. Use of ICT can have an immense impact on the quality of services that the government delivers to its citizens and can also demystify the procedures making them citizen-friendly.

E-governance promises to bring about "Simple, Moral, Accountable, Responsive and Transparent "(SMART) governance. Here, I feel that e-governance is not a matter of technology alone; rather it is more a matter of re-engineering of the procedures and rules and change of mindset. Effective technological solutions to provide a variety of services are available and the need is to put those in the system on a reliable infrastructure.

A master plan of e-governance has to be guided by the following:

- Any plan or scheme for e-governance should have sustainability and it should not be a mere novelty at government expense only for the sake of doing something that is in fashion.
- Areas of public and private funding and revenue raising and sharing models should be clearly spelt out.
- Interactivity must be built into all schemes of e-governance, as otherwise it will remain only a labour saving device for the government functionaries.
- In the matter of e-governance, G2G (government-government), G2C (government-citizens), G2B (government-business) functionalities have necessarily to be developed.
- Active participation by States depending on their needs must be ensured.

There are three broad issues in implementing e-governance and these are technological, managerial and funding. While the technology issues are being progressively tackled, the managerial issues, which are very important, can only be resolved by a strong commitment at the top. Regarding funding, there could be very laudable objectives and ambitious work plans but these have to be weighed in terms of available resources. The ongoing projects can be made more cost-effective and value-effective with the use of ICT in a modulated fashion without any critical incremental costs. The Government and the private sector will have to work in harmony to utilise the resources in an optimum manner and provide value-added services to the citizens.

As you know, in the last one decade India has matured into a preferred IT outsourcing capital of the world. We are exporting computer software to more than 130 countries the world over.¹ In the telecom and broadcasting sectors our infrastructure and competence are equally excellent. Public perception is that we should increasingly deploy ICT for improving the quality of life of our own countrymen.

At this august gathering I can see many guests from abroad who can share the experiences of their countries on these issues. I hope you will all come up with a White Paper on the policies needed to internalise information technology in the development processes of the social infrastructure. I assure that the Government of India will give every consideration to your suggestions while formulating and implementing various plans for extending the benefits of the ICT to cover an ever-wider cross-section of our civil society.

I am sure that this seminar will provide a good platform to you all to deliberate the issue of enhancing Human Capital Index through ICT applications. As I speak to you today, I see representatives of ICT industry and eminent thinkers from the world over and they look quite eager to networking of thoughts and strengthening of alliances.

With these words, I inaugurate the Seminar and wish it all success. Thank you.

¹Speech at the inauguration of the Seminar on "ICT Applications in Education, Health, Governance & Social Infrastructure" organized in partnership with the Confederation of Indian Industry (CII) on March 14, 2002 in New Delhi

TONING UP FISCAL MANAGEMENT*

Shrimati Usha Sahajpal, Controller General of Accounts, the Comptroller and Auditor General of India, Secretary Economic Affairs, Secretary Expenditure, other distinguished guests and officers and staff of the Civil Accounts Organisation,

At the very outset, may I felicitate the Indian Civil Accounts Organisation on the completion of its first 25 years as a distinct entity?

The Silver Jubilee is an important milestone in the history of any organisation. The initial period is critical in that it sets the tone for the organisation's work culture and shapes the standards that it sets for itself. I am glad to note that the Indian Civil Accounts Organisation has displayed a high level of professionalism at all levels during the initial years and I am certain that it will continue to do so in the future.

But we cannot rest on our laurels. Although we have met and overcome many challenges in the past, new challenges await us in the future and we need to prepare ourselves for them. We have to adapt to new circumstances and innovate continuously to keep ourselves abreast.

The Tenth Five Year Plan has commenced a few days back. The Plan targets an overall GDP growth of 8%, which though ambitious is attainable. It aims at high growth in order to speed up the alleviation of poverty and enhance employment opportunities. It will call for a higher level of investment by Government particularly in infrastructure sectors. Special emphasis will be placed on agriculture as well as social sectors like education and health.

The Planning Commission has set this ambitious objective keeping in mind the performance of the economy as reflected in key indicators. Although there has been a slight drop in the growth last year due to various factors, we have achieved an average growth rate of about 6.5% in the period covering the Eighth and Ninth Plans. Inflation is at a

record low, while foreign exchange reserves are showing a robust increase. Nevertheless, the objectives of the Plan are not going to be met by following a "business as usual" approach.

The Plan document identifies the need for raising efficiency both in the public and private sector for attaining the targeted rate of growth. The Plan also envisages a reduction in the fiscal deficit of the Government by taking various remedial measures. These require significant changes in the way we organise ourselves and the manner in which we conduct our activities.

We have recommended that the Central assistance to State Plans should increasingly take the form of project-specific assistance and for this purpose several special funds have been created. Their effectiveness should be increased through better monitoring and targeting. We have also noted that in the implementation of externally aided projects the Ministries and States are willing to abide by the standards of the funding agency on project consultancies, implementation and monitoring but the same discipline is seldom shown in our domestically-funded programmes. The Commission has accordingly called for a major reform on governance issues.

It is a matter of concern that cost and time over-runs continue to affect project and programme implementation. Our controls have proven inadequate to ensure the attainment of objectives in a cost-effective manner and within a stipulated time frame. The Ministries tend to be satisfied with the release of budget provisions to the State Governments towards the close of the financial year without effective monitoring of the utilisation of the funds previously released. Often, physical and financial performances are overstated not only to the detriment of the particular scheme but much worse to the weakening of the moral and ethical standards of governance.

Our present system of budgeting holds the Departments and officers responsible only for spending the money budgeted. The Performance Budget that is now being brought out by the Ministries has failed in its objective for many reasons. It is time that we move towards output-oriented budgeting wherein broad, but clearly measurable, indicators

are included in the Detailed Demands for Grants themselves. It is our responsibility to inform Parliament and the public what would be achieved through each project or scheme budgeted during a financial year. This change, coupled with a shift towards project-oriented funding, should hold the Departments and officers accountable to a greater extent and bringing transparency in our functioning. The Civil Accounts Organisation will have an important role to play in planning and implementing this shift. They would also have to start capturing in their data the outputs of the schemes and projects. I would like the Ministry of Finance and the CGA to work towards putting such a system in place.

I feel the Civil Accounts Organisation can play an important role in the evaluation of the programmes and schemes that are directly funded by the Central Government to the State Governments or indirectly through other and non-government agencies. This would need an effective mechanism of internal audit, which should extend beyond regulatory audit to performance audit. I understand there are internal audit units in each Ministry and Department. The internal audit mechanism is a vital management tool and should be utilised effectively. If necessary, the Ministries and Departments may also consider constituting multi-disciplinary teams for efficient evaluation of the programmes and schemes.

Whereas the field offices of the Civil Accounts Organisation are closely involved in the process of budget execution, there is a need to raise the level of their participation in the budget formulation process. The expertise available in the ICAS needs to be utilised in innovative ways to curb the growth of the Government's establishment expenditure and in ensuring that the assets, which have been built up, are utilised fully in a productive manner. As I mentioned earlier, the Plan is formulated on the premise that there is considerable stock of existing capital assets, which are either lying idle or have never been used to their full potential. The Civil Account Organisation should be utilised to identify investments lying idle for one reason or another so that we could prime these projects for quick results.

With the emphasis now being placed by the Planning Commission on the utilisation of funds, I feel it is very necessary to involve the CGA in the reporting, monitoring and analysis of Plan funds under various programmes and schemes of the Ministries and Departments. This would enable the Commission to keep a close watch on the pace of sector-wise programme implementation. Indeed, I would go further to suggest that the responsibility for ensuring optimal synergy between Plan and non-Plan expenditures should rest upon the CGA. Too often we lose sight of the non-Plan, perhaps to our detriment.

The Monthly Review of Union Government Accounts prepared by the CGA is an incisive analysis of the fiscal operations of the Central Government. The Ministry of Finance might consider placing relevant portions of this document before the Cabinet. This would hopefully help the Ministries to ensure that the utilisation of funds is spread out in a reasonable manner.

I am happy to note that the Civil Accounts Organisation is one of the pioneers in adapting to information technology. Several payment and accounting functions have been computerised. In view of the need for better monitoring of Plan programmes and schemes, I would like the Civil Accounts Organisation to move in the direction of management accounting, which I believe is one of the assigned tasks, and eventually developing a comprehensive management information system for the government.

The success of fiscal reform rests critically on our ability to improve the quality of public expenditure. The existing accounting principles appear inadequate to meet the demands of economic and financial management, no matter how appropriate they may be for budgeting purposes. A management information system has to cater to diverse needs and considerable thought needs to be given to how these may be best met.

I am indeed happy to know that you would be releasing today a CD containing many important accounting Rules and Manuals. I believe that these are already on the CGA's web site. This is a welcome step

towards transparency in Government functioning. We also need to look closely at other areas of our functioning with a view to making our decisions more transparent and responsive.

The theme of the Conference and the technical sessions, which have been slotted, are apt. I am sure the distinguished speakers and participants would be making many useful suggestions during their deliberations. I would be looking forward to receiving the recommendations of the Conference.

I convey my good wishes to all the officers and staff of the Civil Accounts Organisation with the expectation that they will build on their achievements. I wish the Conference all success.

**Inaugural Address at the Conference on "Financial Reforms: Issues and Challenges" on the occasion of the Silver Jubilee of the Civil Accounts Organisation held on April 3, 2002 in New Delhi*

EMPOWERING PANCHAYATI RAJ INSTITUTIONS*

It gives me great pleasure to participate in this Sammelan of Panchayat Adhyakshas organised by the Ministry of Rural Development. We are grateful to the honourable Prime Minister for sparing his valuable time to be with us. His presence underlines the need to carry forward the process of democratic decentralisation.

As you all know, panchayats were always important in the social life of the village community. They are the bedrock of our democratic polity. The Panchayati Raj Acts passed by the State Governments after Independence and the 73rd and the 74th Constitution Amendment Acts, which bestowed constitutional status on these bodies in 1992, have endeavoured to put a structure of decentralised governance in place with the expectation that local governments would fulfill the aspirations, and respond to the needs, of local communities quickly and efficiently.

It is almost 10 years since the 73rd Constitution Amendment Act was passed. It is an opportune time to appraise the progress that the Panchayat Raj system has made in the country. This is particularly important for the Planning Commission, as the Panchayats have been given a prominent role in the delivery of development programmes in the Tenth Five Year Plan, which we are about to finalise. In fact, our whole concept of responsive administration revolves around the integration of Panchayati Raj institutions in the existing delivery system. We are, therefore, concerned that the process of operationalisation of the constitutional mandate presents a mixed picture. Though the process of democratic decentralisation has proceeded as per our expectations in some States, it has been extremely slow in many others.

Effective devolution to the Panchayats requires political will and commitment at the State level. Unfortunately, the empowerment of

the Panchayati Raj bodies has come to be personality-driven. Administrative powers, functions and finances have been devolved where a Chief Minister has been supportive; if not, the Panchayats have remained weak. Perhaps, it is a battle for political turf and spheres of influence. Unfortunately, so far this battle has turned out to be an unequal one. But the time has come for fulfilling the constitutional mandate for sharing powers and responsibilities. This alone will lead to genuine democratic decentralisation. The Constitution has bestowed a great responsibility on you. It is now for you to step forward and take on the rights and responsibilities that are legitimately yours.

It is in this context that I attach particular importance to today's *Sammelan*. This *Sammelan* will not only make us wiser about what you expect from us but it will also enable you to appreciate the immense potential and value of co-operating with your counterparts at different levels within the State. It will also provide an opportunity for the delegates from different States to learn from each other's experience with a view to projecting a set of coherent demands to their respective State Legislatures. I must compliment Shri Venkaiah Naidu, the Minister for Rural Development, for holding this Conference and for the way he has structured it over a period of two days. The issues of reservations, rotation of seats, social inclusion and concerns of women have still not been settled. The question whether the Panchayat elections should be fought on party or non-party lines still remains unresolved. The increasing use of money and muscle power in Panchayat elections is a matter of serious concern. So is the polarisation of villages along caste and communal lines. Though there are no easy solutions to some of these issues, they have to be addressed with energy and determination to ensure the healthy growth of the third layer of Government.

Another important issue relates to awareness generation and capacity building. The Planning Commission, in the Eighth and Ninth Plans, had laid strong emphasis on capacity building of PRIs. It has to be realised that unless the Panchayati Raj functionaries are made aware of their powers and limitations and trained to discharge their roles

and functions, the PRIs would remain weak and prone to be exploited by vested interests, including the field-level bureaucracy. You are aware that close to 30 lakh elected functionaries are in position at different tiers of PRIs. Training such large numbers is a mammoth task and cannot be accomplished by the Government alone. We have to find innovative ways of building the capabilities of our elected PRI representatives within a short period of time. Many institutions and non-governmental organisations have done commendable work in this regard. Their presence in this area needs to be encouraged and expanded. I understand that a session would also be devoted to resource mobilisation and planning at the grassroots level, social audit, transparency and the functioning of Gram Sabhas. These are important components of the architecture of Panchayati Raj governance.

One of the attributes of governance is the capacity to raise resources. However, even though many State Governments have vested the powers of taxation with Panchayats, very little resources are raised by them on their own. They continue to depend on the Central and State Governments for their day-to-day functioning and developmental activities. I urge you to make full use of your powers of taxation to enlarge your fiscal domain. I feel that the fiscal position of PRIs has to improve considerably if they are to make their mark as responsible institutions of self-governance. Dependency can never be the foundation for a self-confident and effective structure of decision-making.

I am aware of the excellent work done by many village panchayats. In fact, the mid-term review of the Ninth Plan gives some examples of successful panchayat experiments as illustrations. However, some of the evaluation studies commissioned by the Planning Commission point to extremely low participation of Gram Sabha members in the Gram Sabha meetings. Neglect of the issues that concern Scheduled Castes, Scheduled Tribes and women and financial irregularities due to collusion by elected representatives and the field-level bureaucracy have also been highlighted. Some have even gone to the extent of saying that the tyranny of the bureaucracy has been replaced by the

tyranny of the Panchayat functionaries. In the system prevailing in most States today, there is no structured grievance redressal system.

I am quite aware that though many of these criticisms may have some truth, they do not represent the total reality of Panchayats in this country. I am only voicing these concerns to alert you to the dangers that lurk in the background. There are powerful vested interests, which do not want Panchayats to emerge as strong institutions and if you do not guard against these ills, these forces would only gather momentum and obstruct your progress. There is, therefore, a need to get together and evolve a code of conduct, which makes the functioning of PRIs fair, just, transparent, inclusive and accountable.

I end with the hope that this Conference will take confident, practical and effective steps to this end.

I wish you all success.

** Speech on the occasion of All India Panchayat Adhyakshas Sammelan held in New Delhi on April 5, 2002*

POVERTY ALLEVIATION IN SOUTH ASIAN REGION*

Mr. Chairman, Secretary General, SAARC, distinguished delegates,

Let me begin by congratulating Aziz Sahib on his election as Chairman of this meeting. I have no doubt that under his able chairmanship we would deliberate in depth on the subject of poverty alleviation and come up with concrete and substantive recommendations for a future course of action for our region. I would like to assure you, Mr. Chairman, of my delegation's full cooperation.

The SAARC Secretariat must also be congratulated for all the effort it has put in and for its excellent documentation.

Let me also take this opportunity to thank the Government of Pakistan, on behalf of my wife and myself, and also on behalf of my delegation for the excellent arrangements made and the warm hospitality that has been accorded to us.

We have gathered here today after a gap of over 6 years to take stock of our progress on the poverty alleviation front and to set the broad directions for the way forward. At the very outset, we need to acknowledge the fact that, despite some tangible gains, we are nowhere near the target, that we had set for ourselves, of eradicating poverty in our countries by 2002. South Asia still represents the largest concentration of the poor in the world and, at the present rates of progress, will continue to do so in the foreseeable future. This is an unconscionable situation and we will need to make every effort to ensure that the task of poverty eradication informs every aspect of our national policies. We owe our peoples no less.

There is no doubt that each one of our governments has poverty eradication high on its agenda and in each country many innovative initiatives have been taken with greater or lesser effectiveness. But

poverty knows no boundaries and neither should our concern. Deprivation and suffering, wherever they exist, represent a challenge to our essential humanity. We cannot let political and ideological differences blunt our sensitivity and circumscribe our efforts at lending a helping hand, wherever and whenever possible. India stands fully committed to this principle and is both ready and willing to do whatever it can within its limited means. We have demonstrated our commitment with a number of our neighbours.

In the regional context the identification of poverty alleviation as a central area of concern for SAARC was an important step. Over the years, we have learnt much from each other's experiences and have shared ideas. We have more or less agreed upon a broad strategy for poverty eradication in our countries, which emphasises social mobilisation and decentralisation. The SAARC Secretariat and the Independent South Asian Commission on Poverty Alleviation have played an important role in this process, which we gratefully acknowledge.

However, the time has now come for us to reflect upon the role that SAARC as a forum can, and should, play in accelerating the pace of poverty reduction in our region. No matter how valuable the process of exchange of ideas and experiences has been, there is a limit to which it can carry us. After all, the primary responsibility for devising suitable strategies for poverty eradication and their implementation vests in national governments, which have to take account of the specificities of their countries in designing suitable interventions. For the most part, the specific poverty alleviation programmes and schemes representing the cross-fertilisation of our ideas and experiences are already in place in all our countries. However, the possibility of new initiatives by SAARC to complement the efforts of governments is being explored. An Independent Poverty Alleviation Commission has been set up to take a fresh look at poverty issues and programmes in South Asia and to prepare a programme of regional cooperation. I understand that this includes making an inventory of best practices and outlining a programme for their dissemination and replication.

Their recommendations will, no doubt, help the countries in the region to refine and strengthen their strategies of poverty alleviation.

SAARC is a regional forum, which is meant to address not only issues that are of common interest to its members but also those that we in this region share *vis-à-vis* the rest of the world. May I suggest that there are a number of such issues in the broad area of development and poverty alleviation that can be appropriately and gainfully taken up under the aegis of SAARC? We need to identify these and issue the necessary directions so that a programme of work can be drawn up.

Excellencies, the basic prerequisite for any credible attack on poverty is rapid and sustained growth, which generates sufficient opportunities for decent work, to meet the needs and aspirations of our people. This requires resources and a climate conducive for investment. Although some of us have reasonably high domestic savings rates, others do not. None of us can claim sufficiency. International capital flows are essential for all of us to a greater or lesser extent.

As you are all aware, just over two weeks ago the United Nations convened an International Conference on Financing for Development at Monterrey, Mexico to discuss the requirements of developmental resources, responsibilities for mobilising them and modalities of transfer. At the conclusion of the Conference, a joint declaration, now called the "Monterrey Consensus" has been issued, which will probably set the future agenda for international development cooperation, particularly for the attainment of the goals outlined in the Millennium Declaration of the UN. I believe that there are certain aspects of the Monterrey Consensus, which require careful consideration since they affect us all and may form a useful starting point for a productive work programme for SAARC.

First of all, the principal responsibility for creating the conditions necessary for generating domestic resources and attracting international funds is placed firmly at the door step of national governments. Although this is unexceptionable in itself, there are two dimensions that we need to take into account. It appears quite clear that the shift that has taken place over the years from aid funds to private capital

flows is expected to continue in the future as well. Movement of private capital is extremely sensitive to the conditions prevailing in the recipient countries and all of us will need to bring out individual and collective efforts to bear so as to ensure an environment that is investor friendly.

The second dimension relates to the possibility of international development assistance being linked to conditionalities regarding the patterns of public expenditure and to governance. We have all, at one time or another, been exposed to the rigours and difficulties that accompany conditionalities but we cannot wish them away. Therefore, it is necessary to ensure that there is synergy between internationally-led efforts and our own national priorities and policies of poverty eradication.

The Monterrey Consensus also recognises the importance of trade as an instrumentality of development and poverty reduction. Leaving aside the issues of SAFTA for the moment, it would be desirable for us to evolve common positions regarding developments at the WTO. The SAARC Meeting of Commerce Ministers as a prelude to Doha has proven the utility of such co-operation and we need to carry this process much further and on a more sustained basis. As you are all aware, the WTO is being increasingly driven by case laws, which have had the effect of modulating the original intent of the various agreements, frequently to the detriment of developing countries. We need to keep abreast of these and to assess their implications on our development efforts. We also need to co-operate on countering the more deleterious case laws through appropriate interventions in the WTO.

At the same time, we need to look at the untapped potential of intra-SAARC trade and the possibility of increasing it. It is often argued that we have similar trading baskets and that this basket is limited. But consider the enormous mutual benefit that has accrued through the development of Bhutan's hydroelectric resources. I am glad that studies are also going on the development of similar resources in Nepal. A number of other scenarios can be envisaged and the time has perhaps

come to explore such mutually beneficial possibilities of trade among countries in the region.

As far as international development assistance is concerned, there has been a growing trend towards linking much of this with what are today referred to as "global public goods", which though important in themselves, may lead to a diversion of resources away from more pressing local needs. Moreover, such linkages tend to disproportionately benefit the developed countries. It is necessary for us, therefore, to assess the value of such global public goods for our region and in particular in relation to our other development goals. It is only with such an assessment and through building upon our individual and regional interests that we will be able to evolve a rational position regarding the nature of aid flows.

There are a number of other issues regarding the international economic and financial architecture with which we need to concern ourselves since they have a significant bearing on our ability to tackle poverty in our countries without running undue risks. So far, we have not taken any coordinated and collective positions on many of these issues and I believe that unless we engage ourselves much more actively than in the past, our interests would go by default.

Excellencies, poverty eradication is not merely about anti poverty policies and programmes. It is about an overall development strategy, which recognises the limitations placed on our actions by the international context in which we exist. Unless we start a work programme to address these wider issues in a much more focussed manner, I am afraid that we will let valuable opportunities slip through our fingers. I would therefore strongly urge that the SAARC Plan of Action for Poverty Alleviation should be significantly widened in its ambit. I have tried to indicate some possible directions. I am sure others will emerge in the course of our deliberations.

Thank you.

**Statement at the Third Meeting of the SAARC Finance/Planning Ministers on Poverty Alleviation held in Islamabad, Pakistan on April 8-9, 2002*

REDUCING INFANT MORTALITY*

I am very happy to be present at the concluding session of this National Workshop on "Infant Mortality". The infant mortality rate (IMR) is perhaps the single most important indicator not only of the state of social development in our country but also of our care and concern for the well-being of our people. In addition we all know that the high wanted fertility due to the prevailing high IMR is estimated to contribute about 20% of the current population growth. The Planning Commission accords the highest priority to the reduction in IMR, which has been included as one of the monitorable indicators for the Tenth Plan and beyond. The Tenth Plan envisages reduction in IMR from the current level of 68 per thousand to about 45 by 2007 and 28 by 2012. A reduction in IMR of such magnitude in such a short time has never before been achieved in India. However, this goal can be achieved through the whole-hearted efforts by all the sectors concerned to improve access to inexpensive and time-tested interventions for the prevention and management of illnesses during infancy.

In our endeavour to reduce the IMR it is necessary to have a proper understanding of the levels, trends and differentials, both regional and across socio-economic groups. It is also important to understand the criticality of each of the factors that influence the IMR. It is heartening to note that so many experts from various disciplines including demography, medical and public health professions, public administration and NGOs had attended the Workshop and had participated in the discussion during the last two days on each of these aspects. The deliberations during the Workshop have thrown up many useful suggestions both at the policy planning level as well as for the implementation of the schemes. The Planning Commission would be happy to consider the suggestions for improving the schemes, which are being implemented or are on the anvil.

The National Commission on Population was set up by the Government when the population of India crossed a billion mark. It has been working on a number of fronts acting as a catalyst to the new initiatives on population-related issues through its effort to achieve coordination and convergence of social sector programmes and functionaries at various levels. The Empowered Action Group in the Department of Family Welfare has been focusing on the States, which are demographically backward. The deliberations and recommendations in this Workshop would provide inputs for the work being done by these institutions.

It is a matter of concern that over the nineties the IMR has plateaued. India is a vast and diverse country where there are substantial inter-State and inter-district variations in the IMR. The differentials in the IMR across the country show that it is as low as 14 per thousand live births in Kerala on the one hand and as high as 96 in Orissa on the other extreme. While some doubts have been raised about the low levels of IMR in Kerala as the figures indicate, it remains a fact that Kerala has made remarkable progress in reducing infant mortality rate. The achievements of Tamil Nadu and West Bengal, the other major States where the IMR is just above 50, and Karnataka where it is about 57, should also be noted considering that these are larger States with significant intra-State variations. On the other hand, in Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan, Chhatisgarh, Jharkhand, Uttaranchal and Orissa the IMR is still very high. Even within these States there are districts where the IMR is low. The Ninth Plan therefore advocated decentralised district-based need assessment and focused interventions.

Nearly half of the infant deaths occur within the first week after birth. In order to reduce this the Steering Committee on Family Welfare has recommended that there should be improvement in the antenatal, delivery and neonatal care. The ANM is the critical worker who has the responsibility of improving coverage under each of these critical areas. In order to ensure that the lack of ANMs does not come in the way of improvement in coverage of these vital services, it has been

decided that from the current year the cost of salaries of all the 1.4 lakh ANMs in the country will be met by the Department of Family Welfare. The States will take over the funding of Rural Family Welfare Centres, which have been functioning as a part of primary health centres. This step will streamline the functional units and improve efficiency. It is expected that these will ensure improved coverage under immunisation, antenatal and child health as well as contraceptive care and enable the country to reach the goals set for reduction in infant and maternal mortality as well as population growth. Under the PMGY funds have been provided to State Health Departments to improve the maintenance of the infrastructure in rural areas and improve the availability of drugs and diagnostics. Close collaboration between the ANM and the Anganwadi worker (AWW) is envisaged. The AWW has been given the responsibility of weighing neonates in home deliveries and referring those infants with birth weight below 2.2 kg to the centre where a paediatrician is available. Early referral and prompt treatment may result in reduction in neonatal mortality. To combat under-nutrition in infancy and early childhood, funds are being provided under the PMGY Nutrition component to provide take-home food supplements to children between 6-36 months of age. The AWW will also act as the depot holder for oral dehydration salts so that deaths due to diarrhoea during infancy will be reduced. It has also been decided to raise the honorarium of Anganwadi workers and Anganwadi helpers, which will also go a long way in improving the delivery of services through these functionaries because they are one of the only visible Government functionaries at the village level whose services are being made use of by both Government and non-governmental organisations working for the well-being of children and mothers. If all these interventions are effectively implemented, it is technically possible to achieve the goals set in the Tenth Plan for reducing the IMR to 45/1000 by 2007.

There is a need to ensure that the various departments of the Government of India and State Governments work in a coordinated manner. The medical institutions, including medical colleges, and the researchers working in the area of community health etc., have an

added responsibility to identify new and appropriate technologies, which are cost-effective. The advances in medical science have to be taken advantage of in a profitable manner. By bringing together the experiences of professionals working in the field in different areas of the country, this Workshop has tried to put together a wide array of experiences. There are important lessons to be learnt from all these deliberations. There were certain intervention strategies, which were successfully undertaken in some parts of the country by dedicated medical professionals and NGOs, which have brought substantial reduction in IMR in the project areas. The lessons from these experiences have to be upscaled nationally and put to good use. The involvement and contribution of NGOs in such intervention programmes is also very important.

One of the important areas, which needs attention is the monitoring of the programmes. As I have already mentioned, the IMR is one of the indicators for which monitorable targets have been set in the Tenth Plan. Unless these indicators are monitored at various levels, including districts and blocks, it may not be possible to ensure that the benefits are distributed evenly across the regions. In the context of decentralisation of the planning process it is necessary to have monitoring done at the Panchayat and town levels. All this calls for good quality data on these indicators. Unfortunately, we do not have information on IMR below the State level on a continuing basis. The available information at the State level masks the intra-State variations. In such a situation it is not possible to have proper monitoring of the interventions and take corrective actions.

This situation is not because we do not have systems, which can produce data on these indicators at levels below the State. Unfortunately, these systems have not been working efficiently. The most important data source on births, deaths and causes of death is the Birth and Death Registration System. I am given to understand that our country is able to register only about 55% of the births and 46% of the deaths. The level of registration is much lower in the case of infant deaths. In such a situation we cannot think of getting reliable

data on births and deaths from this source unless the level of registration improves. The National Population Policy has set a target of 100% registration of births and deaths by the year 2010. However, it is necessary to achieve this level much earlier for proper monitoring of IMR as well as the maternal mortality rate. I would urge the representatives of the State Governments to carry this message back and impress upon their governments the need to initiate appropriate action for improving the level of registration.

In the absence of complete registration of births and deaths, we have been depending heavily upon the Sample Registration System for data on vital rates. While the demand on SRS for more detailed information is stringent, one cannot forget the fact that it is a sample survey and has its own limitations. While the data made available by SRS and other sample surveys like the National Family Health Survey would be of immense use for macro-level planning, they cannot help much for micro-level exercises. There have been demands for increasing the sample size of SRS so that it can give district-level estimates. I would like to point out here that it may not be possible to increase the sample size whereby district-level estimates can be reliably obtained because it will add to other problems relating to the management of the survey.

