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### ⇒ **Challenges in India's Health Scenario**

The challenges facing India's health sector are mammoth. They will only multiply in the years ahead. Surprisingly many of the challengers are neither a result of the paucity of resources nor of technical capacity. These hurdles exist because of a perception that the possible solutions may find disfavour with voters or influential power groups.

The first malady has been the utter neglect of population stabilization in states where it matters the most.

The second is the monopoly that an elitist medical hierarchy has exercised for over 60 years on health manpower planning. The result has given a system where high-tech specialty services are valued and remunerated far higher than the delivery of public health services. The latter ironically touches the lives of millions.

Related to this is the third big challenge — how to make sure that doctors serve the growing needs of the public sector when the working conditions are rotten, plagued by overcrowding, meager infrastructure and a virtual absence of rewards and punishments.

**The Challenge of Reducing Maternal and Infant Mortality**

There is a clear correlation between the health of the mother and maternal and infant

mortality. In the northern states more than 60 percent of the girls and boys (respectively) are married well before the legal ages of 18 and 21. The repercussions of early pregnancy and child birth have not even dawned on the pair when they wed. The first child arrives within the year when most adolescent girls are malnourished, anaemic and poorly educated. With no planned spacing between the births, another child is born before the young mother has rebuilt her strength or given sufficient nutrition and mother care to the first born. These are among the main causes of high deaths of young women and infants. The chart and tables clearly show the regional difference in maternal, infant and child mortality. Narrowing the gaps poses one of the biggest health challenges.

The regional variations in the deaths of mothers in the states of Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan and Assam show that the percentage of maternal deaths is 6 times higher than in the Southern states.

Taken together the EAG States and Assam account for 62 percent of the maternal deaths. Schemes for nutrition, supplementary feeding, literacy, the right to education and health care remain hollow expressions without any meaning as long as women (and chiefly adolescents) have

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no control over pregnancy. Unlike other South and South East Asian countries the uses of IUD and injectibles has not taken off in India – nor are these the thrust areas for family planning anywhere in the country. Although long term, reversible methods of preventing pregnancy are available, young mothers and children continue to suffer or die. The challenges lies in bringing the issues to centre – stage and wait for incremental improvements to take place in the fullness of time. The charts show the colossal difference that has been achieved by the southern states that invested heavily in family planning (albeit through the adoption of terminal methods like sterilization which can be avoided today.

#### **THE CHALLENGE OF ESTABLISHING NCHRH**

The neglect of public health is one of the fallouts of the elitism that has pervaded medical education. Whereas cities and towns at least have alternatives available – at a price-epidemics and acute illnesses that occur in rural areas often leave people in the hands of fate. The east while elected MCI has relegated public health to the lowest rung of the health hierarchy and the doctors that once decimated dreaded diseases like malaria and smallpox are not to be found. The complement of technical staff, nurses, pharmacists, dentists, lab technicians and operation theatre staff are all in short supply outside the urban areas as the bodes that register then do not work in tandem. More importantly no Council has a stake in health care of any particular state-leave alone the country.

The proposal to set up a National Council for Human Resources in Health (NCHRH), far from being a bureaucratic response was a well thought out strategy having its roots in the recommendations of independent think tanks and

expert committees. The rationale for setting up such an umbrella body was to see that the goals of health manpower planning the prescription of standards, the establishment of accreditation mechanisms and preservation of ethical standards were served in a co-ordinated way, on the lines of structures that operate successfully in other countries.

The Indian Medical Association in particular and doctors in general have been arguing against the need for such a body because they perceive it as a threat to their autonomy and a camouflage for political and bureaucratic meddling. The fact that health manpower planning was simply ignored, that there was a complete lack of coordination between the councils and most important of all the fact that public health had become a low priority have been overlooked in the fire and fury of opposing the NCHRH concept tooth and nail. The challenges today is how to ensure that the health sector produces adequate professionals as required for the primary, secondary and tertiary sectors, both for the public as well as the private sector health facilities. If the NCHRH Bill before the Standing Committee of Parliament does not see light of day, the resurrection of the superseded scam-ridden MCI is a foregone conclusion.