One of the important areas where we do not have reliable information relates to morbidity and mortality. While the causes of death are to be reported at the time of registration of death, this information is not provided in a standardised manner across the country. The scheme of Medical Certification of Causes of Death (MCCD), which forms an integral part of the registration system, needs to be strengthened. The medical colleges and health professionals have a vital role to play in this respect. Appropriate training to the medical practitioners, as well as to the medical students, on properly recording the causes of death is very important to ensure the quality of information. I would request those participants, who have come from medical colleges across the country and from the Health Department of States, to give a serious thought to this issue so that at least in the case of those deaths,

which take place in hospitals and institutions, we have good quality data on causes of death.

The ORGI and the other organisations, which have collaborated in organising this Workshop, are to be congratulated. However, all the efforts put in by them may remain under-utilised, if the lessons that have been learnt over the last two days are not put into use. I urge that the concerned departments of the Central Government as well as the State Governments to act upon the several workable suggestions that have come up during this Workshop.

Thank you.

**Address at the National Workshop on Infant Mortality organised by Registrar General of India on April 12, 2002*

SYNERGY BETWEEN GOVERNMENT & VOLUNTARY SECTOR*

Hon'ble Prime Minister, Union Ministers, Chief Ministers, distinguished guests from the voluntary sector, ladies and gentlemen,

Let me begin by thanking the Prime Minister for the inspiration he has provided to organise this national-level conference of the voluntary sector. The Prime Minister, while inaugurating the State-level conference of voluntary organisations at Lucknow on 22nd October 2001 organised by Smt. Sumitra Mahajan, Minister of State for Human Resource Development, had made an announcement that an all-India conference would be convened in Delhi. Expression of such interest by the Prime Minister is a measure of his recognition of the role of the voluntary sector in nation-building.

I am also thankful to the Union Ministers, Chief Ministers, distinguished guests from the voluntary sector and from the multilateral and bilateral organisations, who have joined us today. I welcome you all to this one-day Conference on the "Role of the Voluntary Sector in National Development".

The tradition of voluntary action in the country has been a part of our national awakening and of our freedom struggle. Great social and religious reformers like Swami Dayananda and Swami Vivekananda had emphasised the need for strong social and community action to remove social evils and promote education, health care, scientific thinking and traditional values. Gandhiji had established institutions like Adim Jati Sevak Sangh and Harijan Sevak Sangh to serve the downtrodden. He believed in the necessity for empowerment of the poor and the weakest.

Since Independence this tradition has flourished and there has been a growth of voluntary organisations dedicated to various facets of our

social and economic existence, such as adult literacy, health, preservation of the environment and raising the productivity and income of the rural and urban poor. These efforts need to be strengthened and synergised.

With increasing popular demand for better quality and delivery of public services, governments everywhere are responding by taking steps to involve the civil society. They recognise that the voluntary sector enjoys certain functional advantages, being community-based, more accountable and capable of providing services at a lesser cost. More significantly, voluntary organisations have the flexibility to develop innovative projects based on local needs and resources in contrast to the standardisation that normally characterises governmental actions. That is why I feel that there is space for voluntary action even where local self-governing institutions like PRIs are strong as the voluntary organisations can work for making the system more participative, transparent and accountable by creating awareness among the people about their rights and duties and about the shortcomings in development. Their roles are, and should be, mutually supportive and symbiotic.

Public co-operation and public opinion have been recognised as the principal force and sanction behind development planning. The Steering Committee appointed by the Planning Commission made a useful suggestion to integrate the voluntary sector into the planning and development process by creating an enabling environment conducive to growth of social entrepreneurship and the release of energies of dedicated and idealistic persons willing to serve the country. An important step to achieve this objective has been to declare the Planning Commission in March 2000 as a nodal agency for the interface between government organisations and voluntary organisations in order to provide a focal point from which an integrated and holistic view on the voluntary sector could be taken. The first task taken up by the Planning Commission, as the nodal agency, was to build a comprehensive database on voluntary organisations and NGOs.

The database is being updated on a regular basis. It shows the source of funding and the project activities taken up by these organisations.

The sector has demonstrated its capacity in a wide range of areas, such as drought proofing, conservation of natural resources like soil and water through watershed development, ecological and food security in backward areas, population stabilization, health, literacy and educational programmes.

However, the growth of the voluntary sector has been uneven in the country and consequently the flow of funds, both domestic and foreign, is somewhat skewed in favour of some States and some activities. This needs to be corrected. For example, voluntary organisations do not have adequate presence and capacity in areas and districts, in which population stabilisation efforts call for urgent action by the voluntary sector. I would suggest that donor agencies, including the Government, should take corrective measures for proper growth of the voluntary sector, where it is most needed.

The Tenth Plan Approach Paper has laid down eleven monitorable targets. These could provide a focus for partnership between the Government, the voluntary sector, higher educational institutions and the private corporate sector. Such a partnership would call for increasing professionalism within the voluntary sector. I am sure that these possibilities will be discussed in the conference leading to concrete proposals.

We already have an Action Plan to bring about a collaborative relationship between voluntary organisations and the Government, which emerged in 1994. As a follow-up of the recommendations of this Action Plan we have Joint Machinery on GOs-VOs collaboration under me having members from both the Government and the voluntary sector. At the last meeting of the Joint Machinery it was decided to expand the membership of the Joint Machinery to make it more representative and broad based.

To have a regular review of the contribution of the voluntary sector all the State Governments have been requested to include a separate chapter on the "Role of Voluntary Organisations" in their Annual Plans. Based on the information received from States and Central

Ministries and Departments we hope to keep abreast of the overall performance of the voluntary sector.

I would like to make three requests:

- (i) to the VOs to adopt appropriate standards of accountability and transparency to maintain their image and integrity;
- (ii) to Government Departments to be more transparent while dealing with the voluntary sector; and
- (iii) to organisations like CAPART, NIPCCD, CSWB, etc. dealing with the voluntary sector to bring about convergence and synergy in their efforts.

Today, after the inaugural session, we would be having two presentations to stimulate discussion. A copy each of the Theme Paper for this Conference and the Report of the Steering Committee on Voluntary Sector for the Tenth Plan have been circulated to all participants. A Compendium on Government-Voluntary Sector Partnership will shortly be released by the Hon'ble Prime Minister.

I am confident that the recommendations of this Conference would lead to greater involvement of the voluntary sector, *inter alia*, in mobilising and effecting the participation of the people in the implementation of various development schemes meant for their welfare.

With these words, I welcome you all to this Conference.

Thank you.

* Welcome Speech at the All India Conference on the "Role of the Voluntary Sector in National Development" held on April 20, 2002 in New Delhi

NATIONAL HUMAN DEVELOPMENT REPORT*

I welcome you all to the release of the first National Human Development Report for India. The Hon'ble Prime Minister had very kindly released this Report earlier today.

I believe that this is a momentous occasion, which may lead to the opening of a new chapter in our planning process. Right from the inception of development planning in our country, we have recognised that the primary aim of all public policy and action is to improve the quality of life of the average citizen. We have also recognised that income is but one dimension of the quality of life. Indeed, it has often been seen, both in inter-country and inter-State comparisons, that there is no direct correspondence between economic measures of development and the quality of life of the people. Nations and regions with high levels of income and economic growth have not necessarily attained similar levels of achievement on social indicators. On the other hand, relatively poor nations and regions have succeeded in providing their citizens with relatively decent conditions of living. These social services are desirable not only in themselves but also because of their role in supporting better opportunities in the future. Thus, if we look at the process of development in a longer-term perspective, the social indicators of today reflect both the existing quality of life as well as the potentialities of tomorrow.

Despite this recognition we have by and large focused our attention primarily on economic issues. This approach was, perhaps, a response to the conditions prevailing in the early years of our planned development, when poverty and material deprivation were rampant. Even though there is still a significant incidence of poverty in the country, we have come a long way since then. However, our progress on social indicators leaves much to be desired. It becomes necessary, therefore, to have a development framework and strategies that forge

and strengthen the link between the two and encourage the most effective and efficient use of available resources for furthering the well-being of the people. In this context, the human development framework developed and refined by the UNDP over the last decade deserves special mention.

For any approach or development framework to be meaningful and effective in directing public policies and programmes, it has to be anchored in a specific social context. More importantly, it should reflect the values and development priorities of the society where it is applied. It is this concern that has led us to work on developing a contextually relevant approach to human development and identify and devise appropriate indicators to help formulate and monitor public policy for India. Such a policy must, of course, keep in view the many unique concerns and development priorities of the country as well as her social and economic diversity. I am very happy to point out that the National Human Development Report has addressed these concerns.

The Report has broken fresh ground in quite a few areas in presenting the status of human development at the State level in India. It has, for the first time, put together an extensive database for at least two, and in some cases three, points of time covering the period from 1980 to 2001. The data have been drawn from the Census and a few other sources. The database, that has been presented, includes nearly 70 distinct social indicators on various aspects of the quality of life and well-being of the people

In India there is a considerable difference in the level of attainments of people depending on their place of residence, whether it is in rural or urban areas, and on the sex of the person. The Report highlights these inequalities by estimating the 'Gender Gap' and the 'Rural-Urban Gap' in all indicators where the data are available. The analytical presentation of the development status has been done in two forms. The graphical presentation in the form of 'development radars' helps in simultaneously assessing attainments in different aspects of quality of life, the pace of improvement over time and in identifying the areas

of gaps for facilitating an informed policy debate at the State level.

Secondly, a number of carefully selected indicators have been combined to develop three composite indices. I should make it clear that the indices developed in this Report are not identical to the UNDP indices, which are designed for inter-country comparisons. Our focus is not the same and, therefore, though the names may be similar, the substance is different. While the Human Development Index presents a quantitative estimate of attainments of the society as a whole, the Human Poverty Index measures the extent of deprivation in the society. In addition, for the first time, a Gender Equality Index has also been constructed to capture the relative attainments of women as against men. For each of these indices, critical indicators of well-being, capturing the ability to live a long and healthy life, the ability to read, write and acquire knowledge, and command over resources, have been identified keeping in view the context, societal values and development priorities of the country.

One of the factors kept in mind while conceptualising this Report was the need to evolve indices that could adequately reflect inter-temporal changes and policy sensitivity in various dimensions of human well-being. We believe that we have succeeded to a significant extent in this endeavour and the indices presented here will reflect the changing conditions in different parts of the country more sensitively and accurately than other such indices.

Since the human development approach has to recognise local constraints and aspirations of people, the size and diversity of our country demand further contextualisation at the sub-national level. The Report has, therefore, explored a range of indicators on all aspects of development that are potentially available even at sub-State levels of disaggregation. We would encourage the States not only to compile the core set of indices developed in the NHDR but also develop measures, which better reflect their specific conditions and concern.

The compilation of indicators in this Report extends beyond the economic, educational, health and demographic concerns of society. It also includes indicators on various aspects of the social environment, like the state of the elderly, the working children, the disabled, and

violence and crime against women. Besides, aspects of the physical environment having a direct bearing on the well-being of people have also been highlighted.

In a sense, the Report marks a beginning. It is but a first step towards monitoring the process of development in a manner that directly captures the level of well-being and the quality of life of our people. We cannot claim that this is the last word on the subject. The methodology and implications will need to be debated widely before these are fully accepted. We welcome all suggestions in this regard. Much also remains to be done in terms of integrating this work with the planning framework. However, a beginning has been made in the Tenth Plan by explicitly specifying monitorable targets covering economic, social and environmental dimensions of human development. We are in the process of outlining these in the Plan document. In addition, a major objective of the Report is to bring about a certain consensus on the adoption of the human development approach in the country, in general, and on the framework for building indices at the State and sub-State levels, in particular. Some States have already brought out their HDRs and many others are in the process. It is our hope that the present work will be useful in guiding similar initiatives in the States in future.

I would like to take this opportunity to express my appreciation of the team in the Planning Commission, which laboured hard to produce this Report

* Speech at Press Conference on the occasion of release of National Human Development Report on April 23, 2002

DEVELOPMENT OF TRANSPORT SECTOR*

It gives me great pleasure to be here today on the occasion of the inaugural function of this National Conference on Transportation Systems. I look forward to a stimulating debate on matters relating to the transport problems of the country and tangible recommendations that could be inputs for policy decisions.

We have made rapid progress in developing a nationwide transport network in the first fifty years of Independence, both in terms of spread of the transport network and the capacity to carry passenger and freight traffic. There have also been several improvements of a qualitative nature, such as the emergence of a multi-modal system in the form of container transport, marked reduction in arrears of obsolete assets, improvement in the self-financing capacity of the sector and the establishment of new centres of excellence for manpower development. Though these are impressive achievements, the country's transport system is far from adequate and suffers from a large number of deficiencies and bottlenecks. The main rail and road links of the transport system of the country are saturated and capacity shortages are becoming a constraint on overall growth.

The planning process in India has consistently worked on developing a comprehensive framework to address various inadequacies and imbalances in the transport sector. Special emphasis was placed on improving the transport infrastructure in the Ninth Five Year Plan. It laid stress on improving the capacity and quality of the transportation system. Emphasis was also placed on improving the self-financing capacity of the sector and on providing speedy, efficient, safe and economical carriage of goods and people. The review of the Ninth Plan shows that while there were tangible achievements in some sectors, particularly roads and ports, the progress in others has not been very encouraging. Our endeavor in the Tenth Plan would be to address these shortcomings and improve the quality of passenger and freight services.

The structural changes taking place in the economy and the country's resolve to accelerate the rate of growth will generate massive demand for transport services. The growth in transport demand has to be met by expanding domestic supply, since transport infrastructure is by and large non-tradable. Investment in transport must reflect the need to make up the existing capacity shortages and also to allow for growth in demand.

I would like to draw your attention to two initiatives in the transport sector, which could change the face of the country. These are the National Highway Development Project and the Pradhan Mantri Gram Sadak Yojana, which are expected to bring about a major revolution in the road sector and accelerate the economic and social development of the country through better connectivity and accessibility.

The National Highway Development Project comprises the Golden Quadrilateral (GQ) and the North-South, East-West (N-S, E-W) corridor projects and aims at 4/6 laning of the existing 2-lane network. The GQ, with a length of 5,851 km, will connect Delhi, Mumbai, Chennai and Kolkata. The North-South and the East-West Corridors, with 7,300 km length, will connect Kashmir to Kanyakumari and Silchar to Porbandar. The project envisages an investment of Rs.54,000 crore.

The other major area of focus is the Pradhan Mantri Gram Sadak Yojana (PMGSY), which would provide connectivity by way of all-weather roads to the unconnected habitations in the rural areas. The aim broadly is that all habitations with a population of 1000 and above are covered by 2003 and all habitations with 500 persons and above by the end of the Tenth Plan Period (2007). The Programme, as a related objective, also aims to achieve an equitable development of the rural roads network in different States and districts so as to fully exploit the latent potential for rural growth.

Compatibility between vehicular technology and expansion of road network is very important for realising the full potential of our investments. While projects like the Golden Quadrilateral and the North-South, East-West corridors would provide a nearly world-class

road network for passenger and freight traffic in the country, the quality of vehicles, particularly in public transport and the freight sector, unfortunately is abysmally poor. This leads to slow traffic movement and damage to roads. Yet the solution is far from obvious since these high-speed corridors will necessarily have to co-exist with inferior road networks for some time to come and vehicle design will need to take this fact into account. I seek the co-operation of engineering institutes in addressing this problem.

The issue of technological upgradation is not confined to the road sector and is equally relevant for other modes of transport. It is particularly important in the railway sector. The Railways need to improve reliability of assets, which affects its productivity. The incidence of asset failures has to be controlled by providing technological back-up to the human element in the area of railway operations in order to enhance safety.

In order to improve the quality of services, the Railways must increase the speed of its freight trains, which, in turn, requires improvement in freight car design to secure higher pay load to fare ratios for freight. The process of improvement in locomotive technology through adoption of the latest state-of-the-art locos needs to be accelerated but it is dependent upon corresponding improvements elsewhere. Introduction of modern signaling and telecom facility and better track management practices are essential to augment track capacity.

The issue of pricing of transport services is very important in this context. The price charged for transport services should ensure adequate return on investment, which could be ploughed back for further investment as well as improving the quality of services. The pricing policy assumes special significance when budgetary resources are a constraint and an incentive mechanism for attracting private investment is to be developed. Another important role of price instruments is to correct the supply-demand imbalances in the transport sector so as to avoid overcrowding and ensure optimal utilisation of the transport infrastructure. In addition, in a poor country like India, due consideration has to be given to the paying

capacity of users of transport services. An ideal pricing policy would have to take all the three factors into consideration and I invite the distinguished speakers and experts here to come up with suggestions on the subject of appropriate pricing strategy for transport services in the Indian context.

Another area where your inputs would be most valuable is in ways to increase private sector participation in creating and operating the transport infrastructure. As you are aware, the Government has been setting aside large sums for expansion of road network, modernisation of railways and other transport sector projects. The Government's ability to finance infrastructural projects, however, is limited. The way out is internal generation of resources and associating the private sector in a big way. Though some groundwork has been done, the response of the private sector has not been very encouraging so far. I would like the technical institutes, particularly the management institutes, to suggest what should be done to encourage private sector participation and foreign direct investment (FDI) in the sector. They could also draw upon global best practices and suggest innovative financing mechanisms that could be offered to private entrepreneurs.

As you are aware, metropolitan cities and large urban centres are facing major transport bottlenecks, leading to road congestion, pollution and a number of related problems. While the Government is working on various alternatives to address these issues, I welcome advice from engineering and management institutes in solving the problem. Engineering institutes could suggest more fuel-efficient and environment-friendly technologies for Indian conditions. Innovative ideas would be welcome in the field of mass transit systems so that the pressure on private vehicles could be reduced. Management institutes could also draw upon international experience and suggest alternative systems of urban transport, their relative cost and fuel efficiencies and their relevance to Indian conditions.

Another issue is the regulatory mechanism. To what extent should transport services be regulated by the Government? No doubt issues like pollution control, accident prevention, public private ownership, competitive efficiency etc. would figure here, but over-regulation can

be as damaging as under-regulation. This could possibly be a subject of discussion at the Conference.

The ball is now in your court. I have touched only the fringes of a vast and complex set of problems. I hope that the Conference would come up with recommendations that could be policy inputs in solving the transport problems of the country. I also hope that there would be useful suggestions for ensuring greater interaction between the technical institutions, the society and the industry so that these institutions could become partners in promoting the socio-economic development of the country.

** Inaugural Address at the National Conference on Transportation Systems held on April 24, 2002 in New Delhi*

INDIA-UK CO-OPERATION*

Distinguished Co-Chairman, colleagues and fellow members of the Round Table,

It is with great pleasure that I address this distinguished gathering assembled here under the aegis of the India-UK Round Table. I would like to thank Lord Paul for the excellent arrangements made at Warren House for the meeting as well as for our stay. Lord Paul's introductory remarks have set the tone for our fourth meeting, which seeks to reorient the Round Table's discussions towards an assessment of common concerns and interests of India and the UK in the post-September 11 global scenario as well as focus attention on issues related to civil society and political participation.

The post-September 11 developments have in many ways reinforced the growing solidarity and understanding between India and the UK. Our relationship has been shaped by two-and-a-half centuries of close association and by the multifarious links between the people and institutions of the two countries, spanning virtually every field from business and commerce to the arts, culture and education. The one-and-a-half-million-strong Indian-origin community in the UK plays a particularly important part in this relationship. The traditional relationship has today acquired a new maturity and depth. Moreover, in keeping with the changing global scenario, it has acquired a contemporary dimension.

The momentum of high-level exchanges between India and the UK has been unprecedented in recent months with Prime Minister Tony Blair visiting India twice in October 2001 and January 2002 and a visit from our Prime Minister to the UK in November 2001. Prime Minister Tony Blair's state visit to India in January 2002 represented a high water mark in the relationship. Exchanges at the ministerial level are regular and substantive. We are especially looking forward to

the visit of Deputy Prime Minister Prescott, whom we met yesterday, and of the Prince of Wales later this year.

India and the UK are today working towards a modern partnership, which is reflected in our strengthened co-operation in fora such as the Commonwealth, the EU and the UN. I would, in particular, like to express our appreciation for the support expressed by the UK for India's candidature for a permanent seat in the UN Security Council and its commitment to work with us on the issue.

The New Delhi Declaration, which was signed by our Prime Ministers on 6th January 2002, is symbolic of the current dynamism of our relations. The Declaration identifies the areas of partnership between India and the UK in the 21st century. We look forward to the presentation by Ms. Bhaswati Mukherjee and Sir Rob Young on the implementation of this landmark declaration.

This Round Table itself is a reflection of the contemporary dimension that our bilateral relationship has acquired. By giving a fresh perspective and imparting a new vigour to our ties it has significantly contributed to enriching our multifaceted relationship. The previous three meetings held in New Delhi in April 2000, Warren House in October 2000 and Sariska in April 2001 dwelt upon a variety of initiatives in the fields of trade and investment, educational exchanges, e-commerce, information technology and the media.

On the economic and commercial front, it is heartening to note that bilateral trade is on the upswing and crossed the £5 billion mark in 2001. The target set by the two Governments is to achieve an annual trade turnover of £7 billion by 2003. The flow of actual direct investment, however, seems to have declined in the last couple of years while the number of joint collaborations remains stagnant. It would be pertinent for this Round Table to give some thought to this issue. The strength of this Round Table lies in suggesting innovative ideas and approaches, *inter alia*, to enhance bilateral trade and collaboration, especially in non-traditional areas.

Co-operation in education is also progressing steadily. We welcome the selection of Prof. Sanjay Subramanyam to occupy the Chair of

Indian History and Culture at Oxford set up with a Government of India endowment of £1.8 million. We also welcome the British proposal to increase the value of the Chevening Scholarship scheme to £2 million and introduce Business Enterprise Scholarships. The UK is today the third destination for Indian students. The British Government's recent decision to permit foreign students to work part-time during their studies and stay on and work in the UK following their graduation has been greatly welcomed by Indian students and has led to an increase in the number of students going to the UK for higher studies. There is reason to encourage a reverse flow of British students to India, which is also known for its quality higher education. The Indian University Grants Commission is very keen on the establishment of mechanisms for "twinning" between British and Indian universities and the initiation of joint degrees.

On the science and technology front, the Science Festival, inaugurated by Prime Minister Blair in New Delhi in January and attended by eminent Indian and British scientists, was hugely successful and we hope similar events will be organised in the future. Co-operation is on track in the field of information technology also and NASSCOM (National Association of Software and Services Companies) of India signed Memoranda of Understanding for co-operation with CSSA (Computing Services & Software Association) of U.K and the Welsh Development Agency in 2001.

The Government of India has prepared an implementation report on the recommendations of the past meetings of the Round Table. It would be particularly useful to prioritise these recommendations and arrive at a list of core recommendations on which our principal efforts can be concentrated. This would not only make the Round Table more focussed but also ensure more effective implementation and monitoring of progress.

We are meeting today in the aftermath of a series of barbaric acts of terrorism—the September 11 attacks in the USA, followed by the terrorist attack on the Jammu & Kashmir Legislative Assembly in Srinagar on 1st October and on the Indian Parliament on 13th

December. These events have changed dramatically the world we live in by posing a serious challenge both to the stability of the international order and the fundamental liberal values of democracy and rule of law. We must respond to this new threat by joining hands to root it out. In this context, I would like to thank Mr. Benjamin Bradshaw for his perceptive keynote address last evening on the theme of the second session, "The UK and India in the New Global Situation." We are keenly waiting to hear Ambassador M.K.Rasgotra and Mr. Uday Kotak express their views on the subject.

Terrorism is faceless and limitless in its reach. At the outset, we must strengthen the global coalition against terrorism, which must tackle the menace comprehensively by eliminating not only the terrorist groups but also the support-bases that nurture terrorism. It is heartening that both India and the UK are working closely with a firm resolve to eliminate the scourge of terrorism everywhere and in all forms. The India-UK Joint Working Group on Terrorism, which met for the third time yesterday, is a useful mechanism to exchange views and information on this issue of great concern to both our countries. Ms. Bhaswati Mukherjee will brief us on the functioning of the Joint Working Group this afternoon.

It is unfortunate that open and democratic societies such as ours are so vulnerable to terrorist attacks, for the terrorists abuse the very freedom, which these societies allow them. Terrorism targets nations as well as civil societies and, if not handled spiritedly, can shake the foundations of democracy. The means to express grievances or opinions must clearly be through political participation and not violence. Where democracy has suffered an eclipse, the voice of civil society has become muted. Civil society can play a vigilant role by focussing on the poisonous nurseries of terrorism and suggesting remedial measures to our governments. In this context, we keenly look forward to the presentations of Ms. Sandhya Jain on "The Strengths and Weaknesses of Democracy" and of Mr. Aweek Sarkar and Professor Judith Brown on "Civil Society and Political Participation".

The Round Table was set up with great expectations on the part of our Prime Ministers. A discussion on the future of the Round Table,

scheduled for the closing session, would be a useful occasion to take stock of the Round Table's performance in the two years since its inception and also chalk out a vision and agenda for the future.

Ladies and gentlemen, I look forward to useful and productive discussions at this meeting of the Round Table.

** Opening Remarks at the Fourth Meeting of the India-UK Round Table held on April 27 & 28, 2002 in UK.*

EMPLOYMENT DYNAMICS IN INFORMATION ECONOMY*

It gives me great pleasure to be with you at this Tripartite Workshop on 'Employment Dynamics in the Information Economy.' This theme is a natural extension of the World Employment Report 2001 prepared by ILO on 'Life at work in the Information Economy'. The ILO 2001 Report, following the rich tradition of the organisation, has explored in considerable detail many issues concerning the employment implications of information and communication technology. I am sure this Workshop will further elaborate on these issues, particularly in the Indian context.

It is an indisputable fact that technology has a strong social influence, both in the immediate and the long-term context and that the impact of technology on employment is one of its most discussed aspects. The Employment Report has brought out the effect of IT on organisation at the workplace, the divide which usage of IT introduces between the aged and the young, the women and the men, the rural and the urban, and between the rich and the poor. The employer-employee relationship gets redefined and the work opportunities get influenced as trade in many of the IT products is free from geographical boundaries and tele-working can transfer work from office or factory establishment to the household. These changes throw up many opportunities but also challenges. It is noteworthy that there are many case studies in the Report on the role and influence of this technology in the informal sectors of the economy. It is of particular interest to us.

It is, of course, pertinent to question the relevance of information and communication technology in the Indian employment context. Does its potential to create work opportunities for our workforce justify special focus? After all, given the size of our labour force, which is of the order of hundreds of million, the number of IT professionals today

does not even cross a six-digit number. However, although direct employment in the ICT sector may not be very large, hardly any worker in the country is likely to remain untouched by it in one way or another. We can ignore these effects only at our peril. Furthermore, if we consider the relevance of IT to the Indian masses, the potential of ICT in extending a range of services to the people is enormous and its indirect impact on the quality of life is substantial. Several examples come to mind and these are just the tip of the iceberg. The use of ICT in railway reservations, telecommunication, banking services, medical services and postal service has been introduced on a significant scale but we have yet to cover a long distance before we can claim that the average Indian has the benefit of these services. Here lies the significance of IT and its potential in terms of the work opportunities and living conditions of an average Indian citizen.

The fact is that employment in the ICT sector in India is growing very fast. From the National Sample Survey estimates on employment and unemployment, it is found that growth of employment between 1983 and 1993-94 in transport, storage and communication sector, of which ICT sector is a part, was 3.24% and this rose to 6.04% during the period 1993-94 and 1999-2000. We expect this industry to provide jobs to 7 million persons by 2008.

In the workplace the computer is fast becoming the norm. The National Association of Software and Services Companies (NASSCOM) estimates that there are over four million computers, nationwide. But this revolution is limited to the main metros and some urban and select semi urban areas. Rural India has remained almost untouched by the cyber revolution and that is where the real revolution needs to take place.

There are a few problems, which have been encountered in providing access to an average person. First, the price of a computer is too high, which is beyond his reach. Secondly, the power position in our country

needs to be improved so that frequent power failures do not hamper the growth of the IT revolution. Thirdly, there are various versions of computers and or software. Even those who have computers may not be having the latest technology and upgraded models. The software also may be obsolete. Fourthly, not everybody can access the net, which requires a telephone connection.

The full potential of information and communication technology can be realised only with telecommunication connectivity. In India, we have taken many strides towards expansion and reform of the telecommunication sector. The World Employment Report 2001 has noted that the percentage of population connected by main telephone lines increased from 0.6 in 1990 to 1.3 in 1995. This has now risen to 4 per cent and we expect it to reach the double-digit level by the year 2007, the terminal year of the Tenth Five Year Plan. The Internet subscriber base is expected to be over 35 million by 2007 against the present level of about 4 million. The penetration of personal computers in India, which the ILO report records as having increased from 1 per thousand to 3 between 1995 and 1999, is now 5.8. This is expected to reach 20 per thousand by 2008. The size of the global IT industry, estimated at present to be 1.2 trillion US dollars, is growing at a rate of nine per cent in hardware and 14 per cent in software. India's present share in the overall global software market is only 2 per cent. But we are striving to raise the exports of software and IT services from the current level of US dollar 8 billion to US dollar 87 billion by the year 2008. The IT exports should constitute 35 per cent of India's total exports in 2008 against the present level of 14 per cent. The software and IT services industry is thus likely to contribute 7.7 per cent of GDP in 2008 from the present level of 1.7 per cent.