#### **THE CHALLENGE OF ALLOPATHY AND AYUSH**

Public health cannot be run on contract basis and much less be farmed out to private insurance companies and HMOS (Health Management Organizations) as a recent report on Universal Health Coverage seems to suggest. Public health is squarely a state responsibility and particularly so in a developing country. It has to go hand-in-hand with sanitation, drinking water, health education and disease prevention. The National

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Rural Health Mission (NRHM) which is a public-sector programme has registered an encouraging impact in even the most intractable regions of the country. A UNFPA study has shown that nearly three quarters of all births in Madhya Pradesh and Odisha had been conducted in a regular health facility. The percentage of institutional deliveries in Rajasthan, Bihar in Uttar Pradesh was lower but even so, accounted for almost half the deliveries conducted in those states. Indeed these achievements are immense.

Having said this, institutional deliveries alone cannot be the answer to all the problems that beset the rural health sector. A visit to any interior block or *taluka* in the Hindi belt states shows that most primary health centres beyond urban limits are bereft of doctors, except sporadically. Some state governments have taken to positing contractual AYUSH doctors engaged under NRHM to man the primary health centres. These doctors dispense allopathic drugs, prescribe and administer IV fluids, injections and life-saving drugs, assisted by AYUSH pharmacists and nursing orderlies.

This reality must be confronted. If an AYUSH doctor has been entrusted with the responsibility of running a primary health centre, and found in shape to handle the national programmes, the controversy over what AYUSH doctors working in as registrars and second level physicians in private sector hospitals, clinics, and nursing home is wide-spread in states like Uttar Pradesh, Maharashtra and Punjab; so also in Delhi and Mumbai. The challenge lies in understanding what can be changed and what cannot be changed, without getting intimidated by protests from Medical Associations that will always protect their turf to retain primacy.

### ⇒ **Drug Pricing and Pharmaceutical Policy**

The Department of Pharmaceuticals was established on 1<sup>st</sup> July 2008 as the nodal Department for ensuring the availability of medicines at reasonable prices in the country. Availability of good quality drugs at affordable prices with a specific focus on the poor has been the constant Endeavour of the Government. The Government is administering Drug Price Control through the Drug Price Control Orders issued from time to time.

The National Pharmaceutical Pricing Authority (NPPA), an independent body of experts in the Ministry of Chemicals & Fertilizers was formed by the Government of India. The functions of NPPA, inter-alia, relates of fixation/revision of prices of scheduled bulk drugs/formulations under DPCO's 1995 monitoring and enforcement of the prices.

### **EVERYTHING YOU**

#### **WANT TO KNOW ABOUT NUTRITION**

The Union Ministry of Women & Child Development's recently launched a website on Nutrition. This interactive website will offer a knowledge bank, library and e-forum to those in the business of nutrition and the ones interested in eating right to stay healthy.

Currently there is just much information about food, nutrition and various types of diets. There are various experts in the field of food and nutrition who give out information which at times can be contradictory and even confusing for the public.

Besides working at bridging the gap of clarity on nutrition and its co-relation with health, the website will also give bird's-eye view of what the national and international community has to say on a particular diet or issue. The site is also meant for

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policy-makers. The website will help the policy-makers to connect with and understand the public's nutrition concerns." Besides being of public use, the website is also expected to help the Government with real-time monitoring of the Integrated Child Development Services.

⇒ **Janani Suraksha Yojana**

A new initiative namely Janani Shishu Suraksha Karyakaram (JSSK), launched in June 2011 which guarantees free entitlements to pregnant women and sick new born till 30 days after birth, including C-Section, drug and consumables, diagnostics, diet during stay in the health institutions, provision of blood, exemption from user charges, transport from home to health institutions, including transport between facilities in case of referral and free drop back home after 48 hrs stay, has failed to show tangible results because of lack of awareness. The benefits of the scheme are not known even at the hospitals. Expecting people to benefit from it would be rather far-fetched.

Similarly, the result of adolescent sexual reproductive health (ARSH) strategy for the promotion of menstrual hygiene among adolescent girls in the age group of 10-19 years in rural areas, is far from satisfactory. This programme is aimed at ensuring that adolescent girls (10-19 years) in rural areas have adequate knowledge and information about menstrual hygiene and the use of sanitary napkins. Under this scheme, 1.5 crore girls across these districts will be reached with the behaviour change communication campaign and provided access to an NHRM brand of sanitary napkins that will be sold to the girls by the ASHA at subsidized costs. This is expected to prevent reproductive tract infection (RTI) and sexually transmitted infections (STIs).

⇒ **Pulse Polio Immunisation**

Seven million children die globally before they reach their fifth birthday. Of these, 1.7 million are in India—highest anywhere in the world. Half of these deaths occur within a month of the child being born. While India has made some progress with the under-five mortality falling from 116 per 1000 live births in 1990 to 59 per 1000 live births in 2010, this is still inadequate. These figures also mask the gross inequalities between the States and between different social, cultural, gender and economic groups within them.

India's major achievement of the recent past has been the eradication of polio. With only 42 polio cases detected in 2010 compared to 741 cases detected during 2009, the most significant progress was seen in the endemic States with no type 1 case detected in 2010 in Bihar with onset of July 2010. During 2011, only a single case of wild polio virus was detected in Howrah district in West Bengal.

Earlier this year, the World Health Organisation officially removed India from the list of polio-endemic countries, as India has not had a case of polio since January 13, 2011.

⇒ **Universal Immunisation Programme**

Immunisation programme is one of the key interventions for protection of children from life threatening conditions, which are preventable. In India, full immunisation coverage is increasing but continues to be just about 60 percent and lesser in rural settings and other deprived sections not having access to pure drinking water and sanitation. Under the Universal Immunisation Programme (UIP) vaccination is carried out to prevent seven vaccine preventable diseases i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles,

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severe form of Childhood Tuberculosis and Hepatitis B. Since 2006, single dose of Japanese encephalitis vaccine has been introduced under routine immunisation in the high burden district in phased manner.

Pentavalent vaccine which consists of vaccines against five diseases (Diphtheria, Pertussis Tetanus, Hepatitis B and *Haemophilus influenzae B*) has also been introduced in some States. Vaccine against Hib disease (*Haemophilus influenzae B*) is a new addition to the immunisation programme. Pentavalent vaccine is administered to children vaccine is administered to children at 6, 10 and 14 weeks of age and will replace the existing DPT and Hepatitis B vaccine primary dose which is given at the same age.

The Government claims that Pentavalent vaccine will ensure complete immunisation against 5 diseases three injections to children and also reduces the chances of the Adverse Event Following Immunisation due to less injection load, but the claim is contested by right –based health activists.

It is estimated that 40 percent of all under-5 mortality in India is attributed to Pneumonia, Meningitis and Diarrhoea. Hib disease is estimated to cause 2.6 lakh cases of pneumonia and 52 thousand cases of meningitis every year. In India, as in other parts of the world, the cost of healthcare is often prohibitive for the poor and discourages the use of the services that exist. Also many States with high levels of child mortality do not spend all the resources that have been allocated. It is always the poorest and the most marginalized Indian children who are at the greatest risk.

## DO YOU KNOW?

### **NATIONAL MISSION FOR JUSTICE DELIVERY AND LEGAL REFORMS**

#### ***What is National Mission for Justice Delivery and Legal Reforms?***

The National Mission for Justice Delivery and Legal Reforms was set up in June, 2011 to achieve the town goals of increasing access by reducing delays and arrears; and enhancing accountability through structural changes and by setting performance standards and capacities. The Mission has become fully functional from 2012-13 and is pursuing strategic initiatives: outlining policy and legislative changes; re-engineering of procedures and court processes; focusing on Human Resource Development; and leveraging Information and Communication Technology & tools for better justice delivery.

#### ***What are the policy and legislative changes the Mission has undertaken?***

The Mission has taken several steps in each of the strategic areas towards fulfillment of its objectives. Judicial Standards and Accountability Bill has been prepared. The Bill has already been passed by the Lok Sabha and is now before the Rajya Sabha for consideration. Constitution amendment bill for raising the retirement age of High Court Judges is also before the Parliament. A comprehensive proposal has been formulated for constitution of All India Judicial Services and the 25 States have formulated their Litigation Policies.

#### ***What are the changes proposed for Court Procedures and Court Professes?***

An important aspect of the judicial reforms relates to re-engineering court procedures and court processes for early disposal of cases. A

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National Court Management System has been recently notified by the Supreme Court for addressing the issues of case management, court management, setting measurable standards for performance of the court and the National System of Judicial Statistics in the country. The National Mission would coordinate with NCMS and would render necessary assistance in achieving the goal of reducing pendency in courts.