India's IT spending is about 0.7 per cent of GDP as compared to 1.3 per cent in Malaysia and 2.5 per cent in Singapore. Going by comparative indicators like number of PCs, Internet users, cable TV

subscribers, fixed telephone etc., India is almost five years behind China. In the beginning, the Government has to take a lead in spreading the usage of IT in the public services and sustain a reasonable growth in demand for ICT products. Many e-governance applications in rendering services by Government have been initiated. These include income tax and customs offices, the judiciary and the Election Commission. But a large area is yet to be covered even by the Central Government. A few State Governments have done better. But most others and the local authorities have yet to make a tangible beginning. Up to 3 per cent of budget of Central Government Departments is, therefore, earmarked for creating IT infrastructure in public services.

To facilitate the growth of information and communication technologies (ICT), major initiatives have been taken by the Government. Earlier, research and development in the electronics industry and provision of communication services were with separate Ministries. Now, in keeping with the emerging convergence scenario, the two have been merged into a single Ministry of Communication and Information Technology. A National Task Force on Human Resource Development in IT has been set up and a venture capital fund of Rs. 100 crore has been created. An IT Act was enacted in 2000, which, *inter alia*, provides for legal recognition of transactions through electronic data inter-change. In the North Eastern States and Sikkim, which were far behind the national average in the usage of IT, the Government has initiated the setting up of 487 information communication centres at block head quarters.

Many innovations, suiting local conditions and reducing costs, are necessary before an average Indian gets access to IT usage. One of the biggest challenges before us is to make IT available in local languages. Though some success has been achieved in developing IT products in Hindi, our official language, the road to the IT revolution still goes via English and computers. The knowledge of English among the

Indian youth has been an asset in integrating with world IT. A good part of our expansion of work opportunities in the IT sector has come from the demand overseas. However, within the country, the knowledge of English is not uniform. Unless IT products and IT services are available in major Indian languages the use of IT will not reach its ultimate potential in the country. It is here that the major problem of the 'digital divide' will have to be tackled.

In its simplest form 'digital divide' is an access issue, between those who have access to information and communication technology and those who do not. The treatment of 'Digital Divide' in the ILO Report brings into sharp focus the inequalities that exist across different sections of society and among nations. In a lighter vein, perhaps "Cyber-poverty" should be included in the human development framework that has been developed and refined by the UNDP.

More seriously, however, the ICT usage is rapidly becoming a major "process indicator" for human development. The World Employment Report 2001 illustrates many instances as to how services delivery for citizens can be enhanced by the use of ICT, as also how governance can be facilitated. The conventional systems of delivery of public services, as we all know, have a high unit cost of service and, therefore, limited reach. We look forward to tremendous contributions from ICT in delivery of services to people. Many mass services can be rendered only through use of ICT and particularly so when the user and producer are distant from each other or do not have a fixed location. Such features exist in our agricultural commodities market, migrant workers and in general in the informal economy. At present, we are trying to introduce certain forms of institutional support systems like crop insurance, credit cards for farmers, credit guarantee for the small producer and pension system for the unorganized workers, as well as other measures for a broad-based social security system. Given our demographic and social dimension, the need for such services on a large scale is quite clear. However, the design of projects and systems will be quite infeasible without the use of ICT.

As is true of all new technologies, the costs come down after a period when the heavy investments made in research and development get amortised and benefits reach a wide cross-section of people. We have seen this in the case of health and medicine. However, as I noted earlier, ICT is an area, where, at least for some decades to come, the pace of turnover of new innovations, and hence of obsolescence of old products, will continue to be high. And this would restrain the fall in costs of this technology and hence its dissemination on the requisite scale to the masses. The international developmental fora and the developing countries need to join hands for developing strategies in this regard for the benefit of the common people. I am certain that this Workshop will contribute to this process.

I look forward to the fruitful outcome of your deliberations.

** Inaugural Address at Tripartite Workshop on "Employment Dynamics in the Information Economy" organised by ILO on May 7, 2002*

TRADITIONAL FUELS & INDOOR AIR POLLUTION

I am glad to be here with you at this Workshop on "Household Energy, Indoor Air Pollution and Health" organised by the World Bank and Tata Energy Research Institute in collaboration with several international agencies and Ministries and Departments of Government of India. This is indeed an important issue and it is essential that we evolve a suitable strategy as rapidly as possible.

Recent surveys show that of the total domestic fuel needs, 59.2% in the rural areas and 35.5% in the urban areas is being met from fuel wood. Together with dung and agricultural residues, these three non-commercial sources of energy still meet 80% of fuel needs of rural areas. Of these, the use of dung and agricultural waste as fuel is widespread in agriculturally prosperous regions with fertile soil and controlled irrigation, such as Punjab, Haryana, UP and north Bihar, but wood continues to be the main domestic fuel in less endowed and poorer regions.

Biomass, such as firewood, agriculture residue and dung cakes, is still the dominant source of fuel in our rural areas. Women and girl children are the key players in collecting and using these fuels. They spend a major part of the day for these activities leaving hardly any time for other productive uses. The improvement in burning efficiency of these fuels and provision of assured and clean fuels would help not only in reducing their drudgery but also in saving time for other productive works and improved health.

The energy use patterns in urban areas are changing with greater use of LPG and kerosene. It is, however, unlikely that fuel wood will be completely replaced in the near future, as poorer sections of the community may lack the capacity to purchase the minimum quantity of kerosene or LPG or the appliances for use of these fuels.

The supply of LPG in the rural areas has just begun. It is not, therefore, easily available to the villagers. Kerosene is used in villages but mainly for lighting. Its use as a cooking fuel is rare and it is also not preferred in villages for heating. Since firewood is obtained almost practically free of cost, there is no inducement for the villagers to shift to other sources. Thus, their dependence on fuel wood is likely to continue in the near future.

These bio-fuels result in very high levels of indoor air pollutants. Pollutants released indoors, due to their proximity to human beings, are far more dangerous than those released outdoors. In poorly ventilated homes the women and children are forced to breathe this polluted air. Studies reveal that the pollutant levels they breathe in are many times higher than the acceptable limits set by the Central Pollution Control Board. The high exposure to these pollutants has been associated with serious health problems. Major diseases associated with it are acute respiratory infections (ARI), chronic obstructive lung disease such as chronic bronchitis and lung cancer, and possibly tuberculosis, adverse pregnancy outcomes, blindness, heart disease and asthma. In India, the most important disease associated with indoor air pollution is probably ARI that includes infections from a wide range of viruses and bacteria, with similar symptoms and risk factors.

Women and children below five years of age are most affected, as they are regularly and severely exposed. There is a need to pay more attention to the plight of hundreds and millions of women and children living daily with exposure to indoor air pollution. Specially designed health programmes with clear focus would go a long way in alleviating their plight.

Despite uncertainties in assessing the impact of indoor air pollution, it now appears that in India and other countries where solid fuels are used in simple stoves, indoor air pollutants may rival unsafe water as a cause of ill health.

Socially sensitive and sustainable development strategies frequently involve vexing choices between what is desirable at the micro level

and what can be justified at the macro. The choice of household energy sources is clearly a case in point. As I have already said, solid biomass fuels have extremely deleterious and unacceptable consequences on the health of our women and children. On this count, it is clearly preferable to initiate measures to promote the use of modern cooking fuels. However, most of the so-called 'modern' sources of energy, whether it is kerosene, LPG or electricity, involve the use of depleting natural resources. Therefore, we are faced with the choice of either continuing to use the traditional renewable energy sources, which have most undesirable health consequences, or shifting to non-renewable resources, which may not be inter-generationally sustainable.

The problem is further compounded by issues of availability, accessibility and affordability. Traditional fuels are not only available locally but have the distinct advantage of requiring mainly just labour power to access them. In this sense they are not costless but they do not require the conversion of labour power into income, which is necessary for commercial energy. Therefore, the shift to cleaner fuels would necessarily involve not only the provision of alternative sources of energy but also additional income generating opportunities. This is easier said than done.

In view of these factors, the solution to the problem may not lie in following the path that has been taken by developed countries during their development process. It would perhaps be preferable for us to take these factors squarely into account while devising a suitable strategy for mitigating the ill effects of indoor air pollution. In a sense, the strategy that has been followed by the Government does reflect these concerns and is therefore, based on a four-pronged approach, namely, improved ventilation in the cooking area; better stoves which require less fuel and generate less smoke; clean fuels for cooking like biogas, LPG, kerosene etc. and Solar Cookers.

Improved biomass stoves and improving ventilation are likely to be the most cost-effective options for the near and mid term. Social forestry and afforestation of degraded forestland by the community should help in increasing availability of biomass. But in the long term, the

preferred option would be transition to high-quality alternative energy sources for cooking. In general there is a preference for cleaner fuels and a transition to clean household fuels comes as a natural consequence of economic development. Such a transition can be accelerated if clean fuels are made available at affordable cost. Local micro credit facilities will have to be provided for meeting the upfront costs to low-income households for switching to clean fuels.

The sun is an inexhaustible source of energy to mankind. India is ideally located for the utilisation of the radiant energy of the sun. A solar cooking device cooks food with the help of solar energy and saves conventional fuels to a significant extent. The Ministry of Non-Conventional Energy Sources has been promoting the use of solar cookers through capital and interest subsidies. Over half a million solar cookers have been installed so far. Presently, different types of solar cookers are being propagated under the market-oriented and demonstration programme of the Ministry.

The Ministry of Non-Conventional Energy Sources has taken up programmes on biogas development, improved chulhas, solar cookers and Integrated Rural Energy Programme (IREP) for meeting rural energy needs, especially for cooking. Over 32 lakh family type biogas plants have been set up against the potential of 120 lakh biogas plants in the country. In addition, more than 3,000 community, institutional and night soil-based biogas plants have been set up. The number of improved chulhas installed in the country is over 34 million against the potential of 120 million chulhas. In addition, block-level IREP Project Cells have been sanctioned for being established in 860 blocks.

People's participation through Panchayats, other local bodies, co-operatives and NGOs would go a long way in realising the objectives of the above programmes. The achievement in Sagar island in Sundarban area of West Bengal has shown what community participation can do. There are other examples too, which are worth emulating for meeting the energy requirement in rural areas. We need to consolidate our experiences to devise a strategy, which addresses this issue in all its dimensions.

I understand that the World Bank has been undertaking a multi-sectoral study titled "India: Household Energy, Indoor Air Pollution and Health" to improve knowledge and raise awareness of indoor air pollution issues and identify mitigation strategies and policies. This Workshop is being organised with the objective of disseminating the results and recommendations of this study to a wider audience. Further, the World Bank is now taking up a study on "Access of the Poor to Modern Household Fuels in India". We look forward to the outcome of this study and hope that it will come up with practical and implementable policy decisions.

I wish the Workshop all success and look forward to its proceedings and conclusions.

Inaugural Address at the Workshop on Household Energy, Indoor Air Pollution and Health organised by the World Bank and Tata Energy Research Institute (TERI) in New Delhi on May 9, 2002

COMMERCIALISATION OF INDIGENOUS TECHNOLOGIES*

It gives me great pleasure to be here among this galaxy of scientists and experts on the occasion of National Technology Day and to present the National Award for successful commercialization of indigenous technology. On this day in 1998 India entered the club of nuclear nations after it successfully carried out the nuclear tests, popularly known as Pokhran-II. It was a defining moment in the demonstration of our technological prowess and hence christened as the National Technology Day by our Prime Minister, Shri Atal Bihari Vajpayee. I am happy to note that the Technology Development Board of the Department of Science and Technology has been celebrating 11th of May as the National Technology Day every year since then.

It is always a pleasure for me to interact with those who have contributed handsomely to bolster S&T in this Country. There are many unsung heroes in the campaign to develop and strengthen S&T. They work in universities, National Laboratories, scientific organisations of the Government and the private sector.

The pace and shape of national development will be determined in a significant way by our success in promoting science and applying technology for raising production in all sectors. The Technology Development Board is the first organisation within the Government set-up with the specific objective of promoting indigenous research by actively pursuing the commercialisation of indigenous technologies. It is, therefore, entirely appropriate that it should take the lead in giving recognition not only to those who have developed technologies but also to those who have demonstrated their confidence in our indigenous technological capability by putting their money where their mouth is. Growth of science and technology has raised several hopes about its potential on the one hand and anxieties about its implications on the other. The importance of technological innovation

and creativity as a catalyst of growth is becoming increasingly evident and bodies like the Technology Development Board can play an important role in nurturing new technological initiatives.

There is no denying the fact that the knowledge of individuals and the collective knowledge of organisations are the only real competitive advantages that any country can rely upon to develop in the 21st century. India, fortunately, recognised this fact early and has made relatively good progress in this direction. However, our successes should not make us complacent, as the challenges are complex and growing and the competition tough. In the past, given our relative insulation, technological self-sufficiency did not necessarily require being at the frontier. As the process of globalisation progresses, however, we will have to raise our sights and bench-mark the best. I have no doubt that we can do so but it will not happen without the requisite focus and determination. Given India's diversity and the varying levels of economic and social development, the technological needs of the country are also diverse. The challenge before us is to bring about synergy in our actions, so that knowledge generation and utilisation benefits all segments of the Indian society, without causing disparities or lopsided development. A three pronged development strategy encompassing technological inputs is, therefore, required for societal transformation, wealth generation and knowledge or resource protection. For societal protection, the area of focus should be on education, health care, agriculture and governance. In respect of wealth generation, the important areas include information technology and communication, biotechnology, space technology, material technology and oceanography. The service-driven areas include disaster mitigation, tele-medicine, tele-education, infotainment, conventional and non-conventional energy, environment and ecology. In order to benefit from the potential of these areas, attention should be given to the informal sector of the economy. This would not only accelerate the growth of GDP but also help to improve the quality of employment and increase the incomes of workers in the informal sector. Growth of a knowledge society progressively requires development of capabilities for protecting the knowledge resource and therefore involves the

strengthening of Intellectual Property Rights, protection of biological and microbial resources, protection of native knowledge and culture, protection of network and information generators from all kinds of electronic attacks.

At the macro level, the developmental strategy with technological orientation should focus on meeting the needs of the nation, including the industry, and encompass a wide spectrum of activities, namely, basic research, applied research, technology transfer, design, development, fabrication, tests and trials, manufacturing, marketing, maintenance and product support during the product life cycle. In the present liberalised environment, industry may have to pay more attention to external sources to upgrade its technology through radical technological jumps. It must also anticipate technological changes and take advantage of the same, acquire appropriate new technology, depending on its business strategy, and commercially exploit it to develop and produce new products for competitive markets. Technology management for industry has to be viewed as a continuous and cyclical process and it requires a strong system of technology monitoring and assessment. Indian industry must be assisted to develop these capabilities.

The R&D sector in India has so far been predominantly supported through government funds. Traditionally, Indian industry has been seeking technology from foreign sources through production license. However, gradually, the interface between industry, R&D and academia has been gaining strength in terms of acquiring new technology, availability of well-trained scientific and technical manpower, gaining experience relevant to the country, development of sector-specific capability etc. There have been weaknesses too, such as: lack of forums for regular need-based interaction, low sensitivity to urgency, deliverability and end-use orientation, insufficient motivation for continuous improvement and innovation, lack of proper mechanisms for technology transfer and absorption, lack of level playing field and inadequate mechanisms for accountability and rewards etc.

We are now in the process of finalising the Tenth Five Year Plan. The Approach Paper to the Tenth Five Year Plan has recognised that the

comparative advantage in the globally integrated knowledge-based economy today is shifting to those with brain power to absorb, assimilate and adopt the spectacular developments in S&T and harness them for national growth and that the Tenth Five Year Plan should give a special thrust to S&T for leveraging on the strong institutional S&T framework built so far. During the Tenth Five Year Plan, significant inputs will be put in those areas where India can emerge as a global leader and where benefits of S&T will accrue to all those who have been excluded so far. With a view to preserve, protect and add value to India's indigenous resources, an appropriate mix of innovative technologies, designed to meet Indian needs, will be supported. The situation of Indian exports deriving their comparative advantage through resources and labour will be progressively changed to one, where technology-led hi-tech products also enjoy a comparative advantage.

The challenges and opportunities of global competition in the emerging knowledge economy can only be met through sustained development of our human resources. The creation of a rapidly expanding cadre of top-class professionals in various disciplines of science and technology, especially in the areas of information technology and biotechnology, is needed to meet the demands of both domestic and international markets. However, lack of enthusiasm among young students for higher studies in science and careers in scientific research, large-scale migration of science students from India to other countries or shifts from science career options to others are resulting in non-availability of specialised and trained manpower in the fields of S&T. Such a trend, if not arrested at this stage, may result in serious shortages of good quality teachers and research scientists. Although several programmes have been initiated to attract young scientists, these do not appear to be enough to reverse the trend. There is, therefore, a need to take up new, imaginative and innovative programmes by various agencies to stimulate the interest of young students in science and technology. A great deal of attention should be given to generation of the right kind of scientific and technical manpower, whether it is technicians for operational levels or

higher levels of post graduate education including Ph.Ds., in order to meet the growing and demanding needs of indigenous technology. For this the conventional structure, viz. vocational, professional undergraduate, post graduate and Ph.Ds, may have to be much more responsive to the needs of the economy particularly to meet the challenge of global excellence.

The increasing integration of national economies into the world economy, through international flows of goods and services, investment, people and ideas, has given rise to new forms of competition and cooperation among firms and countries and encourages the diffusion of new ideas and technologies. The ability to create, distribute and exploit knowledge and information seems ever more important and is often regarded as the single most important factor underlying economic growth and improvement in the quality of life. Identifying niche markets, in which our international competitiveness can be improved, increasing technology investment and enhancing productivity have become imperative. The processes of liberalisation and globalisation have posed new challenges to our R&D establishments, especially in the context of WTO and TRIPS. Technology development acquired even greater critical importance in the tightened technology denial regime in the aftermath of the nuclear explosions. Along with challenges, new opportunities have emerged. India's impressive technological base, with all its technical expertise, is capable of responding to these new opportunities. If we lag behind in our scientific and technological efforts, we may well lose a most opportune moment for attaining not only advanced knowledge and techniques but influence and status in the world. It is, therefore, necessary to take bold initiatives to seize the opportunities that have arisen.

With these words, I offer my heartiest congratulations to the recipients of the National Technology Day Awards for the year 2002 and appreciate the efforts being made by the Technology Development Board for promotion and commercialisation of indigenous technologies.

**Inaugural Speech at the National Technology Day on May 11, 2002.*

STRATEGIES FOR EMPLOYMENT GENERATION *

It gives me great pleasure to welcome you to the release of the report of the Special Group on Targeting Ten Million Employment Opportunities per Year. As you are all aware, shortly after this Government took office the Hon'ble Prime Minister announced to the nation that his Government is committed to "create ten crore employment opportunities over a period of ten years". There was prescience in his vision. At that time, the results of the 1999-2000 NSS survey were not available and most experts were more or less confident that the acceleration in growth, that had been experienced during the mid-1990s, would have created sufficient employment opportunities not only to absorb the increase in the labour force but also to reduce the back-log of unemployment. In the Planning Commission too, we were expecting that the elasticity of employment to GDP growth would remain around 0.4, which had been our experience between 1983 and 1993 and which was reflected in the Ninth Plan document. With such an elasticity, a growth rate of 6.5% per annum would lead to the creation of almost 8 million employment opportunities per year, which would be significantly higher than the increase in the labour-force.

The release of the NSS survey results in 2000 was an eye-opener. It became apparent that the pace of creation of work opportunities had slowed down significantly during the 1990s, despite an acceleration in the growth rate of the economy. During the 6-year period between 1993-94 and 1999-2000, the rate of growth of employment was just above 1% per year, which is less than half of what would have occurred had the earlier elasticity obtained. Clearly, there has been a decline in the labour intensities in the various sectors of the economy. On the other hand, demographic trends had indicated that the rate of growth of population in the working age group is accelerating due to the high birth rates experienced in the late 1970s and early 1980s and is likely to attain its peak during the current decade. Surprisingly, the

NSS data indicated a significant lowering of labour force participation rates, mainly among the younger age groups and rural women, resulting in a lower than expected rate of growth of the labour force. As a consequence, there was little increase in open unemployment during the period.

However, it seems quite likely that participation rates will tend to rise again, since those who have delayed their entry into the labour force in order to pursue more years of education will seek employment in the coming years. Moreover, there is no reduction in the growth rate of the working age population. Thus, the growth rate of the labour force will almost certainly accelerate in the future. If this happens, these trends imply that, if nothing is done, the country will face the spectre of rising unemployment with all its attendant economic, social and political consequences. There is also a growing recognition that the commonly cited unemployment figures mask the high incidence of underemployment in the country. Too many of our people do not have sufficient work to engage them round the year, while others work long hours at low levels of productivity.

Thus, the Prime Minister's assessment of the future appears to be borne out by the data. The Planning Commission was entrusted with the responsibility of giving shape to his vision. To this end, the Planning Commission constituted a Task Force on Employment Opportunities in January 1999 under the chairmanship of Shri Montek S. Ahluwalia, then Member, Planning Commission. The Task Force submitted its report in July 2001, which I believe is available with most of you and has also been placed in the public domain for wider debate and discussion.

The Task Force examined the requirement of job creation in terms of additions to the work force on the Usual Principal and Subsidiary Status (UPSS) basis, which turned out to be lower than ten million per year at the assumed labour force participation rates. It also assumed that the recently observed labour intensities in the various sectors of the economy would continue to prevail and it therefore concentrated primarily on the major macro-economic policy changes that would

be required to increase the growth rate of the economy sufficiently in order to generate the requisite employment opportunities to absorb the projected increases in the work force. Its main conclusion was that the growth rate of the economy will have to be increased to at least 8% per annum and that this was a feasible target provided that certain critical policy reforms were undertaken.

In its deliberations the Task Force had not paid adequate attention to the issue of the large backlog of underemployment as reflected by the Current Daily Status (CDS) data, which is perhaps as much of a problem as open unemployment. Once this is taken into account, the target of ten million job opportunities per year on the CDS basis becomes imperative and consideration needs to be given as to how this can be met. It is certainly true that an acceleration of the growth rate is essential to tackling the employment issue and the Task Force has made many valuable suggestions in this regard. However, we cannot entirely disregard the possibility of increasing employment intensities through appropriate policy interventions at the sectoral and regional levels, especially in view of the expanded requirements for employment. It was felt by the Planning Commission that the Task Force report needed to be augmented in at least these two dimensions.

In order to address these issues, the Planning Commission constituted the Special Group on Targeting Ten Million Employment Opportunities per Year under the chairmanship of Dr. S.P. Gupta, Member, Planning Commission. It is a source of satisfaction that this report of the Special Group, which is now before you, has examined these issues carefully. It clearly indicates that it is possible to increase labour intensities in the economy and to reduce underemployment through well-designed policy and programme interventions, which take into account sectoral and regional specificities.

The strategy for employment creation through the growth process, as recommended by the Task Force, is likely to take time and should therefore be seen as a medium-run solution. It needs to be complemented by specific short-run strategies, which can deliver results within the Tenth Plan period. There is also need to ensure that

the structure of employment opportunities is consistent with the skill profile of the labour force as it exists today and is likely to evolve in the immediate future. The Special Group has dealt with these issues. In particular, it has shown that there is considerable scope to reduce the extent of underemployment in, and thereby increase the productivity of, agriculture.

Today, therefore, we have available to us two valuable reports on the issue of employment generation in the country. Each examines a different facet of the overall problem. The Task Force goes into the macro-economic policy reforms that are necessary to increase the rate of growth in the country, while the Special Group concentrates on the more micro aspects of increasing labour intensities in the different sectors and regions. In this sense, these two reports are complementary and should therefore be taken together in order to get a holistic picture of employment prospects.

We believe that both these reports need to be discussed and debated at the national level so that an informed consensus emerges. We will be happy to consider all serious comments and suggestions received. I would be grateful if the media takes a leading role in encouraging such discussions in a balanced and constructive manner. The Planning Commission will consider both the reports and the suggestions received and its final view will find reflection in the Tenth Five Year Plan document, which is currently under preparation.

Thank you.

* *Opening Remarks at the release of the Reports of the Special Group on Targeting Ten Million Employment Opportunities per Year on May 28, 2002 at Yojana Bhavan in New Delhi*

NEED FOR PRO-POOR POLICIES IN SOUTH ASIA*

Excellencies, distinguished members of the Independent South Asian Commission on Poverty Alleviation, ladies and gentlemen,

May I begin by welcoming all of you to Delhi and to say that the Government of India is delighted to host the second meeting of this Commission? It is particularly gratifying to note that ever since the conclusion of the Eleventh SAARC Summit the Member-States have shown commendable commitment to, and interest in, this very important subject of poverty alleviation. Not only has the re-constituted Commission been set up but also a Ministerial-level meeting on poverty alleviation was held in Islamabad under the three-tier mechanism. I am happy to note that work on poverty profiles of each SAARC member-country has also begun in right earnest.

South Asia is home to over 1/4th of the world's population. A region, once known for its economic prosperity, richness of culture and social unity among different religions and communities, has come to be seen as one of the poorest regions of the world. Poverty, misery and strife are projected as the defining characteristics of the South Asia region. We continue to be home to over 40% of world's poor in spite of impressive growth in many parts of South Asia over the last 15-20 years. This situation cannot be allowed to continue. All of us have to bring our energies together in tackling the scourge of poverty in our region.

At the Eleventh SAARC Summit, all Heads of State or Government identified poverty as the major developmental challenge in the region and made a commitment for a concerted programme to deal with it. The reconstitution of the Independent South Asia Commission on Poverty Alleviation is a reaffirmation of the collective resolve of member-Countries to eliminate poverty in a concerted and time-bound manner.

That poverty is multi-dimensional is clearly recognised. Focusing only on the economic aspects, as we have tended to do in the past, will

clearly not suffice. Attention will have to be paid not just to the present needs but also to develop future capabilities. It would require substantial resources, effective delivery mechanisms and empowerment of the poor to ensure that every citizen of our region is enabled to realise his or her full potential. At times we seem to get frustrated by the enormity of the problem. This is particularly so in the context of India where, in spite of poverty alleviation being our major objective of planned development, over 25% of our population continues to live below the poverty line. The situation in many other countries of the region is similar. A renewed approach, which tackles poverty in its different manifestations, is therefore the need of the hour.

As you all know, poverty has become a global concern. The international community has increasingly devoted its attention to this issue. Many Conventions and Treaties have been signed in the last 10 years that have an important bearing on the question of poverty. Most of the countries in the South Asian region are parties to these Conventions. The millennium development goals adopted in the year 2000 internalise many of the targets set by the international community in the 1990s. Elimination or reduction of poverty by half by the year 2015 is the foremost millennium development goal. Achievement of this goal critically depends on the progress achieved in South Asia in poverty alleviation. If we fail, the world fails. We must succeed, not just for meeting targets set internationally but to provide a fair deal to our people.

To achieve a sustained reduction in the incidence of poverty we need to embark upon a series of pro-poor growth policies. This would require economic reforms and a rapid process of trade liberalisation. For years our economies have taken shelter behind protectionist measures. Such measures helped us to industrialise initially. However, they also pushed our inefficiencies under the carpet. In a globalising world, we can no longer overlook these inefficiencies and still survive. The time has come for us to embark upon a new course and with a sense of urgency and greater vigour. Internal reforms are important in our South Asian

context. That these reforms would also make our region an attractive destination for foreign investors is another advantage.

At the same time it is essential for us to remember that pro-growth policies must have a pro-poor focus, as the fundamental goal we are committed to is poverty eradication. The distribution of gains needs to be fair so that the acute asymmetries of unprecedented prosperity on the one hand and abject misery on the other may be meaningfully addressed on a sustained basis. Frequently these appear to be contradictory objectives but it is not so. We believe that with sensitivity and imagination the two objectives can be reconciled in a mutually reinforcing manner.

As I had mentioned earlier, elimination of poverty requires adequate resources and their proper utilisation. The resources required to finance pro-poor policies can be generated only by accelerating the economic growth. Some of the measures that we need to look at seriously in this regard relate to liberalisation of our economies with a view to creating synergies for growth. Many of our countries have large populations, which can provide huge internal markets. If we can enlarge the contours of these markets by enhanced economic and commercial co-operation, all countries in the region would benefit immensely. Many regional groupings have travelled very far down the road of economic co-operation. The European Union and ASEAN countries are two shining examples. The SAARC countries have still a long distance to traverse. However, I am sanguine that in the coming years, economic co-operation through SAFTA and SAPTA would be given the necessary impetus as this would be mutually beneficial to us all.