#### ***What is the impact on Infrastructure Development?***

Infrastructure development for subordinate judiciary is a major thrust area of the National Mission. With a view to enhancing the resources of the States Governments, the Government has increased the central share by revising the funding pattern from 50:50 to 75:25 (for States other than North Eastern States) under modified Centrally Sponsored Scheme for development in infrastructure facilities for the judiciary from the year 2011-12 onwards. The funding pattern for North-Eastern has been kept as 90:10 from 2010:11.

#### ***What is the Gram Nyayalayas Act 2008?***

The Gram Nyayalayas Act, 2008 has been enacted for establishment for Gram Nyayalayas at the grass roots level for providing access to justice to citizens at their doorstep. The Central Government provides assistance to States for non-recurring expenses for setting up of Gram Nyayalayas and for meeting the cost of recurring expenses for running these Gram Nyayalayas for the first three years. At the time of enactment of Gram Nyayalayas Act it was envisaged that 5067 Gram Nyayalayas would be set up throughout the country for which Central Government would provide recurring and non-recurring assistance to States as per prescribed norms.

#### ***What is the Pendency Reduction Drive launched by the Government?***

The Government had launched a pendency reduction drive from July 2011 to December, 2011. High Courts were requested by the Minister of Law and Justice to initiate a campaign mode approach towards clearing long pending cases and case relating to marginalized sections of the society. As per feedback received from them, total pendency was reduced by over 6 lakh cases out of which about 1.36 lakh cases belonged to targeted groups such as senior citizens, disabled, minors and marginalized section of society.

One of the important components of pendency reduction drive related to release of under-trial prisoners from jail. Around 3.16 lakh under-trial prisoners were released from the prisons during the campaign period.

A similar drive has been launched this year as well from July, 2012 to December, 2012.

Hidden hunger of unlike the hunger that comes from a lack of food or calories. It is a chronic lack of vitamins and minerals that is often not evident and has no visible warning signs; therefore people who suffer from it may not even be aware of it. The consequences are nevertheless disastrous – it can increase child and maternal mortality, cause birth defects and development disabilities, contributes to and exacerbates global poverty, constrains women's empowerment and limits the productivity and economic growth of nations.

#### **⇒ Fast Facts of India**

Slowly and insidiously, 'the hidden hunger' of micronutrient malnutrition is sapping away the vitality of entire nations, including India. Consider these facts:—

- Child under-nutrition and micronutrient deficiencies in India are among the

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highest in the world, -worse than many much poorer countries.

- 62 percent of pre-school children are deficient vitamin A, leading to an estimated annual 330,000 child deaths.
- 9 percent of children under five are affected by diarrheal diseases, one of the two biggest killers of children.
- Up to 60 percent of pregnant women, 63 percent breastfeeding mothers and 70 percent of pre-school children are anemic.
- Only 71 percent of households currently consume adequately iodized salt, an ingredient absolutely vital for brain development.

⇒ **Brief Status of JSSK Programme in the Country**

Government of India has launched Janani Shishu Suraksha Karyakaram (JSSK) on 1<sup>st</sup> June, 2011. The initiative has been rolled out in all States and Union Territories under the overall umbrella of National Rural Health Mission (NRHM). The scheme is estimated to benefit more than 12 million pregnant women who access Government health facilities for their delivery. Moreover it will motivate those who still choose to deliver at their homes to opt for institutional deliveries.

In the year 2012-13, a sum of Rs 2082.47 crores have been allocated to the States for the implementation of free entitlements under JSSK. A quick review was undertaken by the Ministry in select health facilities in 1 to 2 districts of 13 States between April to June, 2012 (6 EAG States and 7 others). The States included in the field visits are Andhra Pradesh, Bihar Chhattisgarh, Gujarat, Haryana, HP, Karnataka, Maharashtra, M.P., Odisha, Punjab, Rajasthan and UP. The

information provided in this report is based on the interaction with the pregnant women and mothers in ODD and IDD, services providers in the facilities and district level health administrators. The report has highlighted certain significant progress in JSSK programme which are as under.

**KEY POSITIVES**

User Charges in OPD and IPD for Pregnant women and sick children exempted in 10 out of the 13 States visited except Bihar, Chhattisgarh and Odisha.

**DRUGS AND CONSUMABLES**

Availability of drugs in the facilities have improved. Out of the 13 states, 8 states are giving free drugs from within the facility. Situation of drugs in Madhya Pradesh. Situation of drugs in Madhya Pradesh, Bihar, Chhattisgarh, Odisha and Himachal is still far from adequate.