The reconstituted Commission has already met in Kathmandu in March and has set out a road-map to achieve the target set out by the 11th SAARC Summit for submitting its Report and Recommendations to the 12th Summit early next year. At another level, I had recently participated in the SAARC Conference of Planning and Finance Ministers, which was held in Islamabad in April on the same subject. Many of you would have read the Report and the Plan of Action that came out of that conference. While the Ministers can meet periodically

to review the progress or otherwise on poverty alleviation, the Commission's work is an on-going process. However, it should be borne in mind that the framework and the Plan of Action agreed to in the meeting of SAARC Ministers is not lost sight of.

The Commission needs to deliberate on these as well. Dealing with poverty cannot be confined to an academic exercise. While theoretical models and research studies are enlightening, in the immediate short and medium term we need to candidly ask ourselves, "What are the costs of delaying and deferring co-operation in the economic, trade and fiscal areas? What are the costs of not opening up our economies? As members of WTO and as those seeking accession to WTO, do we have the luxury of placing on hold our commitments and obligations, particularly where these relate to economic reforms?"

Distinguished participants, you have an important and urgent task before you. What is at stake here is the future of over 1.4 billion people. While wishing your deliberations all success, I hope you will make practical and realistic recommendations.

¹ Inaugural Address at the 2nd meeting of the Independent South Asian Commission on Poverty Alleviation (ISACPA) held on June 5, 2002 in New Delhi

HEPATITIS B VACCINE IN IMMUNISATION PROGRAMME*

Immunisation has been the sheet anchor of preventive child health programmes all over the world. Currently almost every country in the world immunises children against six vaccine-preventable diseases. This effort has saved millions of children by preventing morbidity and mortality arising from these infections.

In India, the Universal Immunisation Programme (UIP) was taken up in 1986 as a National Technology Mission and the programme became operational in all the districts in the country during 1989-90. The National Health Policy of 1983 had set the goal of achieving universal immunisation against all the six vaccine-preventable diseases by 2000 AD. This goal was not achieved. However, the Department of Family Welfare has undertaken steps to strengthen the routine immunisation programme and has been conducting the pulse polio campaign for the last six years. It is expected that with these intensified efforts universal immunisation and elimination of polio will be achieved within the Tenth Plan period. However, we will have to continue universal immunisation with these six vaccines for the next decade or longer so as to ensure that the country remains free from vaccine-preventable diseases.

Research efforts during the last two decades have resulted in the development of effective vaccines against many other infections such as mumps, measles, rubella hepatitis B, H influenza and chicken pox. Many of the developed and some of the developing countries have incorporated some of these vaccines as a part of their childhood immunisation schedules. In many countries the cost of the newer vaccines are borne by the parents. In India, MMR and Hepatitis B vaccines have been provided on payment by the private and voluntary sectors for the last two decades. These vaccines were not introduced in the National Immunisation Programme because of the prohibitive cost of the vaccine as well as the potential adverse effects of overloading an already stretched public health system. If polio elimination is

achieved soon, this scenario may change. Advances in biotechnology, and entry of Indian biotech firms in the area of Hepatitis B vaccine production have resulted in a dramatic fall in the cost of the Hepatitis B vaccine in India from over Rs.400 per dose in the mid-nineties to less than Rs.20 per dose in 2002. During the last two years, several voluntary organisations have been giving Hepatitis B vaccine to children in metros. Their experience suggests that even poor parents are able and willing to bear the current cost of purchasing the vaccine, once they have been informed of its importance and benefits. Having once borne the cost of getting the vaccine, the dropout rate between injections is relatively low. In Mumbai, the reported completion rate of the three-injection course was over 80 per cent.

It is in this milieu that the Department of Family Welfare is undertaking this pilot project on Hepatitis B immunisation in 15 major cities to cover an estimated population of 7.2 lakh slum children and 32 districts with 12.5 lakh children at a cost of Rs.27.19 crore. The areas have been chosen because the reported current routine immunisation rate is over 80% and the existing infrastructure can cope with the additional work load of introduction of the Hepatitis B vaccine. The partners in this pilot project include UNICEF, World Bank, GAVI, WHO and Department of Family Welfare.

Experience over the next two years with this pilot project and the ongoing NGO and private sector efforts regarding Hepatitis B vaccine will provide valuable insights into the emerging public-private participation in immunisation and other preventive and promotive child health programmes in the country. Based on this experience the Government will be able to evolve appropriate policies and strategies and make investment decisions regarding introduction of newer vaccines. With the commitment of all concerned stakeholders, I am sure that this pilot programme will be very successful. I would like to take this opportunity to felicitate all the partner organisations for having initiated this effort to eliminate yet another killer from our midst.

* Speech on the occasion of launching of the project for introduction of Hepatitis B Vaccine in the Immunisation Programme on June 10, 2002 in New Delhi

TASK BEFORE SAARC NETWORK OF RESEARCHERS*

It gives me great pleasure to inaugurate the Fifth Meeting of the SAARC Network of Researchers on Global Financial and Economic Issues and the Seminar on Post-Doha Challenges of the World Trading System for South Asia and to welcome you all to Delhi.

I believe that the SAARC Network of Researchers is an important initiative of SAARC not only to foster intellectual co-operation in the region but also to enhance our capabilities for strategic policy-making. It will promote academic research and studies in the SAARC region, which are of relevance to policy-making specifically on the global financial and economic challenges and also on taking advantage of the opportunities for co-operation. Many challenges that the South Asian countries face today in an increasingly globalised world economy are common. For instance, one is how to respond to the emerging rule-based world trading system or to deal with the volatility of the capital markets. Hence, it is important that we have an institutional framework for the researchers of the region to co-operate and collaborate with each other and for coordinating their efforts. This Network could serve in facilitating these linkages and networking.

It is indeed gratifying to see the Network, set up in April 1999, becoming active within a fairly short span of time. I understand that a number of short-term and longer-term studies have been launched. The *South Asia Economic Journal*, brought out jointly for the Network, by RIS and the Institute for Policy Studies (IPS) in Colombo, is in its third year of publication. It is heartening to note that it has acquired recognition as a prestigious peer-reviewed academic journal and has emerged as a forum for informed debates on major economic policy issues pertaining to the region.

Another initiative in intellectual co-operation in the region, which deserves mention, is the South Asia Development and Co-operation Report 2001-02 brought out by RIS earlier this year. The Report

provides a South Asian perspective on the emerging global trade and financial systems and highlights the challenges and opportunities arising from them. It also maps out the development process in these economies and presents a profile of economic co-operation among them. In the light of this analysis, the Report provides an inventory of policy options before these economies to handle the vicissitudes of the changing world economy. The RIS research team preparing this Report had the benefit this time of inputs received from their Network partners in other SAARC countries. These inputs have helped in enriching the contents of the Report. This Report usefully complements the South Asia Human Development Reports prepared by the Mahbub-ul Haq Centre for Human Development based in Islamabad, among other related initiatives.

I am glad to note that this fifth meeting of the Network is being followed up by a Seminar on Post-Doha Challenges of the World Trading System for South Asia. The emerging world trading system has come to exercise an important influence on the process of development of member countries. Five of the SAARC countries are members of WTO, while Bhutan and Nepal are in their transition phase prior to accession to WTO membership. The WTO agenda is constantly being expanded to bring more and more issues to the negotiating table. Developing countries have undertaken substantial commitments under different WTO Agreements. We have therefore to prepare ourselves not only for the ongoing mandated negotiations but also for dealing with the new issues. This is a formidable challenge. I hope that the Seminar will be able to discuss the various initiatives and further the possibilities of coordination of our position on them. The SAARC countries have coordinated effectively on WTO issues in the past. The Commerce Ministers of SAARC countries met before the Ministerial Conferences of WTO in Seattle and Doha to evolve their common positions and coordinate their strategies with some profit.

Given the asymmetric process of decision-making in WTO, the developed countries, especially the Quad Countries, viz. the US, the

EU, Japan and Canada, exercise disproportionate leverage over the outcome of the negotiations. However, the developing countries, along with the support of other like-minded countries, were able to forcefully present their concerns for the first time at the Doha Ministerial meeting and get the developed countries to agree with at least some of their proposals and to postpone some decisions. For instance, the developing countries were able to stall the introduction of core labour standards on the agenda of the Doha Round. They have also been able to postpone the launch of negotiations on four new non-trade issues, viz. investment, competition policy, transparency in government procurement and trade facilitation, to the next Ministerial Conference. A major success has been that of getting recognition of public health concerns and the need for flexible use of the provisions of the TRIPS Agreement for dealing with them. In this process the close co-operation at the South Asian level has helped our countries to coordinate their positions.

Against that backdrop, I feel that the Seminar on Post-Doha Challenges is very timely. I hope that it will discuss issues of common concern for the South Asian countries and help in evolving a common position on these issues.

Among the issues that merit special consideration is the restoration of effective development dimension in the different WTO agreements so that the development process of developing countries is not adversely affected. There has been a tendency in the recent trade negotiations to dilute the provisions of Article XVIII B of GATT that provides for special and differential treatment (SDT) of developing countries. In the Uruguay Round Agreements the differential treatment provided to developing countries was reduced to only a longer transition period than that allowed to other countries for implementation. Even such longer transition period allowed to developing countries has been diluted in certain cases, as for instance in the case of the TRIPS Agreement, where the provision of pipeline protection has been brought in. The Doha Declaration rightly emphasises the importance of keeping the special needs of developing and least developed

countries in mind. The challenge before researchers is to propose ways and means of incorporating enforceable provisions in different agreements that take care of the special needs of developing countries.

I do hope that the Seminar will be able to reflect on some of these issues and contribute to the process of our preparedness for the forthcoming negotiations.

I wish you all the best in your endeavours. With these words I take great pleasure in inaugurating this meeting.

** Inaugural Speech on the occasion of the Fifth Meeting of the SAARC Network of Researchers on Global Financial and Economic Issues and the Seminar on World Trading System and South Asia: Post-Doha Challenges on 22 July, 2002, New Delhi*

ISSUES IN TRANSPORT SECTOR DEVELOPMENT*

It gives me great pleasure to be here today on the occasion of the inaugural function of the CILT-India International Conference on "Integrated Transport Issues in a Changing Scenario". I look forward to a lively debate on the issues relating to transport problems of the country. I also hope that the Conference would come up with tangible recommendations that could be inputs for policy decisions.

We have made rapid progress in developing a nationwide transport network in the first fifty years of Independence, both in terms of spread of network and the capacity to carry passenger and freight traffic. There have also been several improvements of a qualitative nature, such as emergence of a multi-modal system in the form of container transport, marked reduction in arrears of obsolete assets, improvement in the self-financing capacity of the sector and the establishment of centres of excellence for manpower development. However, the country's transport system is far from adequate and suffers from a large number of deficiencies. The main rail and road links of the transport system are saturated and capacity shortages are becoming a major constraint in overall growth of the economy.

The planning process in India has always worked towards developing a comprehensive framework to address various inadequacies and imbalances in the transport sector. Special emphasis was placed on improving transport infrastructure in the Ninth Five Year Plan. It laid stress on improving the capacity and quality of the transportation system and on improving the self-financing capacity of the sector. The review of the Plan shows that while there were tangible achievements in some of the sub-sectors, particularly roads and ports, the progress in others has not been very encouraging. This is particularly true in the case of railways, where significant shortfalls have been experienced in achieving physical and financial targets as well as policy

objectives. Our endeavor in the Tenth Plan would be to address these shortcomings and to improve the quality of passenger and freight services.

I would like to draw your attention towards two major initiatives in the transport sector, which could change the face of the country. These are the National Highway Development Project and the Pradhan Mantri Gram Sadak Yojana, which are expected to bring about a major revolution in the road sector and accelerate the economic and social development of the country through better connectivity and accessibility.

The National Highway Development Project comprises of the Golden Quadrilateral (GQ) and the North-South, East-West (N-S, E-W) corridor projects, which aim at 4/6 laning of the existing 2-lane network. The GQ with a length of 5,851 km would connect Delhi, Mumbai, Chennai and Kolkata, while the North-South and the East-West Corridors with 7,300 km length would connect Kashmir to Kanyakumari and Silchar to Porbandar. The project envisages an investment of Rs.54,000 crore. The target for completing the GQ is December 2003 and for the N-S, E-W corridors December 2007. There has been some concern about slippages in the work schedule of the GQ and efforts are being made to accelerate the momentum of work.

The Pradhan Mantri Gram Sadak Yojana (PMGSY) intends to provide connectivity by way of all-weather roads to the unconnected habitations in rural areas. The aim broadly is that all habitations with a population of 1000 and above are covered by 2003 and those with 500 and above by the end of the Tenth Plan Period (2007). The Programme also seeks to achieve an equitable development of the rural roads network in different States and districts so as to fully exploit the latent potential for rural growth.

These two Central Government initiatives should adequately address the two ends of the road transport spectrum. The intermediate links, mainly the State highways and district roads need to also be given due consideration. After all, a network, like a chain, is only as good as

its weakest link. Indeed, there is a need to objectively examine the relative importance of the various components of our road network in order to determine the appropriate prioritisation.

You would agree that expanding the road transport network and improving the quality of service cannot entirely be financed from budgetary resources. Therefore, increasing participation of private sector is necessary both to augment the resource base and to increase competitive efficiency in the road transport sector. Thus far the private sector has been involved only in the vehicular and logistics management activities. Its contribution to the base infrastructure has been minimal. Though efforts have been made to encourage such participation, the response of private sector has not been very encouraging so far. Our effort in the Tenth Plan therefore would be to further encourage private sector participation in every aspect of the road transport sector.

Equally important is internal generation of resources through user charges for transport infrastructure, which the Government has been actively encouraging. One of the best examples in this regard is a toll on roads. Levy of tolls on roads is major alternative for generating additional resources. Being implemented on pay-as-you-use principle, toll is particularly useful for large value projects like bridges, expressways, 4/6-laning of roads etc. Such earnings could also be leveraged through borrowing against the security of future inflows. However, care has to be taken to ensure that such charges do not become prohibitive, thereby defeating the very objective of providing connectivity to all.

A related issue is the rational pricing of all transport services. The price charged for services should ensure adequate return on investment. It is a means of internal generation of resources, which could be ploughed back for further investment as well as improving the quality of services. The pricing policy assumes special significance when budgetary resources are a constraint. It is also an incentive mechanism for attracting private investment. The price instrument also corrects supply-demand imbalance in the transport sector so as to avoid overcrowding and ensure optimal utilisation of the transport

infrastructure. In a poor country like India, the paying capacity of the users of transport services also has to be given due consideration. An ideal pricing policy would take all the three factors into consideration and the issue could be further debated in the Conference.

A very important aspect, which is also the theme of this Conference, is the need to take an integrated view of the transport sector. The transport sector comprises of diverse modes and the transport policy has to view the system as an integrated structure in which various modes complement each other, interface appropriately and where possible provide healthy competition to each other. This competition must be conducted within such a framework that each mode is able to operate on a "level playing field" and its comparative advantages and economic efficiencies are reflected in the costs to the users. The emphasis on such inter-modal issues has been an integral part of our transport policy and would be further emphasised in the Tenth Plan. We have come out with an Integrated Transport Policy document last year, in which many of these issues have been highlighted.

To illustrate with an example, the civil aviation sector is highly energy-intensive and short distance air travel is not very viable from the point of view of national economy. The saving in travel time is also at best marginal. Therefore, it is important that air services cater mainly to long-distance travel and to connecting difficult terrain and important tourist destinations, leaving the short-haul traffic to railways and road transport. Railways similarly are more energy efficient than the road-based system. There is considerable saving of time in moving passenger and cargo traffic by railways. It is also more environmentally friendly. There is, therefore, a need for greater emphasis on rail-based systems for both long and short distance passenger and cargo movement and also for addressing transport problems of metropolitan cities.

Inland water transport is another mode I would like to highlight in the context of an inter-modal framework. It is an energy efficient, environmentally clean and economical mode of transport. We have nearly 15,000 kms of waterways that could be used for passenger and cargo movements. The bulk of the potential lies along the rivers

Brahmaputra and Ganges and in the States of Kerala and Goa. With the advent of containerisation, this sector could play an important inter-modal role in facilitating cargo movement through establishment of a network where rail, road and inland waterways are seamlessly integrated into one chain, each working according to its locational advantage and competitive efficiency. Projects linking the inland waterways with the ports, particularly the minor and intermediate ports, could also be undertaken by the private sector. This would facilitate the transportation of cargo from the hinterland directly to the destination without diversion to road transport. The capacity of the sector, however, is grossly under-utilised as most navigable waterways suffer from hazards like shallow water and narrow width of channel, silting of riverbeds and absence of adequate infrastructural facilities. The Tenth Plan would be emphasising on many of these aspects.

The issue of technological upgradation in the transport sector is another priority issue. Compatibility between vehicular technology and expansion of road network is very important for long distance travel. While projects like Golden Quadrilateral and North-South, East-West corridors would provide a world-class road network for passenger and freight traffic, the quality of vehicles, particularly in public transport and the freight sector, unfortunately, is very poor. This leads to slow traffic movement and damage to roads. Yet the solution is far from obvious since these high-speed corridors will necessarily have to coexist with inferior road networks for some time to come and vehicle design will need to take this fact into account.

The issue of technological upgradation is not confined to the road sector and is equally relevant for other modes of transport. It is particularly important in the railway sector. The Railways needs to improve reliability of assets, which affects its productivity. The incidence of asset failures has to be controlled by providing technological back-up to the human element in the area of railway operations in order to enhance safety.

In order to improve the quality of services, the Railways must increase the speed of its freight trains, which, in turn, requires improvement

in freight car design to secure higher pay load to fare ratios for freight. The process of improvement in locomotive technology through adoption of the latest state-of-the-art locos needs to be accelerated but it is dependent upon corresponding improvements elsewhere. Introduction of modern signaling and telecom facility and better track management practices are essential to augment track capacity.

As you are aware, metropolitan cities and large urban centres are facing major transport bottlenecks, leading to road congestion, pollution and related problems. While the Government is making efforts to introduce mass-transit systems to reduce the pressure on private vehicles, we also need to reduce metropolitan congestion by introducing "users charges" on private vehicles in "high traffic zone areas" during peak hours. Delhi itself is witness to the problem of urban congestion during the peak hours and I would urge the Conference to find time to discuss the problem and suggest short and long-term solutions.

Another issue is the role of regulatory mechanism. To what extent should the Government regulate transport services? No doubt issues like pollution control, preventing accidents, public private ownership, competitive efficiency etc., would figure here but over-regulation can be as damaging as under-regulation. Therefore, an optimal level of regulation needs to be explored and the issue could be debated further in the Conference.

I have been able to touch only the fringes of a vast and complex subject. I am certain that this Conference will cover the gamut of issues and come up with recommendations that could be policy inputs in solving the transport problems of the country.

** Inaugural Address at the 8th CIIT- India International Conference on "Integrated Transport Issues in Changing Scenario" held on July 25, 2002 in New Delhi*

ISSUES IN SUSTAINABLE DEVELOPMENT*

Prof. Menon, fellows and associates of LEAD, ladies and gentlemen,

It gives me great pleasure to be with you at this Workshop on "India and the World Summit on Sustainable Development".

I recognize that LEAD India represents a diverse but committed group of professionals drawn from government, media, academia, industry and non-governmental organisations. The fact that professionals with such different backgrounds can share a common vision and work together is a sign of hope. I say this because in today's world, when distances are shrinking and the barriers between disciplines are being broken, progress is possible only when we are able to think and work in a co-operative and inter-disciplinary manner. As a nation and as inhabitants of this planet, all of us have a stake in ensuring that our growth and development are environmentally sustainable and socially equitable, as the mission of LEAD proclaims. Seen from this perspective, both the rationale and the focus of this Workshop are most relevant.

LEAD is to be congratulated for its efforts to contribute to the World Summit and for the timely publication of its book "Rio, Johannesburg and Beyond: India's Progress in Sustainable Development," the first copy of which, I understand, was presented to the President of India last evening.

Later this month, the attention of the international community will be focused on the "World Summit on Sustainable Development" taking place in Johannesburg. The whole idea of sustainable development, reflected in the Rio Earth Summit 10 years ago, is that development and environment are inextricably linked. For developing countries like India this linkage extends to the eradication of poverty and tackling problems of illiteracy, malnutrition, infant mortality and social and economic exclusion.

Much was achieved at Rio a decade ago and Agenda 21, adopted there, remains as visionary today as it was then. Yet, more often than not, we have failed to comprehend the real meaning of sustainability. That word has become a pious invocation, rather than the urgent call to concrete action that it should be. One important task at Johannesburg, therefore, is to demonstrate that sustainable development, far from being an abstract ideal, is a life-or-death issue for millions upon millions of people and, potentially, for the whole human race. Universal acceptance of the notion of sustainable development is an exceptional opportunity to reduce tensions over resources that could lead to violence, to build markets and create jobs, to bring people in from the margins and at the same time, to give every man and woman a voice and a choice in deciding their own future. Can people now living on this planet improve their lives, not at the expense of future generations, but in such a way that their children and grandchildren will also benefit? We have at our disposal the human and material resources to achieve sustainable development. What is needed is leadership and the will.

India has to her credit a number of milestones on the road to development. Our achievements in food production, space technology, nuclear science, telecommunication, information technology, pharmaceuticals, biotechnology and oceanography have been considerable. On the economic front, our rates of growth have been high despite heavy odds. Our foreign currency reserves are substantial and as a nation we have an incredible potential to provide goods and services at internationally competitive prices.

However, our success has not been without its paradoxes. Despite the 6% rate of growth in our economy, millions continue to remain poor. Impressive progress in food production has not yet eliminated malnutrition and scarcity. Despite world class infrastructure for medical education and an impressive turnout of medical professionals, minimum basic health care cannot easily be accessed by many. Availability of safe potable water continues to be a problem in some parts, despite our strengths in hydrology and water conservation.

Sustainable development can be a reality for our country only when we are able to investigate and take concerted action to deal with these paradoxes. What causes them? What processes influence them? What are their impacts? These are overarching and important questions that we must address collectively and harmoniously. Every section should be able to contribute—not only the policy makers but also the civil society, not only scientists and technologists but also holders of traditional wisdom and knowledge, not only environmentalists but every citizen rich or poor who uses nature's bounty to transform his or her life. Inclusiveness and participation are the keystone to sustainability.

We don't necessarily need an international summit like Johannesburg to articulate this vision. But what events like this do is to help us take a hard look at what we have done and what we need to do and to build a consensus on the strategies. This to my mind is the importance of what LEAD has been doing over the last one year and what we seek to do today as we share our concerns and ideas on India's development.

At the Planning Commission we have tried to contribute to this process through a number of initiatives. First and foremost, our national Five-Year Plans have consistently, since the Fifth Plan, embodied a vision of sustainability and have attempted to generate a national consensus on the emerging threats and appropriate responses. By and large, it is widely accepted that the Indian Five Year Plans are fairly comprehensive documents on sustainable development, despite our inability to implement them fully in both letter and spirit. Nevertheless, the role that these documents play in creating awareness and in conscience keeping is invaluable.

To further the process, particularly as far as advocacy is concerned, we have recently brought out the National Human Development Report, which details our successes and failures in various aspects of human well-being at the sub-national level. We hope that this effort will bring about greater focus and further research on the issue of human development in different parts of the country. The very size and

diversity of our nation demands that variations that exist in different regions are not lost sight of in the national aggregates.

Many States have whole-heartedly joined in this effort by bringing out the State Human Development Reports, which take the process further down to the sub-state level. The Reports provide an analysis of the problems and potentialities of the different States of the Union so that a more context-sensitive strategy for sustainable development can be evolved. I sincerely hope that these efforts will bear fruit in the not too distant future and bring about a change in the manner in which we think about issues.

I see that this Workshop has before it a most impressive agenda. I sincerely hope that its deliberations would shed light on how we can move forward.

It is an honour for me to be with you on this day and to inaugurate this Workshop. I look forward to its proceedings and conclusions.

** Inaugural Address at the LEAD India Workshop on "How Sustainable is our Development? India and the World Summit on Sustainable Development" held on 5th August 2002 in New Delhi*

GLOBALISATION IMPACT ON ASEAN-INDIA RELATIONS*

It gives me great pleasure to welcome His Excellency Dr. Ali Alatas who is going to deliver the 14th Lecture under the India-ASEAN Eminent Persons Lecture Series. Dr. Ali Alatas is a great friend of India. He has worked with India in various fora during his eventful career as a diplomat and as Foreign Minister of Indonesia. Dr Alatas has played an important role in the process of India becoming ASEAN's Dialogue Partner and joining the ASEAN Regional Forum.

H.E. Dr. Alatas has chosen to address us on a very pertinent topic of contemporary relevance, viz. International Relations in the Era of Globalisation: Challenges and Opportunities for India-ASEAN Co-operation. I am sure his lecture today and his thoughts on the challenges and opportunities for mutual cooperation between India and ASEAN will be thought provoking.

Our ties with ASEAN countries in general, and with Indonesia in particular, are many centuries old. The cultural linkages between India and Indonesia are well documented. We share a common history in terms of our struggles for Independence. India has contributed in its own way in the struggle for Independence of Indonesia.

We in India wish to build on our age-old cultural links with the ASEAN countries and intensify our co-operation with them as a part of a policy adopted in 1991 that has come to be known as the 'Look East Policy'. This policy is an attempt to strengthen our links with our South East Asian neighbours and to share experiences, technology, capital, and markets with ASEAN countries in a mutually rewarding manner. India became a Sectoral Dialogue Partner of ASEAN in 1992 to develop co-operation in the areas of trade, investment, science, technology and tourism. The fifth ASEAN Summit in 1995 decided to upgrade the relationship with India to the level of a Full Dialogue Partnership. This growing partnership between India and ASEAN

will be crossing an important milestone later this year with the Summit Level Meeting in November 2002.

I am happy to note that Dr Alatas has chosen to speak on challenges and opportunities for India-ASEAN co-operation in the context of globalisation. Globalisation has thrown up many new challenges before us. Rapid movement of short-term capital flows across borders has brought to the fore vulnerabilities and instabilities in developing countries. Several East Asian economies, and Indonesia in particular, have suffered serious liquidity problems because of these volatile capital flows in the late 1990s. We have to learn lessons from the handling of this crisis by ASEAN countries. We have also to co-operate at the regional level to prevent such crises from happening again. In this context, the Chiang-Mai Initiative is a step in the right direction. India should consider joining the Initiative and participate in regional co-operation.

The expanding agenda of WTO negotiations provides another avenue for mutually beneficial co-operation and coordination for ASEAN and India. The developed countries are increasingly putting pressure on the developing countries to expand the negotiating agenda of multilateral trade negotiations to cover several new issues in their pursuit of market access. India and ASEAN could coordinate their positions to ensure that their autonomy to pursue their development policy objectives is not unduly eroded in these negotiations. The Doha Ministerial Conference has shown that with effective coordination, the developing countries are able to achieve some of their objectives despite the domination of the world trading system by the Quad Countries viz. the US, the EU, Japan and Canada. Therefore, the coordination between ASEAN countries and India in WTO negotiations would be highly fruitful.

We have many other common challenges in this era of globalisation and we could benefit from drawing upon the experiences of each other. Among other things, we could learn from ASEAN countries' experiences in handling economic reforms with social safety nets so

that those affected adversely from the industrial restructuring do have some thing to fall back on.

The challenges arising from globalisation are not concentrated in economic sphere alone. There are security concerns and the growing menace of cross-border terrorism that has engaged the attention of the international community in the post-September 11 period. India strongly believes in regional peace and stability and has co-operated with the ASEAN countries on these issues in the framework of the Asian Regional Forum (ARF). The Indian concerns regarding the cross-border terrorism were reflected at the annual meeting of the ASEAN Regional Forum held in Brunei last week.

I am happy therefore that an eminent thinker of the region of the stature of Dr Alatas is with us today to share his words of wisdom with us. We look forward to his innovative and perceptive ideas for intensifying ASEAN-India co-operation, especially in the context of the forthcoming Summit in November.

I welcome Dr. Ali Alatas once again and invite him to deliver his address.

** Speech on the occasion of 14th India-ASEAN Eminent Persons Lecture by H.E. Dr Ali Alatas, former Foreign Minister of Indonesia, held on August 7, 2002.*

HOLISTIC APPROACH TO ADOLESCENT DEVELOPMENT *

I am very happy to participate in this Regional Meet on Adolescents. I would like to compliment the organisers for organising this get-together on the very important subject of 'Adolescents'. The meet is all the more welcome as it focuses on a topic, which has not received the attention it deserves.

As we look back at the first fifty years of our development experience as an independent nation, we can be justifiably proud of many of our achievements. The worst inequities of our colonial heritage are behind us. The long period of decline in our per capita incomes that characterised the first fifty years of the last century has been decisively reversed with steady and accelerating economic growth, based predominantly on our own resources. Moreover, we have recorded significant progress in practically all the social indicators, whether it be birth and death rates, life expectancy, infant and maternal mortality rates or literacy rates. Most importantly, all of this has been achieved within the framework of a vibrant pluralistic democracy, which has amply demonstrated its capacity to overcome divisive trends and manage change.

In the euphoria of these achievements, however, we should not lose sight of our inadequacies or failures. Too many of our people still live below a modestly defined poverty line. Although we may have virtually eliminated hunger, malnutrition and under-nutrition continue to be a source of concern. But the most glaring areas of concern are in the sphere of social indicators of the quality of life. This fact has been driven home by the inter-country comparison of the Human Development Index (HDI) brought out by the UNDP, in which India

ranks at 139 out of 174 countries. Some experts may not agree fully with the UNDP methodology, but that should not divert attention from the hard fact that in some of the objectively verifiable social indicators, India ranks below even the world's poorest and most backward countries of sub-Saharan Africa. This should lead us into introspection and not into fruitless argumentation.

There can be no two opinions about human development being the ultimate goal of all public action. The principal responsibility of the State is to improve the quality of life of its citizens. Quality of life is multi-dimensional, encompassing not only the economic opportunities available to the people but also their ability to take advantage of these opportunities and the existence of living conditions, which permit a healthy and productive life. No development process can be sustainable unless it leads to visible and widespread improvements in these areas.

It is in this backdrop that one must see adolescents. In India they presently comprise 23 per cent of the population. They are the bridge between children and adults. They are going to be the future of the nation and their well-being and development are of paramount importance.

Giving due importance to this critical segment of our population, the Planning Commission, for the first time constituted a Working Group on Adolescents. You have just heard the salient features of its report from Shri Bordia.

Above all, adolescents, with all their vulnerabilities and potential, need sensitive understanding. Adolescence is the formative, often tentative and most impressionable phase of life. How adolescents respond to situations depends largely on their experiences and environment. Whenever they have believed in, and taken up, a cause they have taken the lead and sometimes even become torch-bearers. They are keen to be recognized as useful, productive and participating

citizens of society. Their contribution in the struggle for independence, the environment movement, national literacy campaign and campaigns against plastic bags and fire crackers are only some examples of the good causes they have espoused. However, there are also instances when they have gone astray and taken to violence and crime. One of the important indicators of the health and strength of any society is the idealism of its adolescents. In a democracy, this idealism has plenty of scope for expression. The constructive channelising of the energies of adolescents can be a powerful force multiplier for national development. They have the potential. The time has come for us, as a nation, to seriously think about providing them with the opportunities.

Adolescents have very special and distinct needs, which can no longer be overlooked. By addressing their needs, we would also be addressing other societal concerns like social harmony, gender justice and population stabilization.

In addressing the needs of adolescents it is most essential to adopt a holistic, inter-sectoral and multi-dimensional approach. Adolescence is a period of transition from childhood to adulthood and many physical, psychological and perceptual changes take place during this time, all of which have to be considered while formulating any policy or programme for adolescents. In particular, they have to be built into schemes designed sensitively to take care of the education and health needs of adolescents.

Another aspect, which I feel is important, is the need to change the mindset and not be judgemental when dealing with adolescents. We must become better listeners and allow adolescents to express themselves. Correct information and knowledge must be provided to them in order to help them take informed decisions. Misinformation and rumours can be very harmful.

The Department of Youth Affairs and Sports, which has been made the nodal department for adolescents, is preparing some schemes for adolescents in consultation with NGOs and experts for the Tenth Plan. This is very heartening. I hope the perspectives and views of adolescents themselves will also be kept in mind while formulating such schemes.

There are a number of players that could be involved while addressing the issues concerning adolescence. We should bring all of them on board and each one should contribute in the area in which he or she has a comparative advantage. Here, I see a role for the education system, especially teachers and writers of text books, Panchayati Raj bodies, parents, peer educators, professional counsellors, NGOs and the media.

I look forward to the outcome of this Meet, which I am sure will provide useful inputs in formulating policies and programmes for adolescents. Thank you, Jai Hind!

**Inaugural Address at the Interactive Session on Adolescent Development Policy at PHD Chamber of Commerce, New Delhi on September 17, 2002.*

INDIAN EXPERIENCE IN DEVELOPMENT PLANNING *

It is both a pleasure and an honour to be here today addressing you on the occasion of the Fifteenth L.K. Jha Memorial Lecture. I cannot but begin by recalling the sterling human qualities of Shri L.K. Jha, his unfailing good humour and warmth.

I knew him in many capacities, *inter alia*, as a senior civil servant, as Secretary to the Prime Minister and as Ambassador. I remember him as a brilliant man, overflowing with energy, cogent and precise in analysis and forceful in expressing his ideas.

Shri L.K. Jha had many significant achievements to his credit during his long and distinguished career, but none perhaps as profound as his contributions to the formulation of this country's economic policy. The Industrial Policy Resolution of 1956 still stands as a masterpiece of policy drafting, broad enough in its vision to be of relevance even today and specific enough to be implemented forthwith.

Today I would like to take this opportunity to briefly reflect upon the shifts that have taken place in our development strategy and in our attitudes and approaches towards growth and development over the years and to present a vision of the future of our country. There has been a tendency in recent years to treat the development strategy followed by India for the first forty odd years after Independence as an undifferentiated continuum. Nothing could be farther from the truth. Indian development strategies have evolved from Plan to Plan in response to the objective conditions of the economy and to the challenges of the moment. Some of these changes have been strikingly bold and original, others more modest; but change there has been.

The First Five Year Plan, of necessity, had to be reactive. The

consequences of the colonial experience and the partition, and the aspirational changes generated by Independence were matters of immediacy, which could brook no delay. The focus on agriculture and revival of economic activities was but natural, with longer-term issues left to be addressed later. It was the Second Five Year Plan, which really set the stage for our essential development strategy during the next two decades. Although the Second Plan bore the *imprimatur* of Prof. Mahalanobis, many others, including Shri L.K. Jha, contributed to its formulation. The emphasis on the establishment of heavy industries, both as a means of rapid industrialization and for raising the low savings rate of the economy, was certainly original in its conception and reflects the tremendous confidence that our economic leadership had in his analysis and judgement. The Industrial Policy Resolution made concrete the conceptual components of the Plan, especially the role that was being envisaged for the public sector. There is no doubt that the strategy outlined in the Resolution succeeded in achieving its basic objectives.

The Third Plan, conceived during a period of serious balance of payments problems and falling international prices of primary products, introduced the concept of import substitution as a strategy for industrialisation. It is interesting to note that the Indian planners had actually assessed that this strategy would raise the growth rate significantly to 5.6 per cent per annum. Unfortunately, even in retrospect we cannot judge whether they were right, since the Third Plan ended with one of the most difficult periods of Indian economic history. The two-year period—1965 and 1966—witnessed the worst drought in recent memory and consequent famines in large parts of north India. At the same time, all aid, including food aid, was cut off to India by the donor countries on account of the Indo-Pakistan War of 1965. The consequence was a virtual collapse of the economy and recourse had to be taken to extraordinary financing from the International Monetary Fund (IMF) and the World Bank, which were accompanied by stiff conditionalities.

This traumatic experience brought food security into the forefront of our policy imperatives, which was further buttressed by the observation that sustained industrialization was not possible without adequate provision of wage-goods. The Fourth Plan, conceived after three years of Plan holiday, therefore, had to have food security as its centrepiece. Nevertheless, the Indian planners believed that they had left the worst behind them and that the targets of the Third Plan could be achieved in the Fourth. This too was not to be. Three consecutive years of drought from 1971 to 1973 and the first oil-price shock of September 1973 dashed all hope. But a change had been signaled. Growth was now no longer seen as emanating only from the modern, organised sectors of the economy. The fact that the traditional and the small-scale sectors could also contribute significantly to the process was explicitly recognised, which has influenced policy thinking ever since.

The Fifth Plan too was path-breaking in that it recognized for the first time that growth and industrialization would not necessarily improve the living conditions of the people, particularly the poor. The concepts of "minimum needs" and directed anti-poverty programmes were innovations of this Plan, whatever may have been the success achieved in implementing them effectively. The Fifth Plan also marks the beginning of a period of steady increase in the growth rate of the economy, which continued right through to the Eighth Plan. In fact, since the Fifth Plan, the growth rate of the economy has either met or exceeded the Plan targets, except in the Ninth Plan, to which I shall come later.

The Sixth Plan for the first time recognized that the success of the Mahalanobis heavy industrialization strategy in raising the savings rate of the country had created a situation where excess capacities were becoming evident in certain industries. A shift in the pattern of industrialization, with lower emphasis on heavy industries and more on infrastructure, begins here. The Seventh Plan represents the culmination of this shift. In perspective, it may justifiably be termed

as the infrastructure Plan. It was also during this period that a reappraisal of the import-substitution strategy begins and a gradual liberalisation of the Indian economy is initiated.

The Eighth Plan was overtaken by the crisis of 1991 and the economic reforms that came in its wake. The dramatic events and policy initiatives of the two-year Plan holiday between 1990 and 1992 demanded a full reappraisal of the planning methodology and the Eighth Plan represented the first efforts at planning for a market-oriented economy. Although the shift in planning did not entirely take place, the economy performed unexpectedly well, recording an average annual growth rate of 6.7 per cent. Unfortunately, this growth momentum could not be maintained in the Ninth Plan even though the planning methodology had adjusted substantially to reflect the new conditions. The critical point to note about the Ninth Plan is that for the first time in Indian economic history it recognised the possibility that demand, rather than investible resources, could become the main constraint to growth. The warning was, however, not entirely taken to heart by the economic administration in the country. The pressures of fiscal rectitude in the face of the implementation of the Fifth Pay Commission award led to a sharp reduction in public investment both at the Centre and the States, which precipitated a cyclical down-turn in the economy. Failure in the agriculture sector in three out of the five years exacerbated the problem.

Through all these changes, however, one characteristic has remained unchanged. Right since Independence we have equated development with industrialization and our dependence on agriculture has been treated as a symbol of our backwardness. Even the focus on food production that came in the Fourth Plan continued to view agricultural growth as an adjunct of industrialization rather than as the centrepiece of development strategy. At one level we have certainly succeeded. India today can boast of a highly diversified and productive industrial sector, which has steadily gained in strength over the years. At another level, however, our dreams have been belied. Even today above 70 per

cent of our population live in the rural areas and more than 60 per cent derive their livelihood from agriculture. Thus the benefits of an industrialization-based growth strategy have not really impacted on the lives of a vast majority of our citizens. The so-called "trickle-down" effect has barely worked.

The state of rural India, although much improved since our Independence, is still a matter of grave concern. Despite considerable increases in agricultural output and expansion in non-farm rural activities, almost 30 per cent of the people in our rural areas continue to live below the poverty line. Despite having attained self-sufficiency in food, and indeed a surfeit, if the food stocks are taken as any indication, there is evidence that under-nourishment and malnutrition are endemic in our rural areas, particularly among women and children. This is a state of affair that no democratic government with deep concern for the welfare of its citizens can ignore. The problem does not appear to be in employment *per se*, since the country, and particularly the rural areas, exhibits exceedingly low levels of open unemployment of about 2.8 per cent. The incidence of under-employment, however, is significant and presently stands at around 8 per cent, which is a matter of grave concern. Too many of our people are working for long hours without getting commensurate returns for their labour. There is also evidence of greater casualisation of our rural labour force.

This problem is likely to become even more acute in the coming years. The projections made for the Tenth Five Year Plan indicate that the population in the working age group of 15 to 60 years will be growing at an annual rate of 2.4 per cent, which is the fastest growth that has ever been recorded. This high rate of labour force growth has its origins in the population explosion that occurred during the late 1970s and 80s. Fortunately, our labour force will be growing at a somewhat slower rate of about 1.8 per cent per annum, primarily due to the increases that have taken place in recent years in school enrolment and the number of years of education. These are expected

to continue in the immediate future as the process of universalising elementary education progresses apace. Nevertheless, our past experience and projections for the future indicate that even with optimistic assumptions, unemployment in the country, particularly among the youth, will continue to increase unless the rate of growth of the economy is stepped up sharply and the sectoral pattern of growth is reoriented towards employment-intensive activities. The Tenth Plan has, therefore, targeted an average annual growth rate of 8 per cent, which is to be further accelerated to over 9 per cent in the Eleventh Plan.

The linchpin of the development strategy is the agricultural sector, including its associated activities such as animal husbandry and agro-forestry. It is estimated that almost half of this increasing labour force will have to be absorbed by agriculture defined in this broader sense. Moreover, the role of the agricultural sector in generating demand for industrial goods through a wide dispersal of purchasing power has been seriously underestimated in the past. It is now clear that unless the incomes of the majority of our people who are engaged in agriculture grow rapidly, acceleration in the growth of industry and most services will simply not be possible. Therefore, unless our agricultural sector grows sufficiently fast, we face the spectre of growing unemployment and of even greater under-employment of our work force. This would place an intolerable burden on the fabric of our society and may eventually thwart all our development efforts.

This recognition has significantly affected the way we think about development. The Tenth Five Year Plan reflects a subtle shift in our development perspective, but a shift which can have far-reaching implications. The fundamental message conveyed by the Plan is that the agricultural sector can no longer be treated as being a residual or peripheral component of our growth path but must take the centre stage of all our development efforts. This recognition stems from two important observations. First, our experience since the mid-1980s, and more particularly since the initiation of economic reforms in the

early 1990s, strongly indicates that the Indian industrial sector has reached a stage of maturity whereby it no longer requires focussed attention of the Government, whether for promotion or protection. Our industrial and commercial entrepreneurs are perfectly capable of generating high growth rates in industry on their own and the government needs only to play a facilitative role by creating a conducive policy environment. This is of course easier said than done, since the complexity of our controls are so byzantine and the quality of governance has deteriorated so much that considerable efforts will be required to create a climate where entrepreneurial energies can flourish. Indeed, the Planning Commission considers governance as one of the most important constraints to growth and a separate chapter is being devoted to this issue in the Tenth Plan. Second, it has become increasingly clear that there is tremendous potential that remains untapped in our agricultural economy. It is possible to achieve and sustain high levels of agricultural growth for a considerable period of time even on the basis of existing technology. With induction of new technology, far wider vistas can be opened.

In the Tenth Plan, therefore, agriculture is projected to be the centrepiece of our development strategy. Its importance is highlighted in three distinct components of the broad objectives of the development strategy articulated in the Plan. First, it is viewed as being essential for the acceleration of the overall growth rate of our economy, not only by achieving a high rate of growth itself but also through pulling up the growth rates of other sectors through a widespread distribution of purchasing power and consequently of demand for industrial products and services. This represents a virtual inversion of the "trickle-down" theory and embodies a belief that high agricultural growth can itself be an engine of growth. Second, agricultural growth is recognized to be the surest way to bring about equity in income and wealth so that an accelerating growth rate will be reflected in rapid reduction in the incidence of poverty. The evidence for this is overwhelming both from our own and from international

experiences. Finally, it is central to all our efforts at self-reliance. No country can call itself secure unless it has food security, not only in the aggregate but also at the level of every household and, indeed, every individual. Food security in a macro sense has informed our development policy for over thirty years now but its link with household incomes and intra-household distribution has received less than adequate recognition.

Rapid growth of agriculture will not take place on its own. It will require concerted and coordinated efforts across a broad front. Some of these actions are directly within the domain of the government but many others require participation of a wide range of people and institutions. A sober and careful assessment of our resources indicates that both land and water will be constraints on our efforts. As a nation we already are in a situation where the extent of forest cover has declined alarmingly. Although in recent years there has been some improvement, we are a long way from our eventual target. In such a situation we do not see any possibility of increase in the cultivated area in the country and, indeed, there may perhaps be an eventual decline as urban demand and environmental imperatives lead to conversion of some agricultural land. There is, however, the possibility of bringing more than 60 million hectares of wasteland and degraded lands under cultivation or forest cover through appropriate changes in policy. Similarly, our water resources are under stress. Without active measures this may emerge as the single most important limitation on our efforts. There is, therefore, no alternative but to focus on raising the productivity of our land, water and, most importantly, human resources in a manner, which is sustainable over the long term.

The first, and possibly the most important, area of focus must be to raise the cropping intensity of our existing agricultural land. Climatically we are fortunate in that it is possible for us to have multiple crops practically all over the country. However, most of our agricultural land continues to be under a single crop system, particularly in the rain-fed and dry-land areas. The problem here is

water. Despite large investments in irrigation in the past, only about 40 per cent of our agricultural area is irrigated. The progress on this front, particularly in terms of major and medium irrigation projects, has slowed down considerably in recent years. Public investment in irrigation has fallen significantly. This is only partly due to resource constraints faced by governments both at the Centre and the States. A major reason is also that potential irrigation projects are located in areas, which are either more difficult or environmentally more sensitive. This of course does not mean that efforts at tapping these resources in an environmentally sustainable manner and with due regard to the vexatious issues of rehabilitation and resettlement will not be carried forward. What it does mean is that considerably greater attention will have to be paid to rainwater harvesting and increasing the irrigation potential through scientific watershed development. Furthermore, there is considerable scope to improve the efficiency of our existing irrigation infrastructure through corrective maintenance and revival and through more participative management practices.

The second area, that needs to be addressed, is infrastructure that supports not only agriculture but also all rural economic activities. A number of recent studies have indicated that the rate of growth of rural incomes and reduction in rural poverty are most strongly influenced by the provision of rural road connectivity. No doubt other forms of infrastructure are also important but the impact of rural roads in widening the opportunities and alternatives available to our people has a dominant effect. Our past record in the creation of rural connectivity, with a few honourable exceptions, has not been very good. Although this is an area, which is in the domain of the State Governments, the Centre has taken the initiative to provide dedicated funding for a significantly accelerated rural roads programme. We have also reoriented our poverty alleviation programmes in a manner that they contribute more efficiently to the creation of rural assets, both private and community. The pure employment generation schemes, however, are being focused on those areas, which have

significant underemployment in order to ensure that the objective of providing adequate employment opportunities is subserved where it is most needed.

The third area that needs attention is the development and dissemination of agricultural technologies. Over the years we have developed an extensive system of agricultural research centres and extension services. Although these have had a significant impact on our agricultural growth, much more needs to be done. Strengthening of our agricultural research and development system, especially focusing on bio-technology, and a significant improvement in the sophistication of the technology dissemination methodologies are essential to achieving rapid and sustained growth in agricultural productivity.

Finally, we need to recognise that the true potential of Indian agriculture can be realised only when we can diversify our agricultural products, both geographically and over time. The food and nutritional requirements of our people for leading healthy lives demand a wider range of food products than are presently consumed on the average. Most of the non-foodgrain food products are, however, perishable in nature. In order to encourage this diversification through minimisation of wastage we will require considerable focus on post-harvest technologies and marketing infrastructure. We would also require a reconsideration of the various rules and regulations that govern agricultural trade, which frequently act against the interests of the farmers and distort their incentive structure. These are considered essential in the Tenth Plan.

We also need to fully appreciate the organic linkage that exists between agriculture and rural non-farm economic activities, particularly in an agricultural system, based on small farmers, as we have in India. Non-farm activities have tremendous potential not only for increasing rural incomes directly but also for making available resources for investment by the farmers themselves. Traditional skills, technologies and products

abundant in our country but we need to make concerted efforts to create market opportunities for them and to provide the necessary financial resources for their development. Micro-finance is one method of providing the latter, which has recorded tremendous success in a number of other developing countries. We too are making determined efforts to develop and encourage institutions, which are capable of taking up this critical activity. The recent experience in this regard has been most encouraging and commercial banks have expressed willingness to expand their presence in this activity.

Ladies and gentlemen, I have a vision of India, which is not only a leading industrial power but also where a large proportion of our people continue to live in the villages enjoying a lifestyle that is comparable to, if not better than, what the cities can offer. As Gandhiji said, India lives in her villages. Our social structure, culture and indeed our national values and ethos emerge from rural India and so it should remain. In the industrialised countries of the West, people are beginning to move back to the villages from the cities in order to rediscover the values and the lifestyles that they had lost. This is perhaps one area where we can leapfrog. We must create conditions in the rural areas of our country whereby this vision becomes a reality in the not so very distant future. In order to do so we have to realise that rural activities, whether it is agriculture or manufacturing or commerce, are just as sophisticated and demanding as any urban industrial or commercial activity. Everybody recognises that information and management are the two critical components of industrial growth. I submit to you that these are just as important, if not more so, for the gamut of rural activities.

Today there is talk about the creation of a "knowledge economy" but the application of knowledge is not restricted to industry or specific components of the services sector. It touches every aspect of human existence and every form of economic activity. Similarly, the creation of knowledge is not the sole domain of laboratories and institutions of

higher learning. It is to be found all around us if only we care to look and if we have the humility. It is a national shame that foreigners have displayed a greater appreciation of our indigenous and traditional knowledge and wisdom than we ourselves. We must tap into this vast reservoir and codify such knowledge in a manner that makes it available for the benefit of all mankind.

The information revolution has made possible much that was difficult earlier and we have recorded some success in this arena. The use of information technology is spreading rapidly in the country but its penetration in rural areas is still at a nascent stage. Objective appraisal of the possibilities indicates that information technology can yield vast returns when applied to our rural areas in a creative and systematic manner. This applies not merely to issues of dissemination of technological and market information but also to ensuring better and more responsive governance. We shall make all efforts to ensure that such development does take place. Nevertheless, for the optimal use of such technologies, the people themselves will have to be empowered to tap into the IT revolution. This will not only require a rapid spread of education but also of education, which is relevant to the requirements of the rural populace and enables them to take advantage of the possibilities unleashed by information technology. Non-government organisations will have a central role to play in this and all encouragement will be given to them to play their role effectively.

At the end of the day, however, all initiatives in developing and modernising our rural areas will depend upon the quality of management that exists. To my mind, organisation of rural economic activities requires qualities of management, which are as sophisticated and complex as those required by the industrial economy. Standard forms of industrial organisation cannot be readily transmuted for application to rural areas. New and more appropriate forms of organisation will have to be devised. Cooperatives and self-help groups have played a significant role in our rural areas and they need to be

unshackled from political and bureaucratic interference to enable them to grow faster and prove their worth. The Panchayati Raj Institutions also represent a commitment to effective and representative rural organisations. We have great hopes that these would soon become the most powerful and eloquent champions of the aspirations of our people. These alternative forms of organisation, however, need help in managing their affairs in a professional manner. Such skills are in short supply.

Much of the action that is necessary to achieve the targets of the Tenth Plan lies in the domain of the States. In the past, the central Plan did not explicitly take into account the role that the States had to play in realising the national objectives. In the Tenth Plan it has been felt that a much greater focus on the States was essential, not only for the role that they are expected to play but also because there has been a significant increase in inter-State disparities in both economic and social indicators over the past two decades. This problem has been highlighted in the National Human Development Report 2001 brought out by the Planning Commission recently. Furthermore, to my way of thinking, the creation of a common economic space within the country is one of the essential benefits of nationhood, whereby larger opportunities are opened up for all citizens. There is, unfortunately, evidence that "beggar-my-neighbour" behaviour is becoming increasingly more prevalent among the States, which is fraught with serious danger in a context where the country is in the process of fostering greater integration with the international economy. It would be a tragedy indeed if some States of our country become more integrated with the rest of the world than with the other States of our Union.

In order to emphasise the importance of ensuring balanced development of all States, the Tenth Plan includes a State-wise breakdown of the broad developmental targets, including targets for growth rates and social development, which are consistent with the

national targets. This is being done for the first time in Indian planning. These State-specific targets take into account the needs, potentialities and constraints present in each State and the scope for improvement in performance given these constraints. It needs to be emphasised that these State-wise targets are not meant to be a substitute for, or to over-ride the process of, State Plan formulation. They are more in the nature of indicative guidelines for facilitating planning in the States. Further assistance in this regard is being provided through the preparation of State Development Reports initiated by the Planning Commission.

The Tenth Plan also recognises that there are districts within certain States, which have not been able to integrate effectively with the overall growth process and have been steadily falling behind. In order to address this issue, a comprehensive programme of district-level development called the *Sam Vikas Yojana* is being launched, which will focus both on the creation of infrastructure and on governance reforms.

Finally, with the growing importance of the private sector in economic matters and the consequent increase in the sensitivity of the economy to business cycle fluctuations, both the role and the manner of macroeconomic management demand a reappraisal. Greater flexibility in fiscal and monetary policies has now become necessary to ensure that the economy is consistently maintained on the desirable growth path. While there has certainly been considerable improvement in the flexibility and sophistication of monetary and exchange rate management in the country, the same cannot be said about the conduct of fiscal policies, which remains rooted in outmoded budgetary procedures. The Tenth Plan, therefore, contains a detailed fiscal analysis, which we hope will form the blueprint for a medium-term fiscal strategy at both the Centre and the States.

Ladies and gentlemen, the imperatives of development planning in India have changed from time to time and the planning system has

attempted to keep pace. I have tried to give you a flavour of the considerations that have informed our various Plans and particularly those, which have gone into the process of formulating the Tenth Plan. I sincerely hope that I have been able to convince you that Indian planning is not quite as wooden and hide-bound as it is sometimes made out to be and that it is sensitive to the changes that take place in the objective conditions of the Indian economy, perhaps more so than others. Thank you

** L.K. Jha Memorial Lecture on "Imperatives of Development Planning – the Indian Experience" organised by Bharatiya Vidya Bhavan and the Fiscal Research Foundation on 18th September 2002*

ROLE OF STATE COMMISSIONS IN POPULATION STABILISATION*

The presentation from the National Commission on Population (NCP), you have just seen, might have provided a general idea about the demographic situation in the country. The National Population Policy (NPP) 2000 highlights the urgency of achieving early population stabilisation. It also underlines the demographic diversity prevailing in different States and Union Territories (UTs). The National Commission on Population has been encouraging the States to formulate State-specific policies and to constitute State Population Commissions to bring about synergy among various inter-sectoral programmes involved in implementing the population stabilisation policy. I understand that about 20 States and UTs have already set up their Population Commissions and another four are in the process of doing so. The main purpose of today's meeting is to enable sharing of experience and strategies, and discuss the successful models and various problems relating to population stabilisation. I hope the presentations by the States and our deliberations today will contribute to accelerating the realisation of the goals and objectives outlined in the National Population Policy.

The census 2001 has shown that the population has increased from 866 million to 1027 million during the last decade. However, the decadal growth rate has declined from 23.86% during 1981-91 to 21.34% during 1991-2001. The large population in the reproductive age group, the prevalence of unmet needs for contraception, high infant mortality rate (IMR) etc. are likely to contribute to growth of population for many more decades. Hence, the acceleration of the process of fertility reduction in the present context calls for area-specific intervention strategies. The demographic goals outlined in the National Population Policy 2000 have been incorporated into the Tenth Plan

proposals. The four goals set for the Tenth Plan and NPP 2000 are reduction in IMR to 45/1000 by 2007 and 30/1000 by 2010, reduction in maternal mortality ratio to 2/1000 live births by 2007 and 1/1000 live births by 2010, reduction in decadal growth rate of the population between 2001-2011 to 16.2% and achievement of replacement level of fertility by 2010. These goals are ambitious but can be achieved through the coordinated efforts of all concerned sectors.

Several States in India have made enormous progress in improving the health status of women and children and achieving rapid decline in fertility and mortality rates. Kerala, the first State to achieve the replacement level of fertility (TFR of 2.1), did so in spite of relatively low per capita income. Tamil Nadu, which was the second to achieve replacement level of fertility, did so in spite of low income level, higher IMR and lower female literacy rate. Tripura, Manipur and Mizoram have achieved not only low fertility rates but also low infant mortality, suggesting thereby that a literate population with awareness can successfully overcome the difficulties in access to, and availability of, primary health care infrastructure. Andhra Pradesh and West Bengal, the next in line to achieve the replacement level of fertility, have shown a steep decline in fertility in spite of relatively lower socio-economic indices and gaps in primary health care infrastructure. It would therefore appear that in the Indian context reduction in fertility rates could be achieved even if some of the indicators remain unfavourable.

However, it is a matter of concern that nearly half of India's population live in States and Districts where birth order of 3 or more form more than 50% of all births. Data from National Family Health Survey have indicated that there are substantial unmet needs for contraception in these States. Field visits undertaken by NCP teams have shown that generally the quality and coverage of services remain very poor in the rural areas and urban slums. In view of the importance of achieving early population stabilisation, the Plan outlay for Family Welfare Programmes has been increased substantially every year. From Rs.2489 crore in 1998-99 it has nearly doubled to Rs.4930 crore in 2002-03. But it appears that the increase in the allocations has not had the

desired impact on crucial indicators like TFR, IMR and CPR, especially in the high-growth regions of the country. I would like to request the States concerned to consider and introduce necessary changes in the strategy, programmes and policies so that people get the required facilities to plan the size of their families and the small family norm is actively promoted, at the same time ensuring that there is no coercion in doing so. For this purpose the States presently lagging behind can draw upon the experience of more successful States. Successful models can be adopted if otherwise suitable. The net addition of about 18 million people to our population every year is a serious matter affecting our developmental effort. Apart from the burning issue of generating enough employment for such a growing population, it comes in the way of providing to our people basic facilities like food, drinking water, health care, shelter, education etc. Hence, the issue of achieving population stabilisation at the earliest should be viewed as an essential prerequisite for reaching the various objectives of national development rather than as an isolated target in itself.