**DIAGNOSTICS**

Availability of diagnostic facilities are better at the District Hospitals and even at CHCs and the routine tests for pregnancy wherever available (urine and blood) are being provided free of cost to pregnant women in the facilities.

**DIET**

Provision of diet in IPD for pregnant women has been started in 12 states at the District Hospital and CHC levels.

**REFERRAL TRANSPORT**

Out of the 13 states, in 10 states — Andhra Pradesh, Bihar, Himachal Pradesh, Punjab, Haryana, Rajasthan, Chhattisgarh, Madhya Pradesh, Gujarat, Karnataka national level emergency referral transport model is operational under PPP except for Haryana. Drop back has

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recently been started and is slowly picking up.

#### **DISPLAY OF**

#### **ENTITLEMENT AND AWARENESS OF COMMUNITY**

Health facilities in Andhra Pradesh, Maharashtra, Madhya Pradesh, Chhattisgarh and Gujarat has displayed the entitlements prominently. In the other states, display was sporadic, generally available in DHs and SDHs and partial at the PHC and SC levels.

#### **GRIEVANCE REDRESSAL MECHANISM**

Grievance Redressal Mechanism has been set up in some district of Maharashtra, Madhya Pradesh and Chhattisgarh, however in rest of the states it is yet to set up a system for addressing grievances from patients with regard to JSSK entitlements. The review in 13 states also highlight some of the gaps in Referral Transport (specially drop back), grievance redressal, Display of entitlements and IEC which are being addressed.

#### **⇒ Occupational Lifestyle Disease in India**

Several studies have been conducted by different organizations to identify the magnitude of lifestyle diseases in India. According to a survey conducted by the *Associated Chamber of Commerce and Industry (ASSOCHAM)*, 68 percent of working women in the age bracket of 21-52 years were found to be afflicted with lifestyle disorders such as obesity, depression, chronic backache, diabetes and hypertension. Another study by *Preventive Healthcare and Corporate Female Workforce* summarised that long hours of work under strict deadlines cause up to 75 percent of working women to suffer from deprecation or general anxiety disorder, compared to women with lesser levels of physiological

demand at work. Women employed in sectors that demand more time like those in media, knowledge process outsourcing and touring jobs are unable to take leave when they are unwell. These tensed and continuous working conditions force themselves to work mainly due to job insecurity, especially during the current financial meltdown. In India, around 10 percent of adults suffer from hypertension while the country is home to 25-30 million diabetics. There out of every 1,000 people suffer a stroke.

IT sector has been playing dominant role in Indian economy both in terms of contribution to GDP and its employment generation capability. It was estimated that this sector has increased its contribution to India's GDP from 1.2 percent in FY 1998 to 7.5 percent in FY 2012. Moreover, this sector has also led to massive employment generation. The industry continues to be a net employment generator – expected to add 230,000 jobs in FY 2012, thus providing direct employment to about 2.8 million, and indirectly employing 8.9 million people. Generally being a dominant player in the global outsourcing sector Indian IT sector has emerged to be a key development strategy. Due to the above factors, majority of Indian youth depend directly or indirectly on this priority sector. However, according to the findings of the study by ASSOCHAM, around 55 percent of young workforce engaged in India's IT and ITES sector are stricken with lifestyle disorders due to factors like hectic work schedules, unhealthy eating habits, tight deadlines, irregular and associated stress. More than half of the respondents participated in the survey said that due to 24 × 7 working environment and irregular food timings they directly place order to fast food outlets, street food vendors and roadside eateries operating outside their offices serving ready to eat high

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calorie processed food items like noodles, burgers, pizza, and fried stuff like samosas along with aerated drinks, and coffee, etc.

Sleeping disorders are alarmingly growing among the employees in the corporate work field. ASSOCHAM records that 78 percent of corporate employees suffer from sleeping disorders leading to *Impact of Insomnia on Health and Productivity*. Due to demanding schedules and high stress levels, nearly 78 percent of the corporate employees sleep less than 6 hours in a day which leads to sleep disorders amongst them. The report is based on the survey conducted in the major cities. Like Delhi, Mumbai, Kolkata, Chennai, Ahmadabad, Hyderabad, Pune, Chandigarh, Dehraadun etc. As per ASSOCHAM'S corporate employees' survey result, 36 percent of the sample population are also suffering from obesity. It can be logically summarized that obesity alone can modify occupational morbidity, mortality and injury risks that can further affect workplace absence, disability, productivity and healthcare costs. Almost 21 percent of the sample corporate employees suffer from another serious lifestyle disease called depression. High blood pressure and diabetes are the fourth and fifth largest diseases with a share of 12 percent and 8 percent

respectively as suffered among the corporate employees.