In the next two decades the size of India's population will be determined mainly by adolescents and young adults, who will be hopefully more literate, aware and able to make better use of the opportunities that arise. The information and communication revolution sweeping the country, especially through the electronic media, can be harnessed to generate the conviction among the people at large that keeping the family size small is in their self interest and the larger interest of the community. The process of democratic decentralization, which has been set in motion in recent years, is a very major development with great potentialities. This opens up the scope for involving the peoples' representatives at the grassroots level in formulating and implementing development programmes, including spreading the message of small family norm. The mobilization and training of *Mahila Shakti* and empowerment of women, which can result therefrom, can work as a great force in social and economic transformation in the rural areas and urban

slums. I am glad to note that the State Governments are already taking initiatives to make use of these favourable factors for helping the development process, including achieving early population stabilisation.

The framework of the State Population Commissions can play a major role especially because population stabilisation involves multi-sectoral concerns. Many of the on-going programmes meant to solve sectoral problems are also relevant to demographic stabilisation. However, there is lack of coordination and cooperation among the functionaries of various social sector programmes, especially at the grassroots level. Various Ministries and Departments seem to be using the concept of District or Panchayat Action Plans to address separate sectoral problems. For example, The DAPs are under RCH, NCP and Externally Aided Projects in the Family Welfare sector. As the target groups and beneficiaries of such action plans are often the same, there is a lot of scope for coordinating and bringing them together. I feel the State Population Commissions should look into this important aspect. The need for cooperation among field-level functionaries, such as the ANMs, the AWWs etc., has been often emphasized. Efforts to increase the remuneration of the AWWs and universalisation of ICDS are under way. The State Population Commissions can also promote and help non-governmental organisations (NGOs), voluntary organisations (VOs), self-help groups (SHGs) and youth organisations (YOs) in activities relevant to population stabilisation. As there is a lot of scope for improving the quality and coverage of health, family welfare and other services, the scope of voluntary action to improve the situation is immense. Another area requiring immediate attention is training programmes for elected representatives, NGOs etc. on a large scale. The generation of public opinion and community support in favour of the small family is crucial. This requires well-planned and sustained IEC programmes. Along with using audio, video, print and electronic media the importance of inter-personal communication through meetings, seminars discussions etc. should be recognized. I am sure that the State Population Commissions, through suitable initiatives,

can greatly facilitate the building up of a people's movement in support of achieving early population stabilisation.

The National Commission on Population will be very happy to extend support and cooperation to the State Commissions in the various areas of action they may like to undertake. After identifying the high-fertility districts, the NCP has provided Additional Central Assistance to 65 districts during the last two years for improving the infrastructural facilities. Due to administrative problems, there has been some delay in these allocations reaching the target areas. In order to facilitate implementation of area-specific population stabilisation programmes, it has been suggested to the States that the Family Welfare Society under the District Magistrate should be made more autonomous and given flexibility to draw up and implement area-specific programmes. The creation of a District Population Stabilisation Fund to be operated by this autonomous society may facilitate mobilization of funds by these societies. Adequate representation to elected PRI members, NGOs, SHGs, YOs etc. should be given in these societies. I am happy to say that some States have agreed in principle to make the necessary administrative changes in this regard. The NCP is also introducing a scheme for extending grants-in-aid to the district-level autonomous societies, NGOs and other grassroots level organisations for undertaking programmes relevant to population stabilisation.

I hope that this first Conference of State Population Commissions will pave the way for establishing a consortium of NCP with the State Population Commissions. Apart from helping the formulation and implementation of programmes for population stabilisation, this can also facilitate exchange of ideas, information and statistics concerning various demographic issues on a regular basis between the States and the Centre.

** Introductory Remarks at the Conference of State Population Commissions/Councils on September 25, 2002 in New Delhi*

REMOVING RURAL POVERTY*

It gives me great pleasure to be with you in this Conference of Project Directors of District Rural Development Agencies and Chief Executive Officers. I am glad that the Ministry of Rural Development has organised this Conference, which would provide opportunities to you to interact with each other and learn from your shared experience. I wish the Ministry and you all success.

As you know, successive Plans have focused on removal of poverty and provision of a decent standard of living to our population as their central theme. On the whole, our achievements are noteworthy. There has been a significant reduction in the number of the poor and the proportion of people living below the poverty line in the 1990s. However, we still have miles to go before we can eradicate poverty and deprivation from our country. It is indeed sad that even at the beginning of the new millennium over one-fourth of our population has been mired in poverty. This is not acceptable. We continue to be home to over 22% of the world's poor. An all-out and unrelenting war against poverty must be an integral part of our planning process. The international community too has accorded the utmost importance to elimination of poverty. However, as India continues to be home to over 22% of the world's poor the success in wiping out poverty from the face of the earth hinges crucially on our performance.

I consider the holding of this Conference in the first year of the first Plan of the new millennium as very significant. There has been a paradigm shift in our approach to planning. Though growth naturally continues to be important in our policy framework, there is greater emphasis on total human development and on the quality of life of the people. The need to provide growth opportunities, which are inclusive and provide opportunities to the poor to benefit from the growth process, has come to be increasingly factored in our planning process. This shift has been very pronounced especially in the last decade of the previous century. The notion of human well-being has

come to acquire a broader meaning and it includes not only consumption of goods and services but also provision of basic requirements of all sections of society, which equip them to make informed choices.

The concept of total human development is at the core of the Tenth Plan strategy. The 8% growth rate, reduction of poverty ratio by 15 percentage points by 2012 and other monitorable targets, that we have set for the Tenth Plan and beyond, feed into this basic objective. We start with many pluses in the Tenth Plan. The GDP growth has been robust and well above 5 per cent. We are one of the fastest growing economies in the world. India has come to occupy a place of prominence in many sectors. Our export performance has been impressive and our foreign exchange and foodgrain reserves are at an all-time high. Even in a year of severe drought we do not have to worry about food security at the macro level.

However, there are many worrying factors that would have to be addressed during the Plan period. There has been a slackening of growth in employment and agricultural production has plateaued even in the erstwhile Green Revolution areas, while the technological breakthrough, that was expected to make farming in rain-fed areas more remunerative, is still to emerge. Land degradation, water scarcity and environmental unsustainability are staring us in the face. In this scenario we would have to pool all our resources and muster the will to achieve the targets set in the Tenth Five Year Plan.

As you are all aware, the various poverty alleviation programmes have been revamped and strengthened to overcome some of their shortcomings. There has also been a shift in approach in the implementation of these programmes. The self-employment programmes have been merged into a single programme, i.e., Swarnajayanti Gram Swarozgar Yojana (SGSY). This programme lays great store on the group or cluster approach, provision of adequate levels of investments and necessary linkages and infrastructural facilities. However, problems have arisen in its implementation in the first few years of the programme and the progress in many parts of the country has been slow. There is a need to recognise that the Self-Help Group movement is basically process-oriented and its promotion calls for

identification with the problems of the rural poor. This calls for the replacement of the paternalistic attitude of government functionaries by a different work ethos, based on partnership with the people. Unless you make this switch, the programmes cannot succeed. We would have to forge linkages with Panchayati Raj Institutions, non-governmental organisations and other community associations in organising and mobilising the poor for taking up economic activities.

The wage employment programmes, that have a long history in this country, have also been revamped into a single programme. This programme would be considerably strengthened in the Tenth Plan to provide the infrastructure needed for the villages and to take up the development of identified backward districts so that the poor in these districts are provided employment opportunities. It would also enable the Government to respond to natural calamities like flood, drought, earthquakes, etc. It would be necessary for you to plan in advance the activities that could be taken up under the SGRY programme. While preparing this shelf of projects and activities you should ensure that they contribute meaningfully to increased economic activity in the area so that employment opportunities are expanded.

I now turn briefly to the problem of land degradation. Vast tracts of our rural landscape continue to be degraded due to biotic and abiotic pressures. With careful selection and appropriate intervention these lands can be restored to health. We have the technology, we have the financial resources and we have success stories. But the fact remains that we have not been able to replicate experiments like Ralegaon Siddhi and Sukho Majri on a large scale. You are at the cutting edge of our delivery system. I urge you to leverage the funds available with the Centre and the States and implement the watershed development programmes with a missionary zeal. I have no doubt in my mind that successful implementation of the watershed development programmes can solve some of the most pressing problems of our rural population.

In addition to the schemes and programmes for which you are directly responsible a large number of projects are implemented by other agencies in the districts. The time has come to bring about a convergence of all such schemes, designed to bring about an improvement in the quality of life of the poor and the vulnerable.

This convergence is required at the district and sub-district levels and must be brought about through the mechanism of village, block and district plans and horizontal integration of government agencies. The Tenth Plan has specifically talked of the need for decentralisation of planning and development within the framework of democratically elected local bodies.

The impact of planned schemes on the lives of the people depends not only on the availability of resources but also on how efficiently they are used. Transparency and accountability are the key elements in good governance. You have a central role in the delivery system. Are you prepared to accept the challenge of providing good and participatory government to the people?

In this context, I have great expectations from the Project Directors and CEOs of some of the poorer districts of our country. It is an unfortunate reality that over the years economic and social development has been uneven in our country and this has resulted in growing regional imbalances in practically all indicators. The Planning Commission has brought out the National Human Development Report 2001. The Report has been widely distributed. It is also available on our website. The Report clearly indicates the marked disparities in social attainments across States. These trends cannot be allowed to continue and must be reversed. We are taking action on many of the issues that have been thrown up. However, we can succeed only if the institutions at the district level are committed and equipped to deliver efficiently and professionally.

I offer you my best wishes in this endeavour.

CONTOURS OF INDIA-ASEAN ECONOMIC PARTNERSHIP*

Your Excellency, the Prime Minister of Malaysia; Secretary General of ASEAN; Ministers and distinguished guests,

I have great pleasure in welcoming you to this special session of the India-ASEAN Business Summit. Our Chief Guest this afternoon is a highly respected Asian statesman of our time, whose influence reaches far beyond the shores of his home country, Malaysia.

Prime Minister Dr. Mahathir Mohamad needs no introduction, least of all to this gathering of policy-makers and business leaders from ASEAN and India. We all are aware of his contribution, as the architect of modern Malaysia, to its transformation into a prosperous nation and, indeed, to its emergence as a vibrant symbol of East Asian economic dynamism. Indeed, his personal vision and commitment have made a signal contribution to the expansion and consolidation of regional cooperation in South-East and East Asia.

India and Malaysia share a close friendship and mutually beneficial linkages in diverse fields. Malaysian companies are building highways in India and a Government-owned Indian company is, in turn, laying railway tracks in Malaysia. Malaysia is also home to the largest number of people of Indian origin in South-East Asia.

India's economic plans envisage a substantial inflow of external resources as well as higher levels of trade and other external interaction. As India's immediate neighbours, with whom we share many associations, ASEAN will be a natural area of attention. What will be the future contours of the India-ASEAN economic partnership? Certainly, it will encompass substantially enhanced trade and investment flows but these must also be accompanied by a rich two-way traffic of ideas, business practices and management and professional

cultures. India and ASEAN will also benefit greatly from closer linkages among their scientific communities and think-tank. Above all, I see this business relationship being nourished by greater people-to-people contacts in diverse fields. The presence here of so many corporate leaders from the ASEAN countries is evidence that our entrepreneurs are alive to the promise of the future.

We have watched major developments in ASEAN with interest. India commiserated with the enormous human suffering that came in the wake of the Asian financial crisis. ASEAN's experience of destabilising financial flows carried many lessons for us. It helped us to refine our own external economic management and focus on bringing about greater stability in our macro economic fundamentals.

Today, when ASEAN economies have successfully overcome this difficult phase in their recent history and embarked upon steady growth, there is a fresh affirmation of hope in the economic future of ASEAN. ASEAN is seen as an attractive economic partner in different parts of the world. It is in this context that the Economic Ministers of India and ASEAN have adopted the goal of a Regional Trade and Investment Area, as a long-term objective.

We are indeed fortunate to have with us, at this juncture, an Asian statesman of Prime Minister Mahathir's eminence to reflect on the emerging economic landscape in the Asia Pacific region and the synergies that India and ASEAN may fruitfully pursue in this dynamic environment.

With these words, I have great pleasure in requesting Your Excellency, Prime Minister Dr. Mahathir Mohamad, to address this special session of the India-ASEAN Business Summit.

Ministerial Plenary

Distinguished Ministerial colleagues from the ASEAN countries, Secretary General of ASEAN, distinguished delegates, ladies and gentlemen,

I extend a warm welcome to all of you to this ministerial plenary

session of the India-ASEAN Business Summit. Today has been a busy, but a very productive, day for both the Government and business leaders from India and ASEAN who are engaged in a collective exercise to reflect upon the existing state of India-ASEAN economic relations and come up with concrete ideas and suggestions on how we can—and indeed must—elevate it to a new level that meets the challenges and opportunities of our times.

We heard an inspiring and thoughtful inaugural address by the Prime Minister of India this morning and a stimulating special address delivered in his inimitable style a few minutes ago by the visiting Malaysian Prime Minister. There have also been purposeful and substantive sessions on different aspects of India-ASEAN cooperation. I understand that over the last two days there have been many opportunities for one-to-one meetings and informal networking among the business leaders of ASEAN and India. These are perhaps among the most valuable by-products of a gathering like this. I am sure that the results of this first-ever India-ASEAN Business Summit, which continues in Hyderabad tomorrow, will provide useful ideas to policymakers and open new vistas for industry and business circles, which will enable us to reach our common goal of greatly enhancing the level, scope and intensity of India-ASEAN economic cooperation.

Globalisation, which is an enduring aspect of the realities of the 21st century, imposes its own logic on policies. Countries cannot develop in an autarkic environment. Policies have to be conceived and executed within the framework of an international economic and political environment shaped by an increasingly integrated world. Equally, international economic cooperation has to be aligned to the domestic priorities and constraints of individual countries. In this context, I think it would be appropriate for me to outline briefly our domestic economic priorities and policies.

India's Tenth Five Year Plan for the period 2002-2007 is in the process of being adopted. Our goal is to ensure an annual GDP growth rate

of 8 per cent. This is an ambitious, but not an unrealistic, target, considering the trend in the growth rates of the Indian economy over the last few years. Even in the midst of a global economic slowdown we are managing a relatively healthy 5.5% growth rate. We aim to achieve this target through a policy mix of tax reforms, fiscal prudence, labour reforms, evolution of a fully integrated national market, power sector reforms, disinvestment and good governance. Most of the resources will be raised domestically through enhanced savings but external resources, particularly foreign direct investments, will be welcomed.

Our basic objective is to create a climate in which entrepreneurship can flourish, whether it is of individuals, households, domestic corporates or foreign investors. We propose to review all the rules, regulations and procedures, which impinge on economic activities, and remove the extant irritants. Simultaneously, we propose to reorient our public expenditure pattern to focus on the rapid creation of physical and social infrastructure. We also intend to carry out institutional reforms so that the efficiency of delivery of public services is enhanced.

These policies combined with modern management techniques and technology inputs, institutional strengths of democratic governance, an independent judiciary, a free press and public awareness of environmental concerns are expected to propel India on a stable path of economic prosperity. Paradoxical as it may seem, one of India's strengths also lies in its demographic profile. Ours is a young, dynamic and, therefore, an energetic and productive population. This will not only fuel economic growth and increase national savings for investment but also add to an already impressively large middle class market.

We think that all these factors should attract our ASEAN partners to look more seriously at the possibilities of investments in, and economic cooperation with, India. Equally encouraging is the trend of more and more Indian companies looking to invest in overseas projects and

ventures, including in many ASEAN countries, not just in information technology or biotechnology but in diverse sectors like textiles, paper and pulp, manufacturing, chemicals, refineries, pharmaceuticals, etc. Sectors like IT, telecom, roads and urban housing development, power generation, pharmaceuticals, chemicals, edible oils, food processing, etc. have aroused considerable interest on both sides.

India's is a unique market. Unlike many other countries, India has had a strong entrepreneurial and business tradition. Let me frankly admit that we do need to remove many systemic deficiencies and are making a serious, concerted attempt to do so. But those who have worked around our system and focused on our strengths – looking at a glass as half full rather than half empty – are now reaping rich dividends. Certainly, companies that are already established in India are all looking to expand their presence here.

I view the future of India-ASEAN business partnership with optimism and hope.

With these remarks, may I request my colleagues to briefly outline for this audience their thoughts on India-ASEAN business relations? Thank you.

** Opening Remarks at the special session and the Ministerial Plenary of the India-ASEAN Business Summit held on October 17, 2002 in New Delhi.*

STRENGTHENING INDO-BRITISH TIES*

Distinguished Co-Chairman, colleagues and fellow members of the Round Table,

Let me formally welcome all of you to this fifth meeting of the India-UK Round Table in the pleasant surroundings of Neemrana.

The India-UK bilateral relationship continues to forge ahead at an impressive pace. It would not be an exaggeration to state that our two countries, linked as they are by the threads of shared history and common membership of the Commonwealth, are closer today than ever before. The common links between our two countries, as evident in our institutions of law, education and administration, has been further buttressed by substantial cooperation in trade and commerce. The presence of a large Indian Diaspora, which has begun to play an increasingly vibrant role in cultural, economic and political terms, has added value to our bilateral interaction.

Mutual understanding and respect have become an important feature in our relationship. In the last year and a half, our respective Governments have engaged in regular high-level exchanges spanning diverse fields. Our heads of Government have met regularly, most recently in London on 12th October 2002. The ongoing discussion and debate at the government level has facilitated a better appreciation and understanding of each other's respective positions on bilateral, regional and multilateral issues. Bilateral cooperation, particularly in the economic and commercial fields, and interaction in areas such as science and technology, environment, information technology, energy and infrastructure have been intensified.

It is therefore entirely appropriate that we commence our meeting with a session on India and UK as partners in the new millennium. While the New Delhi Declaration does provide an excellent roadmap in this regard, I hope some concise ideas would emerge during our

discussions on these wide issues. The need is for ideas that would help give a brisk and constructive start to, and provide the right perspective for, the entire round. We would separately examine the way in which our bilateral relations would be influenced by the developments within the EU, including its enlargement scheduled for 2004. Let me also here thank Prof. Khusro for his incisive presentation last evening, which has provided us with a broad framework to examine the parameters of the Indo-UK relationship.

India today is very different in the economic context from what it was even a few years ago. The ongoing process of economic reform has transformed the economy and people's expectations of growth and prosperity. Similarly, the UK has also taken huge strides in the world economy and has established itself as a great trading nation and an important financial centre. India has gained from a constructive economic and commercial partnership with British firms. The Indo-British partnership has been instrumental in bringing closer the businessmen of our countries through various events and activities. Our trade and investment figures, however, do not yet adequately reflect the dynamism that should have followed the vast and exciting opportunities that have opened up in India during the last few years. Our discussions today and tomorrow would allow us to examine why this is so and I hope also to identify the bottlenecks, which our businessmen and entrepreneurs face, in exploiting the economic opportunities, which exist in both countries.

Scientific and technological cooperation between our two countries is another area that merits our attention. Today, India, with its skilled technical manpower, which matches the best available in the world, has a distinct cutting edge. This has been seen in the area of IT. Biotechnology is another area of great promise that requires focussed attention to realise the existing possibilities as well as the potential to the advantage of both countries.

People-to-people contacts between our two countries have been increasing steadily over the last few decades. Tourism provides an important interface between India and the UK. The possibilities of further increasing the interaction in the area of education and culture

have traditionally been an area of great interest to the participants from both sides at the Round Table. I am happy that this time too we would have adequate time to focus closely on the themes of education, culture and the media.

The Round Table was mandated by the Governments of our two countries to examine and analyse the Indo-UK relationship frankly and candidly and to reflect together on what more can be done to further improve these ties. The recommendations of the past meetings had been finalised, keeping in mind the various facets of this relationship and the undoubted potential that exists for its further enrichment and diversification. The agenda for this round also reflects this mandate and should lead to a focussed discussion on bilateral relations, trade and commerce, cooperation in the fields of science and technology, information technology, energy, infrastructure, culture, education, media as well as mutual perceptions about each other country.

At the end of our deliberations we should have a concrete set of suggestions and recommendations on the measures that could be adopted to strengthen the bilateral relationship between our two countries. I look forward to a substantive and fulfilling interaction.

Thank you.

** Opening Remarks at the Fifth India-UK Round Table held at Neemrana in Rajasthan from October 25 to 27, 2002*

SOCIAL SECURITY FOR UNORGANISED LABOUR*

There is a general perception that most of our laws, administrative structures and regulations concerning labour are relevant only to a small section of workers, which is sometimes referred to as "organised labour". This is, indeed, true and it is a source of some concern. The segment of workers, which comes under the present definition of "organised sector", is growing but at a very slow pace. In some parts of the country its absolute size might well have become smaller than it was a few years ago. Given the size of the work force outside the organised sector, any serious consideration of labour conditions must necessarily go beyond the narrow category of "organised labour" and address the concerns of the vast majority of our working population. Hence, the theme of this Seminar is highly relevant in the present context. I, therefore, welcome this opportunity to be with you all today.

Perhaps, it would be appropriate for me to state at the very outset that the concept of the unorganised sector and even of the unorganised labour is too imprecise and too amorphous to be of practical use. Indeed, these concepts are defined in a negative sense, i.e. those who are not a part of "organised labour" comprise the unorganised sector. Such concepts cover a very wide range of activities and institutions, whose characteristics, needs and interests vary widely and, indeed, may often be contradictory. Just to illustrate the point I would only remind you that the owners of informal sector establishments and their employees are both part of the unorganised sector and it is quite obvious that their respective interests may well clash. In such cases, however, it may be possible to draw a distinction between the employer and the employee and thus allow identification of the latter as being "unorganised labour". But the distinction gets blurred in the case of a very large number of people who are self-employed and thereby embody the characteristics of both the employer and the employee.

It is, therefore, not at all obvious that we should focus our attention only on the unorganised labour, i.e. such workers who can unambiguously be classified as being employees, whether of establishments or of individuals. If we do so, we would be ignoring a very large segment of our people who are self-employed and who face vulnerabilities, which may be no less than those faced by the unorganised labour. By definition, vulnerabilities can be exploited not only in an employer-employee relationship but also in all situations where transactions are made. Just as exploitation of hired farm labour is possible, so is the exploitation of the farmer by the middleman. It would, therefore, be perhaps more meaningful to view different constituencies of the unorganised sector in the light of the vulnerabilities that are faced by them rather than to categorise them on the basis of occupation alone.

Seen in this light, the primary source of vulnerability arises from a situation in which a person has no asset other than his personal abilities for generating a livelihood. It does not matter whether this ability is expressed in terms of physical labour or individual entrepreneurship. The absence of collateral assets limits the opportunities that they can access for exercising whatever capabilities they possess. The best strategy for addressing this particular form of vulnerability is to widen the opportunities and choices that are available to them. Rapid economic growth is the surest and most sustainable method for achieving this. But growth in itself is not enough. There are numerous hurdles, which stand in the way of people accessing the opportunities created by growth. These barriers can be in rules, regulations and procedures or in the institutional structures that govern different activities. These barriers need to be identified and removed.

While formulating the Tenth Plan we found that there was huge latent potential in the agriculture and agro forestry sectors, which could not only improve the income of the people who were engaged in such activities but also widen their opportunities substantially. The realisation of this potential will no doubt require substantial public investment in the form of irrigation and technologies. But perhaps

even more important would be to remove a number of policy barriers that were erected at a time when the country faced shortages of food. Thus, bringing reforms to the agricultural sector is a core element of the Tenth Plan. It is our belief that a proper kind of public investment and policy reform would be able to unleash tremendous entrepreneurial energy in the rural sector, which would create opportunities not only in the farming sector but also in non-farm rural activities.

Even in the urban sector the possibilities of increasing the growth and widening the opportunities through reforms are vast. Just to cite an example, the restrictions placed on the construction activity through irrational land use policies have hamstrung a sector, which is important, both as a source of employment and as a provider of a basic human need, namely shelter. The brief point that I would like to make is that we need to review the byzantine system of rules, regulations and procedures that has been erected over the years. These stifle the entrepreneurial urges of our unorganised sector in practically every economic activity and we need to remove them as expeditiously as possible. There can be no better method of providing sustainable social protection.

Nevertheless, we recognise that even with growth and expanding opportunities the vulnerabilities caused by lack of assets will need specific intervention. In addition, there is no assurance that the areas, in which opportunities open up, will be consistent with the skill profile of the people. It, therefore, becomes necessary to deliberate upon how best to tackle the problems arising out of the dynamics of a market economy. The necessity to develop skills, which are appropriate for the needs of the economy, is clearly recognised. Indeed, the Tenth Plan makes the point that unless education and training systems are reoriented towards imparting skills, which are consistent with the projected structure of growth, the availability of skills, and not of capital, may become the main constraint to growth. Recognising the critical role that the unorganised sector, in particular self-employment, has to play, we have laid considerable emphasis on vocationalisation of education and on inculcating the dignity of labour within the educational process. But this is only a part of the issues that will need

to be addressed in the context of skill development.

In a dynamic economic system there is constant flux in the nature and quantum of skill requirements. The demand for certain skills taper off over time, while the demand for other skills increase. Thus, education and skill development have to be seen as a continuous process over the working life cycle of a person and the educational and training establishments have to meet these requirements. Unfortunately, our systems of continuing education and skill development are still at a nascent stage and considerable emphasis will have to be placed on expanding these systems rapidly.

Furthermore, it needs to be recognised that acquisition of new skills and transiting from one occupation to another involve both time and a certain amount of financial resources. Even if we are able to develop adequate systems of retraining and reskilling, it may not be possible for the vast majority of workers, who are assetless, to avail of these opportunities simply because of lack of resources. Thus, any notion of social protection has to consciously take into account such transitional requirements and provide for them. Our experience has been that this is difficult enough for the organised sector and the complexities become much greater when we try to extend it to the unorganised. Nevertheless, it is an issue that can no longer be ignored and we need to deliberate upon it with due care and concern.

The nature of the problem and the issues that confront us in the unorganised sector are such that they cannot be handled by extrapolating from the provisions that exist for the organised sector and our experiences with them. We cannot reach the smaller establishments just by lowering the employment size limit in the existing regulations. Rules and regulations designed for the large establishments may be quite irrelevant, and even obstructive, to the creation of employment opportunities in the smaller establishments. This aspect has received considerable attention in recent times. The workers' organisations have drawn attention to the exploitation of particular segments of workers and the employers too have demanded flexibility in terms of hiring of labour. To respond to this, the Ministry

of Labour, the Ministry of SSI and Agro & Rural Industries, the Second National Commission on Labour and the Planning Commission have examined and proposed certain new initiatives. The State Governments have also formulated certain initiatives of their own.

The Second National Commission on Labour has suggested a draft of an Unorganised Sector Workers (Employment and Welfare) Bill and The Small Enterprises (Employment Relations) Act. It has also suggested Model Standing Orders for establishments employing 20 or more but less than 50 workers. Thus, the suggestions cover practically the entire "Unorganised Segment of Workers", as they are presently covered under this term. At the recent Indian Labour Conference the Hon'ble Prime Minister asked for an early consideration and implementation of the suggestions made by the Commission on Labour.

Following the announcement made in the Union Budget 2001-02 a pension system, which can reach the unorganised workers, is being firmed up. It is true that a broad-based pension system for workers has to be self-sustaining. Productivity, and hence the capability to earn and save, tends to be the highest in the initial and middle phase of a working career. Hence, it should be possible to work towards a financially self-sustaining pension system. But, such a system, as we all know, has many specialised components of services and a framework of regulations has to be put in place to govern the many actors. Certain desirable conditions too have to be fulfilled. These are the assurance of a guaranteed relative financial return on savings, at least for the low-income workers, and a targeted coverage of the beneficiaries in the rural areas.

Though the creation of employment opportunities in the large establishments has slowed down, most businesses require many labour-intensive services, which can probably be sub-contracted. This opens up the potential for employment opportunities in rendering specialised services to the corporate sector through the contractual route. However, at the same time, there should be a system in place, or it must be mandatorily agreed to by the employers and the contractors, to provide

for welfare and social security cover to the contract labour.

Our existing formations for provision of social security under the various Acts, namely, the Employees' Provident Fund Act, the ESIC Act and the various Welfare Funds under the Central and State Legislations, do cover a very sizeable segment of workers. But they can cover still more. However, it should be noted that these are the days of specialisation. No organisation should attempt to do every thing. Delivery of health services, earning a reasonable return on workers' saved capital and the provision of recreation services to workers can be done at much lower cost and for a much larger number of beneficiaries by organisations which specialise in each of these functions. Already there is a need, which is felt rather acutely, for reducing the cost of administration of services per beneficiary by the existing organisations.

The provision of social protection to the entire work force is an ambitious goal. There are no unique solutions to the problem. Each country has to evolve a social security system consistent with its social and economic settings. It would be useful to formulate a perspective plan for extending the coverage to all the workers in India in a time frame of 15 to 20 years. This is possible, provided we grow sufficiently rapidly so that the burden does not fall unduly hard on the present generation. The perspective plan should clearly identify the role of employers, workers, organisations of workers and the Central and State Governments. The contours of such a plan are starting to emerge and I hope that this national Seminar will contribute to it in no small measure.

** Inaugural Address at the National Seminar on "Unorganised Sector Labour—Social Protection, Skill Development and an Umbrella Legislation for the Unorganised Sector" held on 7th November 2002 in New Delhi*

TONING UP CONSTRUCTION INDUSTRY*

It gives me great pleasure to be with you at the fifth National Conference on Construction. As patron of Construction Industry Development Council (CIDC), I welcome the Hon'ble Vice President of India, Shri Bhairon Singh Shekhawat and all my esteemed friends and colleagues to the Conference. I look forward to an informed discussion at the Conference that would deliberate on the future role of the construction sector in transforming the Indian economy.

At the outset, I wish to emphasise that construction is an integral part of infrastructure building and industrial development. Construction covers a wide spectrum of activities and sectors including housing and townships, urban infrastructure like water supply and sewerage, roads and highways, ports, railways, airports, power systems, irrigation and agriculture systems, telecommunications etc. The sector, therefore, forms a basic input in a number of facets of socio-economic development of the country.

Of particular significance is the potential of the construction sector to be one of the largest employers in the country, providing gainful employment, *inter alia*, to economically and socially vulnerable sections of the population. It is also an important source of seasonal employment for the poor. Unfortunately, we have yet to tap the full potential of this sector.

The rate of growth of gross domestic product has no doubt increased but it needs to accelerate even further. We have resolved to move to a high growth path in the Tenth Plan. The faster rate of growth must also be accompanied by wider distribution of benefits. This will require augmentation of supply not only of physical infrastructure, which would support the higher growth rate, but also of social infrastructure, which would improve the quality of life of our people. Construction, therefore, will necessarily be a major activity for which massive

investment has been envisaged in the Plan. The Government is providing substantial fiscal stimuli by way of programmes like National Highways Development Project, Pradhan Mantri Gram Sadak Yojana, power projects etc., which would provide the necessary impetus to the construction sector.

The construction sector, however, has to gear itself up for meeting the challenges and discharging the responsibilities that lie ahead of it. The current capacity of the industry needs considerable strengthening in order to meet the investment targets and build a reputation for delivery of the right quality and in time.

I believe that a special emphasis needs to be laid on the quality of construction. Indeed, quality should be the hallmark and the pride of the construction sector. This should be reflected in our durable assets, which should be so constructed as to withstand the ravages of time and of normal wear and tear. Our experience has been that many of our assets have deteriorated much too rapidly, which represents a massive national waste. No doubt some of this can be attributed to poor or inadequate repairs and maintenance but the initial quality of construction cannot be entirely absolved of blame. Poor quality of construction, whether it is the outcome of shoddy materials, obsolete technology, bad design or poor workmanships, has to be eliminated if this sector is to make its full contribution to the progress of the nation.

Secondly, there is a need for productivity enhancement through appropriate mechanisation to meet the physical targets set in the Plans. I recognise of course that there is a trade-off between faster project completion through mechanisation and higher employment but a rational judgment has to be made on a project-specific basis. In the case of most forms of infrastructure, the opportunity cost arising from long gestation lags, both in terms of output and employment forgone, can be significantly larger than whatever employment gain that takes place in the project itself. We need a highly efficient construction capacity for major projects so that it is possible to deliver in time the critical infrastructure needed for economic development of the country. In other sectors, however, the trade-off may well operate in the other direction.

Productivity enhancement goes hand in hand with, and is indeed driven by, increase in the skill levels of the construction workers and the higher work efficiency enables higher income levels. It is, therefore, important to expand the content, as well as geographical domain, of training and skill certification programmes. Unfortunately, except for a few initiatives taken by the Construction Industry Development Council (CIDC) and some corporate houses, there is no institutional framework to impart training at the worker's level. The association of Industrial Training Institutes (ITIs) with construction-related training with the active co-operation of the construction sector may be one way to bridge the demand-supply gap for skilled labour force. The CIDC may consider setting up a Task Force for this purpose.

In addition, the contract conditions could stipulate that a minimum percentage of registered and trained/certified workers should be employed by the construction companies. The stipulation made by the National Highway Authority of India, requiring the employment of at least 5 per cent trained and certified workers as a pre-qualification condition, needs to be replicated and the percentage of such workers should be progressively enhanced in the coming years.

The high cost of operation has been identified as one of the major problems that not only affects the construction industry directly but also the overall economy indirectly, as the high input and process costs are reflected in the high cost of infrastructure, which in turn translates into higher user charges. There is also a reduced surplus available for ploughing back into the construction sector for technology upgradation and labour welfare measures.

Steps to reduce costs, therefore, are necessary. These would include improving the procurement procedures and instituting a more competitive spirit and transparency among the contractors. The facility for leasing construction equipment through Equipment Banks also assumes importance here. As part of the process of standardisation and improving efficiency in the sector, harmonised bidding conditions and standard bidding documents for domestic construction contracts

have already been developed and circulated to all the Government agencies and public sector organisations as guidelines.

The cost of finance is an important element in the cost structure of the construction sector. At present, its requirements are not matched by the availability of the finance it seeks. The high cost of raising finance translates into high cost of construction, which again has a cascading effect on the economy. It is necessary, therefore, that the flow of institutional credit to the construction sector is increased. The construction sector has already been declared as "industrial concern" under the Industrial Development Bank of India Act. While this step would facilitate institutional funding, it is necessary that banks and lending institutions take further initiatives to develop lending norms and special funding instruments that could address the requirements of the construction industry.

The Indian construction industry was very active in the overseas markets, especially during the 70s and 80s in the Gulf, where it met the demand for construction activities generated by the oil boom. But this trend did not last and towards the middle and late 80s the volume of contracts secured fell sharply. We, therefore, need to lay down a new road map to enable the Indian construction sector to achieve a larger share of global business. This would include formulation of business-friendly policies, development of insurance instruments to mitigate business risks and aggressive marketing of the Indian construction industry abroad. But most of all, it requires a demonstrated capacity to deliver high quality within the stipulated time. This can only be done if domestic projects meet international standards.

You would also be aware of a negative aspect of construction activity, namely, pollution and environmental degradation. Sometimes I hear complaints about projects being delayed because the required environmental clearance for major projects has taken too long a time. All of us should work to cut down all unnecessary delays. I would, however, urge that the spirit of environmental consciousness needs to be inculcated in all construction-related activities so that development

effort is not at the expense of ecological degradation. I would urge the participants to give greater thought to this matter.

Finally, I would like to flag the need for an appropriate dispute resolution mechanism in the construction sector. There is substantial money locked up due to disputes between contractors and clients and a comprehensive dispute resolution mechanism would be an important factor in reducing construction costs and time over-runs.

I have been able to touch only the fringes of a vast subject. I am sure you will be discussing it in depth. I hope the Conference comes up with implementable recommendations to galvanise the construction sector for meeting the developmental requirements of the country.

Thank you.

**Address at the inauguration of 5th National Conference on Construction held on 11th November 2002 in New Delhi*

AIR POWER AND JOINT OPERATIONS*

It gives me great pleasure to be with you at this Seminar on "Air Power and Joint Operations". I would like to congratulate the Centre for Air Power Studies for bringing together such a galaxy of professionals from our defence services and the strategic community to deliberate upon this important subject.

The concept of joint operations is not new. What, indeed, is new and continuously changing is how it is to be achieved. Historically, the need for joint operations arose as soon as more than one component of military force came into being. The earliest warfare exhibited specialisation in combat forces. Spearmen, archers, cavalry and numerous other weapon-specialists made up the land armies of ancient forces. Coordinated employment of these mixed military forces often marked the more successful armies.

Even in our own history from the times of Mahabharata the ancient Indian literature is replete with accounts of armies with various components like elephants, chariots, horse cavalry and infantry, each with its own attributes, training and organisation, and functioning under its own leadership, yet employed on the battlefield in a coordinated manner to maximise the effect. Successful generals understood the role of each component of force in a particular battlefield environment. The issue was not which component—infantry, cavalry or the elephants—was more important or dominant but how the various components could be employed to achieve an end result, which would go beyond the mere sum total of their individual capabilities of firepower and mobility.

Though the basic principle remains valid, the nature of warfare has kept changing over the centuries and the pace of change has kept accelerating with time. The experience of the past hundred years shows that air power has been growing in importance not only in actual war

fighting but also in the way it enhances combat capability of the other components of military power. This is not to say that air power, as some people claimed after the 1990-91 Gulf War, can win wars by itself. But this is to emphasise that no war in the modern day and age can be won without air power. Indeed, in certain situations, the multiplier effect of air power can be decisive. The challenge, therefore, is how to synergise the role and mission of air power with other components of military power without losing the special and unique attributes of each separate component.

Military operations have become extremely complex and costly. It is therefore, important to devote great attention to the way capabilities should be created for the future. We must remain conscious of the reality that air power intrinsically operates at technological levels, which are significantly higher than those in most other forms of military activity. This means higher costs of air power systems. As these very often have to be imported, they involve other factors like political relations, levels of import dependency and the degree of self-reliance considered essential. For a developing country like ours, these issues could easily be the major constraining factors in the creation of capabilities and their translation into coherent joint effect in the application of military power.

The range of military capabilities now spans a wide spectrum—from the foot soldier to the combat pilot in high-performance multi-role combat aircraft and from UAVs (Unmanned Air Vehicles) capable of multiple missions, including direct attack with weapons, to precision-guided bombs dropped from strategic bombers like the B-52s on tactical targets vectored by special forces on the ground. The essence of these developments is that the rapidly changing weapons technology at one level has been increasing the complexity of military systems and their organisation and employment. At another level it poses the challenge of translating the capabilities, that technology provides, into effective firepower and mobility that creates the greatest impact on the conduct of military operations in consonance with the political and military aims of war.

Superior technology is crucial to victory in war. But very often, the mere possession of technology is not enough. There is a need to fully

internalise the strengths and weaknesses of modern weapons systems and their capabilities so as to make the best use of them at the right time and place. This can only be done if adequate attention has been given to thinking and understanding the increasing variety of high-technology systems.

The increasing complexity, greater effectiveness and higher cost of technology tend to lead to greater specialisation. This is so in most walks of modern life. But in the military arena this acquires a special significance since greater specialisation also tends to create greater compartmentalisation. Even as air power has emerged as a major area of specialisation, extending now into aerospace power, it carries within its fold many specialisations in terms of role, mission and technologies. This tends to detract attention and effort from greater coordination and joint operations.

Unfortunately, the great deal of debate and thinking in trying to resolve such problems tends to focus on ownership of systems and capabilities rather than on a holistic understanding of the limits and strengths of different components. Warfare has become too complex to be managed by a linear approach. A more corporate approach is essential if the capabilities are to be used in an optimised framework and requisite flexibility is to be achieved. No plan survives the first shots in a war and ability to respond to fast-changing situations is a pre-requisite of victory in modern war. Joint planning with flexible autonomy in handling tactical situations would have greater chances of success than rigidity and linear approaches.

It is against this background that I would like to commend this initiative to broaden the study, debate and discussion on defence issues, especially in the area of joint operations. The challenges of ensuring effective joint operations are numerous and diverse. Most advanced countries have instituted joint planning and operations strategies for a long time. Great Britain had constituted the Chiefs of Staff Committee as far back as 1924 to coordinate joint operations. Countries, like the United States, with vast experience of war on a global as well as local scale, are continuously struggling with refining

the doctrine and practice of joint operations, not necessarily with success every time. Even historically successful joint operations have had their share of problems arising from inter-service rivalries, jealousy in command arrangements, wasteful duplication of effort, complexity in plans so that every service has a part, and arrogance in one service underestimating the capabilities of another. This has resulted in tensions and inter-service rivalries.

We cannot afford such luxuries and hence would need to study their experiences and draw our own lessons, applicable and useful in relation to our own environment and interests. Competition for a share of the defence budget should not become a competition of doctrines. We need to prepare our military leaders from the very beginning with a joint perspective despite the years of specialised experience that they would acquire in their respective services. This would require inculcating deep respect for each other's role, capabilities, strengths and limitations so that an optimised, coordinated approach is ingrained in their thinking and leads to joint planning and operations.

It goes without saying that our overall national interests should provide the framework for thinking about joint operations. We have sought, and would continue to seek, prevention of war as a strategic priority since this would allow us to concentrate more on socio-economic development. Thus, credible deterrence becomes an essential ingredient of our security policy. It is our policy not to be the first to use nuclear weapons. But in case of deterrence failure we would have to employ military power to ensure that our core interests are protected. It is here that air power starts to play a crucial role.

There is a broader dimension of "jointness" that goes beyond the pure by military aspects. It is a well-established dictum that military power must serve a political purpose and, hopefully, a rational purpose. This is why Karl von Clausewitz had said two centuries ago that war is an extension of politics by other means. In today's world also military power can really be applied effectively only when it is in tune with the political-diplomatic environment. Defence and diplomacy go hand in hand.

This was amply demonstrated by the Kargil War in the summer of 1999. The outstanding performance of our defence forces on the battlefield, coupled with our political handling of the war and its diplomatic dimension, ensured the final success in getting Pakistan to admit to the aggression and withdraw from across the Line of Control. Our ability to manage defence and diplomacy in a coherent, co-ordinated and effective manner also provided a new strategic stimulus to deepening and expanding Indo-US relations in particular and support of the international community for India in general. In future we would need to pay increasing attention to co-ordination of defence and foreign policy in pursuit of our national interests. This becomes even more important in circumstances where military power and force is used without necessarily engaging in a continuing war. Coercive diplomacy of the type that we had to resort to after the dastardly terrorist attack on Parliament on December 13 last year is typical of a situation where we not only need to ensure a co-ordinated joint approach to military matters but also to bring about synergy between defence policy and diplomatic moves.

Thank you.

Inaugural Address at the Seminar on "Air Power and Joint Operations" organised by Centre for Air Power Studies on 25th November 2002 in New Delhi

ENVIRONMENTAL REQUIREMENTS & MARKET ACCESS*

It gives me great pleasure to inaugurate this important International Workshop organised jointly by OECD and RIS. It is our earnest hope that the Workshop will enable us to arrive at a joint assessment of the impact of environmental requirements on market access, particularly in the light of the growing concerns of the developing countries.

Market access for the products of developing countries is the key to achieving the laudable objectives of the WTO as per the Preamble to the Marrakesh Agreement, such as raising the standards of living and ensuring full employment in the developing and the least developed countries and enhancing their share in international trade commensurate with their developmental needs.

There has been a proliferation of environmental and health requirements imposed on trade especially in the developed countries. These requirements not only include product standards and regulations but also voluntary measures, standards set by the private sector, buyers' requirements and supply chain management, which may involve non-product-related production and process methods (PPMs) such as recycling requirements. These regulations have often been applied in such a manner that they act as non-tariff barriers.

The WTO Agreements on SPS (Sanitary and Phytosanitary Measures) and TBT (Technical Barriers to Trade) intend to provide that these standards and regulations are not arbitrarily used for protectionist purposes and do not have an adverse impact on trade while protecting the interest of the consumer. However, at present there is considerable discretion available to the importing countries to impose their own rules regarding these standards and other regulations such as inspection of imported products, specific treatment or processing of products, fixing of minimum allowable levels of pesticide residue, labeling and packaging requirements etc. This flexibility in these Agreements has

been exploited to impose environmental norms and standards that are much more stringent than the international standards, thereby acting as a significant barrier to exports.

The SPS Agreement, for instance, allows the importing countries to impose norms that are higher than international standards provided there is a scientific basis. A number of countries have used very minute environmental risk assessments to justify much more stringent norms than the international standards, thus raising the compliance costs for the exporters. Another problem is the variation of standards across the importing countries, which further increases the compliance cost.

Many of these standards are imposed in a less than transparent manner and are sometimes accompanied by other requirements, such as Good Manufacturing Practice. It has been pointed out that while the system of notifications under the SPS and TBT Agreements has produced a list of notifications on products of export interest to the developing countries, not all the Enquiry Points in the member-countries are functioning well in reacting to relevant notifications disseminating the information to exporters. Serious gaps remain in information gathering and dissemination and capacity to respond adequately. Moreover, there is no obligation to notify to the WTO the voluntary standards and buyers' requirements and the information clearinghouse services for these do not exist as yet.

The effect of these requirements is particularly severe for the small and medium-sized exporters in the developing countries who lack information on the requirements and the financial and technical capability to comply with them.

The SPS and TBT Agreements provide for technical assistance to the developing and the least developed countries. However, experience of the past few years has shown that such technical assistance, even when provided, has generally not been adequate or timely.

The Doha Ministerial Conference has, therefore, instructed the Committee on Trade and Environment to give particular attention to the effect of environmental measures on market access especially in relation to the developing and the least developed countries.

The growing environmental concerns are also opening new vistas for growth in production and trade of environment-friendly goods, such as organic products. However, exports of organic products also face severe constraints, such as high certification costs, complex procedures and high tariff and non-tariff barriers in import markets. The traditional agriculture that has been practised for centuries in the developing countries does not receive appropriate recognition in the developed country markets.

Ladies and gentlemen, the health of our people and the state of the environment are much too important for us to be allowed to be used as tactical instruments of trade policy. Genuine concerns must of course be addressed but care needs to be taken to ensure that in doing so we do not unnecessarily impose a burden on the small and the poor.

In this context, there is a crucial need for a continuous dialogue and consultation between the developed and the developing countries to evolve a world trading system that is fair, transparent and equitable and provides opportunities to the poorer countries to increase their share in the world trade as envisioned by the Marrakesh Agreement.

I am happy, therefore, that the OECD has initiated a dialogue with the developing countries on some of these issues of concern to them. I am sure that such interactions will help in promoting a mutual understanding of these concerns and in identifying the policy challenges that need to be addressed. I am especially pleased that the OECD has chosen to hold this important Forum in India. I wish you success in your endeavours and a pleasant stay in India.

Thank you.

** Inaugural address at the OECD Global Forum International Workshop on "Environmental Requirements and Market Access: Addressing Developing Country Concerns" held on November 27, 2002 in New Delhi*

CHALLENGES IN ACHIEVING ECONOMIC GOALS*

It gives me great pleasure to be here in this august gathering of the captains of industry and other distinguished guests. Winds of change are sweeping across the globe. India cannot remain immune to their effects. Fortunately, thanks to the far-sighted vision of its leaders and planners, India possesses formidable strengths and is, therefore, poised to take advantage of the emerging macro-economic environment being unleashed by the process of globalisation in order to further its own national priorities.

Our national goals are a reflection of our collective aspirations as translated into achievable targets. Towards the end of a decade we would like to see ourselves as a nation free from the scourge of poverty, illiteracy and unemployment. We would like to emerge as a nation in which every young person looks forward to, and is assured of, a fulfilling and gainful activity to engage in. We would like to see a social system and an economic environment in which there are plenty of choices and freedom is given to every one for the fuller development of his/her human potentials. This is possible only with a decent standard of living for all, diversified possibilities of education, decent health services and a minimum of social security accessible to all. In order to achieve these basic human goals we will have to achieve and sustain an economic growth rate of at least 8 per cent in the larger part of this decade. Our immediate challenge is to lay down the necessary foundation for this higher growth path in the initial years.

India's reforms in the 1990s have produced an average growth rate of around 7% in the Eighth Plan period (1992-1997). We need an even higher growth if we are to make a significant dent on poverty in India. Moreover, the growth we have experienced in the 1990s was also not as well balanced regionally as we would have liked. It has had less impact on reducing poverty than we had hoped. But it is definitely encouraging compared to not only our past record but also the record of other countries. In fact, it is not sufficiently recognised, even in

India, that India has been one of the ten fastest growing economies of the world in the 1990s.

The challenge before us today is how to achieve a growth rate of over 8% of GDP per annum, ensure that this growth is regionally more balanced and, above all, that it succeeds in generating employment at a pace, which can absorb our growing labour force. Fortunately, our population growth is slowing down and this bodes well for the future. However, because of the age structure of the population, the labour force growth will begin to decelerate only after 10 years. The next decade must therefore see a growth, which generates high levels of employment. How we tailor our development strategy in general, and the programmes and policy packages in particular, to achieve these objectives is the current focus of work in the Planning Commission.

To start with, we clearly need to consolidate and deepen the process of reforms in the sectors where they have already been initiated. Deregulation of industrial investment activity was a key element of the reform and has been more or less completed at the Central Government level. However, investors also face controls at the State Government and local levels. The task of de-regulation and de-bureaucratisation needs to be vigorously pursued at these levels. Many of our State Governments have begun to focus on this task as they realise that with the liberalisation of investment decisions by the Centre, individual States have to compete for investment from both domestic and foreign investors. Equally important is the need to extend the reforms to our agricultural sector, which is hamstrung by a plethora of controls and regulations framed during an era of shortages. These not only prevent our farmers from realising the full value of their efforts but also prevent the emergence of a vibrant and dynamic agro-processing industry. Even while encouraging the process of liberalisation, we will have to take into account the uneven flow of investment to different States with a view to eliminating regional disparities.

In the area of trade policy the process is well underway and the desired end points are now known. We have removed the quantitative restrictions on imports. Customs duties, which used to be high, have been lowered very substantially and we propose to reduce them further

to bring them in line with East Asian levels. The Indian industry has, therefore, been given a reasonably clear indication of the direction and pace of changes in this area. It is heartening to note that the Indian industry has been able to adjust to the increase in the competitive forces unleashed by the reforms. There is clear evidence of significant improvements in efficiency across a range of sectors. I compliment you on your efforts. Nevertheless, recent studies indicate that we still have a long way to go and that 70% of the non-competitiveness of Indian industry is internal to the firms and only 30% is due to external factors. I would strongly urge you to undertake a thorough introspection so that the existing infirmities of our industries are corrected as soon as possible.

The lowering of industrial tariffs further may mean increased competition for segments of Indian industry but it would also mean greater market access to our exporters. A brief analysis of the tariff peaks in the developed countries indicates that the average level of 3.8% tariff in the post-Uruguay Round period for the developed countries does not provide a correct picture about the market access allowed to the exports of the developing countries like India. This is because of the existence of 'tariff peaks' and the phenomenon of 'tariff escalation', particularly for the products of export interest to India and other developing countries. The proposal to enact a law by the State of New Jersey to ban Business Process Outsourcing (BPO) is yet another example of protectionist tendencies. Such developments are at cross-purposes with the spirit and theory of comparative advantages and the principles of WTO and we shall do our utmost to safeguard our interests.

The encouragement of foreign investment is a key element in our reform programme. The Government has made it clear that it is actively seeking foreign investment especially in high technology areas and infrastructure. We have considerably expanded the list of industries eligible for automatic approval of foreign investment so that we can achieve our target of raising foreign direct investment from US\$ 4 billion per year to US \$7.5 billion within the Tenth Five Year Plan.

The public sector reform is another important aspect of our reform package. The low operating efficiency of many, though not all, public sector enterprises has put an increasing financial burden on the

Government. The failure of the public sector to generate surpluses, as was once expected, has in effect led to a reduced ability of the Government to support the development of the social sectors, such as education and health. It has also limited the availability of resources for the development of physical infrastructure. We initiated the process of public sector reform by giving public sector enterprises more autonomy from the Government and also by beginning a process of disinvestment in public sector equity while retaining majority control. More recently we have gone beyond this position to adopt a bolder policy of actually reducing the Government's stake to a minority or even zero in some cases. The Government has indicated that it will undertake bolder initiatives aimed at effectively privatising public sector enterprises in the non-strategic areas.

Beyond the macro-economic management of the economy and the reform of industrial and trade policy regimes, the agenda for reforms in other sectors is also quite demanding. The thrust of the initiatives taken so far has been on addressing the issues facing the organised manufacturing sector. The Government is also addressing the issues constraining the growth of the unorganised manufacturing sector. A large part of the economy, particularly the rural area, and most of the labour market, is still unorganised. It is essential to ensure that the de-regulation benefits the small-scale sector and the unorganised sector. I am informed that there are certain policy hurdles in fostering greater cooperation between the organised and the small-scale sector. I would be grateful if these are identified and brought to our notice so that these can be redressed expeditiously.

A major weakness of the economy has been the inadequacy and the poor quality of India's infrastructure i.e. electric power, roads, ports, telecommunications, urban and rural drinking water supply and sewerage. Rapid growth is possible only if the supply of these services can be greatly increased and its quality improved. The investments in these sectors at present are far below the levels needed to achieve this objective. The availability of these services is a particularly important prerequisite for attracting capital, whether foreign or domestic. A high quality of infrastructure services is also essential for international competitiveness and export dynamism in an increasingly open economy. Traditionally, the investment in infrastructure has mostly

depended on public funding which, because of the pressure of other priorities, has not been able to keep pace with the growing demand. The major policy re-orientation initiated recently seeks to augment the resource availability and enhance the efficiency in resource use by encouraging the private sector to provide infrastructure with reasonable user charges.

These are some elements of our future strategy but I am certain that you are all deeply concerned about the current state of the economy. We have certainly gone through a bad patch but the signs of recovery are now evident. I am convinced that if we undertake some of the measures that I have outlined the economy will rebound strongly with an improved investor confidence. Nevertheless, we should be under no illusions. As we progressively move towards a more market-oriented economy with a predominance of the private sector, business cycle behaviour will become more probable. We will have to learn how to cope with these in a spirit of public-private cooperation.

The challenges before us and the complexity of our economy necessitate that we evolve a shared vision of, and a shared commitment to, the national objectives and the development strategy not only in the Government but also among all other economic agents. No development strategy can be effective unless each component of the economy works towards a common purpose with the full realisation of the role that it has to play within an over-all structure of responsibilities. This vision and the strategy have been clearly articulated in the draft Tenth Five Year Plan. The National Development Council is to consider this on 21st December after which I hope that we will have an occasion to discuss it in detail.

On the occasion of its 97th AGM I wish the PHD Chamber of Commerce all success.

** Address at the 97th Annual General Meeting of PHD Chamber of Commerce & Industry on 29th November 2002 in New Delhi*

VOCATIONAL TRAINING FOR INFORMAL SECTORS*

I extend a warm welcome to the distinguished members of the General Council of the Institute of Applied Manpower Research. You would recall that last year we met at the inauguration of the first Block of the Computer and Management Centre at the new Narela campus. The campus is now almost complete. The IAMR has, in the last week, commenced its activities from the new campus. I am informed that the fresh training programmes, to commence in February 2003, would be held at the new campus.

The new campus has provided the IAMR with a much larger infrastructure than what it had in the past. It is now for the IAMR to fulfill the long-term vision for its development as a premier institution in the field of manpower research and manpower planning. We look forward to the suggestions and guidance of the distinguished members of this General Council in setting new and challenging goals for this organisation.

As is common with any new facility there has been some teething trouble but I have been assured by the Director that all possible steps are being taken to mitigate the problems faced by the faculty and staff. Let me assure you that the Planning Commission will provide full support towards the creation and maintenance of efficient working conditions at the new campus.

Since we met last the full Planning Commission and thereafter the Cabinet have considered and approved the draft of the Tenth Five Year Plan. The document will be shortly placed before the National Development Council for adoption. I am happy to say that this Institute provided valuable inputs towards preparation of the Plan.

We have noted earlier in the deliberations of this General Council the large increase in the working age population that would occur in the

next few years, which is also recognised as the single most important issue in the Tenth Plan. The measures for provision of gainful employment opportunities, therefore, merit special attention at this stage. In this context, I propose to deal here at some length with the issue of skill development of the new entrants to the labour force and the role that the IAMR can play.

The IAMR has been playing a leading role in manpower planning, identifying new areas of technology and forecasting the manpower needs in different disciplines. The lead centre of the AICTE's National Technical Manpower Information System (NTMIS) is located at the IAMR. The NTMIS, set up in 1983, generates data/information base for planning and management of technical education through its 21 nodal centres across the country. These centres collect data on student intake by, and turnout from, engineering colleges. This data is analysed by the lead centre of the IAMR.

The IAMR has demonstrated its capability in the field of manpower planning in various engineering disciplines. This is a very important contributor to growth and productivity in our economy. But engineering manpower is a small segment of our labour force. Moreover, since the returns in engineering education are perceived to be high, the private investment flows in readily. However, the needs of a much wider cross-section of the new entrants to labour force remain unaddressed. For this purpose we have to address many and varied disciplines of vocational skills, which are required in manufacturing, handicrafts, textiles, construction and related services, transport, social services like health and education, tourism and the hospitality industry.

The formal vocational training infrastructure at present covers a very small fraction, about 5 per cent, of the new entrants to labour force. Hence, there is a need for a rapid quantitative expansion of the vocational training activity. But the qualitative issues are at least as important. The structure of skill development must match the demand. This requires better information and research support than what exists at present. The IAMR can make a very useful contribution here.

As the economy diversifies, the proportion of manpower deployed in agriculture tends to reduce and the skill requirement of agriculture also tends to change. At the same time, a variety of new occupations emerge and it is the structure of such occupations, which determines the vocational skills required. In this connection, there is a need to review and update the national classification of occupations that was drawn up as far back as in 1968.

The traditional occupations provide work opportunities to a very large section of our labour force. With marginal efforts the productivity in such occupations can be improved, leading to better income and a better quality of employment. But there are almost no training facilities oriented towards the needs of the informal sector; which is otherwise expected to provide a large part of the expansion in employment. Some principal economic activities here are retail trade, road transport, equipment repair, construction-related jobs, household industry and a growing variety of community and personal services.

The need for a policy framework for support to informal sector training has been emphasised by the Planning Commission's Special Group on Employment Opportunities. Surveys of the training needs and the existing arrangements for training in the informal sector activities are required. The associations that work for the informal sector can help in the development of skills and entrepreneurship. The training-cum-production centres in the informal sector can enable individuals to earn while they learn, as for example in the handicrafts sector. The private sector companies can create foundations to finance community-based programmes, which include training and business support to micro enterprises. For this purpose a policy for tax and credit incentives has to be designed.

The construction industry, as it exists today, is largely in the informal sector and the work practices here leave much to be desired. Since no proper skill development exists, much of the knowledge is acquired through "learning by doing" or, even worse, by trial and error. This, combined with a lack of knowledge with the small builders, leads to inappropriate use of materials and fittings and slippage in time schedules. Many a time what is contracted for cannot be honoured

because of the financial loss on the work site, which has to be shared by the workers and the employer. Lack of working skills, professionalism and entrepreneurship is responsible. Although there is a strong presence of the private corporate sector in the upstream, which provides cement, steel, plumbing materials, electrical fittings and a variety of appliances, synergies have not been developed. Some of the large companies have no doubt taken the initiatives to train masons and other construction workers but these have remained as isolated efforts. If a proper framework could be articulated, there will be no dearth of resources and demand for training in the construction sector. What is true of the construction sector also applies to many other economic activities, wherein a large number of workers are engaged.

The training services by the Government or those supported by the Government have evolved both as a part of commodity production functions and as part of education and training functions. The strength of the vocational training and the vocational education departments of the Government has been the development of institutions, which can provide curriculum development, testing and certification services to a very large number of trainees and training institutions. But at the same time it should be recognised that the existing vocational training facilities are able to accommodate only a small fraction of our labour force. This calls for a rapid expansion of the training facilities. We must encourage and nurture adequately the training service initiatives of the voluntary sector, trade associations, Chambers of Commerce, the small-scale production units and private corporate training establishments. Even within the Government the nature of the institutions that render training services ranges from departmental mode establishments to societies, which are financially fully self-reliant. In some measure the gaps in the creation of infrastructure for training are due to a lack of a clear vocational training policy. For example, in medical and engineering education clear policies were formulated and we no longer have a shortage of capacity. Investment in vocational training services also requires promotion of the right kinds of institutions. The formulation of fiscal support policy requires calibration of fiscal incentives against the results achieved.

The articulation of a vocational training policy requires data inputs and research into the models of training that work and those that do not. Since the training activities are spread over multiple departments of the Governments at the Centre and the States, there is a crying need for coordination. I feel that the IAMR can make a pioneering contribution by providing research support to the policies and initiatives of the Government. It should entrust the responsibility for time-bound studies in vocational training to an earmarked group of its research faculty.

I note that since the last meeting of the General Council the Institute has set up a Cell to study various aspects of employment and manpower and related issues in the North- Eastern States. Proposals for sponsored research have been made to the North- Eastern Council and the Director of the IAMR has made a presentation to the Council. The NEC has also invited the IAMR to train the officers of the State Governments in the North-Eastern region in manpower planning and governance issues.

Academic training and research mutually reinforce each other. The IAMR has been affiliated to the Guru Govind Singh Indraprastha University for its one-year Post-Graduate Degree programme in Human Resource Development & Planning for foreign nationals and for its Ph.D. course. At the new campus, the Institute is planning to start a programme in human resource planning and development for Indian nationals.

I would like to place on record the good work done by the Executive Council, the Standing Committee on Research Programmes, the Director, the faculty and the staff of the Institute. I now inaugurate the proceedings of the 39th meeting of the General Council.

** Address at the 39th meeting of the General Council of Institute of Applied Manpower Research (IAMR) on 4th December 2002*

ISSUES IN WATER RESOURCE MANAGEMENT*

I am very happy to be here with you at this Seminar on the very important issue of harnessing the water resources for the economic growth and prosperity of our country. In an agrarian economy like ours the importance of water for agricultural productivity hardly needs any emphasis. The recurring cycle of floods in some parts of the country and drought in others has accentuated the need for a comprehensive strategy to combat these natural disasters and mitigate their impact. The consequences of global climate change on the frequency of cyclones, droughts and floods are more in evidence today than before. Thus the strategy will have to encompass short, medium and long-term solutions if it is to have the desired impact.

In India there is unfortunately a mismatch between the endowment of natural resources and the population to be supported. While our country accounts for 2% of the world's geographical area and 4% of its fresh water, these have to support 17% of the world's population and 15% of its livestock. The pressure on our land and water resources is therefore obvious. On the other hand the annual rainfall in the country, averaging 1170 mm, looks adequate. However, there are marked temporal and spatial variations in the distribution of this rainfall. The rainfall, which varies from 100 mm in the western desert to 11,000 mm in the north-east, occurs mainly in a few monsoon months between June and September and 50% of the precipitation occurs in about 15 days. Out of the utilisable flow of 1122 billion cubic metres (BCM), 600 BCM is already put to use, of which 83% is for agriculture. The demand by 2050 AD is likely to reach the level of the full utilisable quantum. But the problem is much more immediate. Many basins are already facing water stress with the per capita annual availability having fallen below the threshold value of 1000 cubic metres. Conservation of water and improvement of water use efficiency will have to be paid more attention from now on as

otherwise the demand will outstrip the availability in a few decades from now.

Irrigation is the most important input for agricultural production. Provision of irrigation alone leads to two to three-fold increase in crop production and corresponding rise in farm incomes. Provision of irrigation to the cropped lands can be achieved through various means like construction of large and medium dams, river diversion works, river lift, minor irrigation tanks or use of ground water through dug wells and shallow, medium and deep tubewells. Minor irrigation forms the bulk of irrigation in India comprising 58% of the ultimate irrigation potential of 139.9 million ha and 60% of the potential of 94 million ha created so far. Compared to major irrigation, minor irrigation is cheaper and quicker to develop and is free of problems like displacement of population and their rehabilitation. However, certain issues in minor irrigation development need urgent attention and mid-course corrections before we can proceed further.

Out of the assessed 433 BCM of replenishable groundwater potential available, about 37% is presently developed. However, in certain pockets in Punjab, Haryana, Rajasthan, Tamil Nadu and Gujarat excessive groundwater mining has caused the water table to dip down alarmingly. This has led to water quality problems and increasing cost of pumping, making any further groundwater development uneconomical and detrimental. Water quality problems, such as arsenic in West Bengal and fluoride in parts of Gujarat and Andhra Pradesh, can also be linked to overexploitation. Out of 5711 blocks/mandals/taluks/watersheds in the country, 310 are overexploited and 160 are already in the category of "dark", where the level of exploitation has touched 85% of the replenishable limit.

Groundwater legislation is necessary to remedy the situation and to prevent its occurrence elsewhere. A model Bill has been circulated by the Centre to the States but the response of most States has been lukewarm. The setting up of the Central Ground Water Authority as per Supreme Court's directive has to some extent redressed the situation

but the enforcement of the Authority's directives depends again on the responsiveness of the States. To compound the problem, power supply for agriculture is free in some States and heavily subsidised in others, which only encourages excessive exploitation of groundwater. Charging appropriate tariff will therefore act as a disincentive to overexploitation of groundwater.

Surface minor irrigation through tanks has been a traditional source of irrigation in many States, especially in peninsular India. It is estimated that there are about 5 lakh tanks in the country. The potential under tank irrigation has been steadily decreasing due to encroachment, siltation and lack of system maintenance. Unfortunately, no estimate of the shrinkage in area under tank irrigation is available although some estimate was made in the 1980s, according to which 1.7 million ha of such irrigated area had been lost. Tanks were traditionally maintained by community initiative but, over the years, the taking over of maintenance responsibilities by the Irrigation Department, despite lack of adequate budget support, has not only stifled this initiative but also contributed to system decline. The transfer of responsibility of minor irrigation tanks to the Panchayati Raj Institutions through the 73rd Constitution Amendment and the promotion of water user associations through enabling legislation in many States are steps in the right direction for remedying the situation. However, the systems will have to be first rehabilitated before the community can be asked to maintain them. The Central and State Governments should target more Plan funds for rehabilitation of tanks. The revised National Water Policy has also advocated a paradigm shift in the emphasis on water resources management from the creation and expansion of the water resources infrastructure to improvement in the performance of the existing facilities.

An effective strategy, now gaining currency, with the twin objective of recharging groundwater and providing food and water security at the village level is watershed development. This is a micro-level planning exercise where watersheds of about 500 ha. area are treated with a package of practices from ridge to valley to store rainwater and arrest

soil erosion. There are many schemes under various Ministries for watershed development especially in arid and semi-arid areas.

The ICAR has estimated the semi arid and arid areas in the country as 50 million ha. So far, about 28 million ha. of rainfed and arid areas have been treated under various watershed programmes with an investment of about Rs.10,000 crore. Here again, community participation right from the planning to the maintenance stage is vitally important. However, the sustainability of the assets created is also a matter of concern, for which capacity building has to get more focus. The recently announced Pradhan Mantri Grameen Jal Samvardhan Yojana has the prime objective of food and water security through micro planning in rural areas. In urban areas, rooftop rainwater harvesting should be made compulsory by amending the municipal bye-laws.

The short-term strategy to combat droughts has conventionally comprised of reserving water in the existing water bodies for drinking water supply and taking up water conservation works like desilting of tanks and construction of new tanks through the Food for Work Programme. This strategy continues to be valid. The medium-term strategy would be to complete the on-going projects quickly to augment the available storage capacity and the irrigated area and thus ensure drought proofing. The Accelerated Irrigation Benefits programme of the Central Government has been introduced precisely with this objective in view. Improvement of water use efficiency, both in irrigation and drinking water sectors, would necessarily have to be a part of both the short and medium-term strategy. Demand management through mass awareness, recycling of water, optimal crop pattern etc. is at least as important as supply augmentation in a country with limited fresh water resources like ours. Interlinking of rivers is now being increasingly mooted as a long-term strategy. This calls for a consensus among the States in a spirit of give and take, recognising water as a national, rather than a regional, resource. In any case, there is an urgent need to pay far greater attention to the origin and catchment areas of our rivers. We have neglected this issue for far too long and it is time that we started taking corrective steps.

The private sector has so far shied away from investment in the water sector mainly due to apprehension about the returns on investment, as the pricing of water supplied for irrigation has been very low. Water pricing should be adequate not only to cover the operation and maintenance costs but also to recover a part of the capital cost. If we do not do that, the future generations will have to pay the price. Many States have, in fact, raised the water charges but the present levels are still not adequate to cover even the maintenance cost due to the high component of administrative expenses. The Government of Andhra Pradesh, which has been a pioneer in participatory irrigation management, passes on 50% of the collected water charges to the WUAs for maintenance works. The ultimate objective is to pass on the full water charges. A beginning can be made by opening up to the private sector certain areas, like pisciculture in reservoirs, development of tourist spots at dam sites, canal side plantation and so on, with an appropriate charge.

In conclusion, I would urge that water be recognised as a scarce and precious national asset to be shared as a common pool resource. It should be developed by techno-economically viable schemes. It should be managed and used by the community efficiently and without causing environmental degradation. Finally, it should be paid for by users appropriately to enable proper maintenance of the created assets.

With these words, I have great pleasure in inaugurating this Seminar.

"Inaugural Address at the National Seminar on 'Jal Swaraj, Harnessing Water, Spreading Growth' held on December 10, 2002

IMPORTANCE OF BALANCED USE OF FERTILIZERS*

I am glad to be at this Seminar on "Fertilizer & Agriculture – Meeting the Challenges" organised by the Fertilizer Association of India.

Agriculture and allied activities make the single largest contribution to our country's GDP, accounting for almost 1/4th of the total, providing employment to around 2/3rd of our total workforce and contributing 14.7% of the total exports of the country. Agricultural growth has a direct impact on poverty eradication. It is thus an important factor in promoting employment generation and economic development and in containing inflation.

During the first two decades after Independence India had to import large quantities of foodgrains to meet the domestic consumption needs. The extent of vulnerability came into sharp focus during the severe drought of 1965 and 1966. The cessation of food aid because of the Indo-Pakistan War of 1965 led to a difficult situation. It is a lesson we should never forget.

The country has made a very significant progress in the field of agriculture. The production of foodgrains has increased from 50.8 million tonnes (mt) in 1950-51 to over 200 mt in 1998-99. Rice production has gone up over four times. Wheat production has gone up more than 11 times. Oilseeds, cotton and sugarcane have also registered appreciable gains in production and productivity. The country is now the largest producer of milk in the world and the second largest producer of rice, wheat, sugarcane, fruits, vegetables, etc. However, the per unit area productivity of our crop commodities is much lower than in the other major crop producing countries. There has also remained a wide gap in the yield levels across the States in the country and across the districts in a State. Thus it is clear that we are nowhere near our true potential even at the present level of agricultural technology.

Though we are now self-sufficient in foodgrains, the geo-political conditions are still not such that food security can be dropped from its position as a central element of our socio-economic strategy. It is the strategy of food security, which powered the green revolution, and in a relatively short period of time the country started producing enough not only to meet its internal demand but also to generate a small surplus. However, this should not be a cause for complacency since the per capita production and availability of foodgrains remain below the normative needs of our population. The National Family Health Survey (NFHS)-II of 1998-99 has shown that under-nutrition especially in children is still widely prevalent. Almost half of the women in the age group of 15-49 years and 3/4th of children have been found to be anaemic.

Although there is considerable potential for accelerating agricultural growth in the country, the pace of progress has been slow and certain weaknesses are becoming increasingly evident. Among the factors of concern are environmental considerations such as land degradation and water depletion, inadequate market integration leading to localised shortages and gluts, tardy progress of technology diffusion and inadequacy of appropriate infrastructure, among others. What is also worrying is that the pace of employment creation in agriculture has slowed significantly in recent years. This has ominous implications for the future.

People, the world over, have of late seen the common challenges facing them in their true perspective and started working together to meet them. There is today a growing concern for restoring and preserving the health of this planet and adopting appropriate energy policies, lifestyles and economic activities, which would be sustainable in nature. What we have to look for now are the new paradigms of growth and economic development, which rest on minimising environmental pollution and reducing the threat to the health and well-being of life on this planet. In other words, the process of development requires a reversal of the policies and practices in several countries, mostly

developed, which are primarily responsible for polluting the global environment. The developing countries should learn from the experience of these countries and follow sustainable development policies and plans.

A sizeable portion of our arable land, forests and wastelands are highly degraded, which in the present form cannot be utilised optimally. As per the estimates of Ministry of Agriculture about 107.4 million hectares of our land resources are degraded owing to erosion, salinity/alkalinity, water logging, etc. About 31 million hectares of the 63.73 million hectares of total forest area are degraded. About 15.5 million hectares of the so-called forest even have no rootstock left for regeneration or are totally degraded and tree-less. About 63.8 million hectares of wastelands are lying unutilised or underutilised.

Unsustainable practices like excessive use of water, together with imbalanced use of fertilizers especially in the Green Revolution areas of northern and north-western parts of the country, have affected the soil health and the environment adversely. There seems to be an increasing reliance on chemical fertilizers. The organic matter content in the soil has gone down because of less use of organics and the micro nutrient deficiency has become alarming. Natural resources like land and water have not received the attention they deserve.

The scarcity of water in the rain-fed areas is causing serious hardship. Due to poor water management practices, leading to excessive run off and poor recharging of groundwater and excessive drawal/exploitation to meet the household needs of growing population and of irrigation, the groundwater resource is dwindling very fast. The water problem in some of the areas has persisted largely due to the adoption of cropping patterns with high water demanding crops. Effective groundwater recharging measures as also regulations for sustainable exploitation need to be put in place on an urgent basis. The sustainable development of land and water resources becomes more important for a nation like India, which shares about 16 per cent of the global population but has only 2.4 per cent of the total land and 4 per cent of the total water resource.

The fertilizer industry in the country has played a crucial role in making the Green Revolution a success and making the country self-sufficient in foodgrains. The fertilizer consumption in terms of N, P & K (nitrogen, phosphorus and potash) nutrients has reached the level of 92 kg/ha in 2001-02 on an average basis, although in some States the consumption is much higher, such as in West Bengal (137 kg/ha), Andhra Pradesh (156 kg/ha), Haryana (161 kg/ha) and Punjab (176 kg/ha). However, in some States/areas the fertilizer consumption has remained very low, especially in the north eastern States of Nagaland (2 kg/ha), Arunachal Pradesh (3 kg/ha), Sikkim (7 kg/ha), Mizoram (18 kg/ha), Meghalaya (19 kg/ha) and in the States like Himachal Pradesh (42 kg/ha), Orissa (47 kg/ha), Rajasthan (35 kg/ha) and undivided Madhya Pradesh (29 kg/ha).

Although the impact of the Green Revolution can be seen all over the country, the additional foodgrains production has been realised primarily in the northern and north-western parts of the country, the so called "Green Revolution" areas. But of late, these regions have started showing signs of fatigue and productivity seems to be plateauing.

In these areas, where fertilizer consumption is comparatively high, the response ratio of grain output to fertilizer input seems to be declining. This is evident from the fact that in these areas the crop productivity has not increased in proportion to the increases in the use of fertilizers. The factors for this seem to be: (i) imbalance in the use of N P & K mainly on account of their price variations; (ii) increasing deficiency of micro nutrients, which affects the growth of plants and interferes in proper uptake of applied NP&K by the crop and (iii) decreasing carbon/organic matter content in the soil because of the increasing reliance on the use of chemical fertilizers.

This trend should lead us into serious introspection. As I have already mentioned, other countries of the world have recorded far higher levels of productivity with higher levels of fertilizer application without the ill effects that have become perceptible in our Green Revolution areas. How have they managed to do so? Is there something in our agronomic practices, which leads to these undesirable outcomes? If so, why?

May I submit that modern agriculture does not only involve progressively higher application of modern inputs. There are a number of collateral measures, which have to be taken in order to take the full advantage of modern technologies and which our farmers must be made fully aware of. Who is better to carry out this function than the fertilizer industry? The outreach that your industry has in terms of grassroots presence is probably unmatched. It is both in your interest and in the interest of the country that this vast network is utilised to bring the best practices to our farming community. After all, the long-term growth of fertilizer consumption will come about only when we can maximise the benefits and minimise the ill effects of increased fertilizer application.

Chemical fertilizers apart, the use of organics too needs to be promoted. A sizeable quantity of organic farm waste is generated, which could be utilised for providing nutrition to the crops after converting it into compost/manure. The Report of the Task Force on Organic Farming 2001, constituted by the Department of Agriculture and Cooperation, has estimated that about 356 million tonnes of crop residue is available annually. Out of this, about 170 million tonnes is soil incorporated and about 136 million tonnes is available for manuring. Besides the crop residue, a sizeable quantity of municipal solid waste (MSW) is also available, which could be utilised for generating energy and making manure. Technologies for pelletisation and bio-mechanisation are available for using the MSW to generate energy and manure. Alternatively, the entire MSW could be used for making compost, for which technologies are already available. The vermi-compost, which is rich in nutrients, could also be made from the organic farm waste.

The conversion of farm waste and MSW into compost/manure can supplement the use of fertilizers in crop production. The use of such composts will also improve the health of the soil by providing organic material for the required biological activities in addition to improving the physical condition of the soil. As organic matter also contains micronutrients, the increasing deficiency of micronutrients in the soil could also be corrected. Therefore, a thrust needs to be given for using organics in agriculture by converting farm waste and MSW into compost/manure/vermi compost of good quality.

For a balanced use of fertilizers or integrated nutrient management (INM), a sound and an efficient infrastructure for testing the soil and fertilizers is of crucial importance. However, we are still lacking in this area. Presently we have a total capacity of testing 8 million soil samples annually. Considering that there are over 106 million operational farm holdings, the existing soil testing facilities seem to be grossly inadequate. Besides, most of the laboratories are equipped to test only NP&K and there are hardly adequate facilities for testing the micronutrient status of the soils. On the one hand there are inadequate soil testing facilities and on the other the utilisation of the existing facilities is unsatisfactory. Therefore, besides creation of additional soil testing infrastructure, the existing facilities, which are underutilised, need to be strengthened in terms of laboratory facilities, chemicals & equipment and trained manpower.

The Tenth Plan emphasises the involvement of private sector in this area. The fertilizer industry has no doubt been providing such services to the farming community but in a limited manner. Now it is time for the fertilizer industry to expand and diversify its activities. The thrust should be on the production of nutrients, which would include production of compost from city garbage/organic waste, bio-fertilizers, and not only chemical fertilizers.

Therefore, both corporate social responsibility and enlightened self-interest dictate that the fertilizer industry plunges whole-heartedly into educating our farmers and helping them to make the best use possible of the techniques and technologies of modern agriculture. It will of course not be cost-less. Your people will have to be trained and linkages will have to be established with the scientific community. However, I believe that if we work in a spirit of cooperation, the combination of your distribution network and our Krishi Vigyan Kendras can form a formidable vehicle for ushering in a new era of agronomic practices in India.

To promote the balanced use of fertilizers and INM concept and to increase the fertilizer use efficiency, the extension machinery is to be geared to propagate the adoption of technologies already developed/

available. The ICAR is also associated in agriculture extension activities through its 314 KVKs, Institute Village Linkage Programme (IVLP) and its institutes/centres in the respective areas. The interaction of KVKs activities with the State/district extension machinery will be strengthened. It is planned to strengthen the linkages between research and extension to improve the quality and effectiveness of the research and extension system. The extension system is to be revitalised and made broad-based through KVKs, NGOs, farmers' organisations, cooperatives, the corporate sector and agri-clinics/agri-business centres.

The realisation about the importance of organically produced food is growing all over the world and the demand for such food items is increasing. Prices of such products are several times higher. Being a low chemical fertilizer consuming country especially in its rainfed areas, northeastern States and hill States, India has good opportunity to take up the production of organic foods for exports and domestic use. Considering this fact, organic farming would be encouraged and facilities developed for testing and certification of organically produced foods. The KVKs and ICAR/SAU units will be designated as nodal agencies for quality certification including organic products, bio-fertilizers, and bio-pesticides.

I hope that the fertilizer industry in collaboration with other stakeholders would be able to evolve strategies towards balanced and integrated nutrient management for sustainable agriculture, together with the promotion of organic farming in the country.

* Special Address at the Seminar on "Fertilizer & Agriculture - Meeting the Challenges" held on 17th December 2002 in New Delhi

TONING UP PLAN IMPLEMENTATION AT STATE LEVEL*

Members of the Planning Commission, representatives from the UNDP and State Governments, friends from the media, ladies and gentlemen, I am happy to have you with us at this function for the release of this compendium of *"Successful Governance Initiatives and Implementation Practices: Experiences from Indian States"*. This is a publication of the Planning Commission, which has been brought out in cooperation with the United Nations Development Programme.

This publication is not a stand-alone effort. It is part of a series of initiatives undertaken by the Planning Commission in its State-oriented development strategy for the Tenth Plan. The two pillars of our strategy for the States during the Tenth Plan are encouraging better implementation at the field level and ensuring regional balance. There is a background to this. It goes back to the Mid Term Appraisal of the Ninth Plan, which you would recall had brought out that due to design weaknesses and poor implementation of schemes at the grassroots level, the impact of the plan programmes and funding was not being fully realised. Further, although all the States were progressing to some degree, regional disparities were not being reduced. We took these findings on board and factored them into the formulation of the Tenth Plan. The draft Tenth Plan, following on the mandate given by the National Development Council through the approval of the Approach Paper, has therefore been termed as a Peoples' Plan and not just a resources Plan.

The draft Tenth Plan has incorporated ambitious but realisable targets, in terms of both growth as well as improvement of monitorable indicators of human development. It also has a State-specific perspective and focuses on the strategies needed to accelerate the

growth of the States and improve governance and implementation. For the first time, the Tenth Plan document has a separate Volume on State Plans. Differentiated growth and poverty reduction targets, based on the potential of the States, have been set in consultation with the States concerned.

The question naturally arises as to why the Union Planning Commission should now focus on States at all and what is the value in doing so. The Planning Commission has been going into the problems State-wise in the past. Substantial Central financial support is made available annually for State Plans. There is, however, now a growing relevance of a State-level perspective in national planning. Major developmental issues need State-wise analysis and resolution in order that the policies and programmes have the desired impact on national development.

Again, for the first time specific monitorable targets for key indicators have been set in the Tenth Five Year Plan. Most of these monitorable targets relate to areas that are in the jurisdiction of States and require action at the State level. Joint efforts by the Centre as well as States towards the fulfillment of these targets are essential.

In our State-oriented approach for the Tenth Plan we have not neglected the issue of financing, since adequate investible resources are needed to achieve the growth targets that we expect of the States. We have ensured that the magnitude of Central assistance as well as overall funding for the Tenth Plan of the States will be going up significantly. However, the key element of the Tenth Plan strategy for the States is qualitative rather than quantitative. We are also keen to see that along with the flow of additional funds, the efficiency of implementation improves as also the quality of the delivery systems, without which the additional funds are unlikely to have the desired impact. Towards this end, the Planning Commission has taken steps in the Tenth Plan to provide to the States technical and financial assistance through a series of new initiatives, of which this present exercise is one.

To begin with, we have already put into place a system whereby the Plan targets and programmes would be jointly reviewed and intensively monitored during the Tenth Plan. This will be done by the mechanism of regular quarterly performance reviews (QPRs) separately for each State right through the Tenth Plan period. This would enable a more or less continuous interaction between the Commission and the State Governments, enabling mutual appreciation of the problems, arriving at mechanisms for their resolution as well as facilitating timely mid-course corrections in the Plan wherever necessary.

The Planning Commission has proactively taken up, in coordination with the States concerned, the preparation of State Development Reports for twenty States in a phased manner. The aim of bringing out these Reports, which are being prepared with the help of reputable, independent organisations, is to provide a quality reference document on the development profile and set out the strategies for accelerating the growth rate of these States. These Reports are meant to provide a roadmap for policies to generate growth and employment and reduce poverty in each State. You will be pleased to know that the first of these Reports, the Assam Development Report, has already been released earlier this month and the Reports on Punjab and Orissa have been finalised.

Reducing regional disparities is a priority area of focus for us as far as the States are concerned. This is the cornerstone of our efforts for sustainable and equitable growth during the Tenth Plan. Reduction in regional disparities has two facets. The first is a trend towards equalisation of resources for undertaking development activities and the second is to bring about significant improvements in the levels of governance, which form the key element of efficient resource utilisation. Accordingly, we will be targeting the less developed States and areas with funds for capital investments and innovative delivery mechanisms linked to institutional reforms. Specifically, in the Tenth Plan, a new scheme called the Rashtriya Sam Vikas Yojana (RSVY)

has been formulated to support efforts in this area. The RSVY will have four components, which will focus on (i) Bihar; (ii) the KBK Districts of Orissa; (iii) identified backward districts all over the country and (iv) State-level Reforms.

Collaterally, the focus will be on ways to improve the implementation of programmes and projects through sharing of information on better ways of doing things as well as on development initiatives that have been successfully adopted by other States. This desire has been oft expressed during my discussions with the Chief Ministers for finalisation of the Annual Plans of the States.

I believe that the Planning Commission is uniquely placed to be a clearinghouse of such information, being the only development wing of the Government that interacts, as it does, with all the States across all sectors. In an effort to respond to this need, encourage the best practices in governance and implementation and disseminate information relevant to raising the standards of implementation across States, this Compendium of *Successful Governance Initiatives and Best Practices: Experiences from Indian States* has been prepared and is before you today.

This compendium attempts to identify and highlight the models of effective implementation and delivery of public services in the States. We have restricted ourselves to an analysis of such models only in the Government sector, where the impact of better implementation is enormous. The objective is to document replicable success stories, which can be used for experience sharing and replication both at the national level as well as among the State Governments.

While selected initiatives have been incorporated in this volume, we see this as a continuing exercise. The Planning Commission would bring out further editions during the course of the Tenth Plan. Efforts would be made to include subjects and initiatives not covered in this compendium.

I would like to place on record my appreciation of the cooperation of the Human Development Resource Centre (HDRC), UNDP India Country Office, which had worked closely together with our staff to prepare this compendium. I also commend the State Governments whose initiatives and experiences are documented here and trust that this will motivate all the States to seek out, implement and document better models of governance and implementation and step up their development efforts.

** Address at the release of the Compendium of "Successful Governance Initiatives and Best Practices" on 19th December 2002 in New Delhi*