A striking case of life style disorders found in the India's most developed state, Kerala which is almost on par with some of the European countries and America in terms of development indicators. The state is fast emerging as the lifestyle diseases capital of India with the prevalence of hypertension, diabetes, obesity and other risk factors for heart disease reaching levels comparable to those in America, as revealed in a recent study done by Dr. K. R. Thankappan and his colleagues at the Achutha Menon Centre for health Science Studies. It was found that overall prevalence of diabetes in Kerala is about 16.2 percent. This is estimated to be 50 percent higher than in the US, according to the result of the study published in the *Indian Journal of Medical Research*. High blood pressure is present in 32 percent people, comparable to recent estimates in the US. Close to 57 percent people studies had abnormal levels of cholesterol, while 39.5 percent had low HDL cholesterol. The prevalence of smoking in men and use of alcohol are dangerously growing in the state. This transition of the state to an era of life style diseases is driven by economic growth, urbanization and our changing food habits.

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⇒ **A Review of Bharat Nirman Programme**

Infrastructure is treated as engine of Growth and provides a basic framework for economic and social progress in a country like India. Physical infrastructure strengthens the economy, boosts investment, attracts prospective entrepreneur and helps alleviation of poverty and reduces unemployment incidences through numerous positive forward backward linkage affects of primary, secondary and tertiary sectors of the economy. Similarly social infrastructure like drinking water supply, sanitation, education, health etc. Helps in improving quality of life of millions of rural inhabitants.

India's economic reform measures of 1990s envisaged, inter alia, to improve infrastructure for enhancing the country's productive capacity's and for facilitating gradual reduction in the poverty and related deprivation. Around 83 crores (70 percent) of population are living in rural areas (census: 2011 provisional). The large magnitude of rural population and their prevailing socio-economic conditions and quality of life calls for all-round development in rural infrastructure to achieve the long cherished objective of equitable and inclusive growth with social justice. During the last six decades of planning period, the country's economists and planners have identified

the potential of a vibrant rural India to resolve issues of poverty and advocated for improvement and expansion of rural socio-economic infrastructure while the eleventh five year plan (2007-2012) noted direct and significant causal relation between the infrastructure and incidence of poverty in states, the approach to twelfth five year plan (2012-2017) laid renewed emphasis on creation of physical infrastructure like roads, railway, ports, airports, power and telecommunications.

Considering the importance of infrastructure in the sustenance of economic growth of our country, the Gol had launched a programme on rural infrastructure called 'Bharat Nirman' as a time-bound business plan for implementation in four years (2005-2009). The six components included under the programme were irrigation, drinking water, electrification, roads, housing, and rural telephony. This had also sought an active and transparent public and private partnership for immediate execution of various infrastructure related development projects with a mission mode. Although the Bharat Nirman registered considerable progress by 2009, non-achievement of goals set under the programme promoted the government to expand the timeline for completion of targeted activities to 2012. The present paper attempts to highlight the progress

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of each of the components and the policy outlook of the government for its successful completion within the targeted timeframe. Successful implementation of the Bharat Nirman initiatives and timely and adequate follow up action on each of its components will enable rural citizens of the country to utilize rural infrastructure for ensuring their basic amenities and raising their economic and social status. A considerable part of the total expenditure under the program is considered as development expenditure. Many projects aiming at enhancing rural infrastructure are also routed through the National Bank for Agriculture and Rural Development which is the apex financial body for agriculture and rural infrastructure.

It is expected that the investments made under the Bharat Nirman in phase I and II would enrich the rural economy and narrow down the gap between rural urban India by spreading growth benefits uniformly. To make this a reality, a synchronized approach is required to converge the infrastructure-building initiatives of Bharat Nirman components with various other development oriented programmes already in operation like programmes for alleviating poverty, generating gainful employment, ensuring social security, enhancing standard of health, hygiene, sanitation and education. Ministries/department Panchayati Raj, Expenditure, Rural Development, Drinking Water and Sanitation, Water Resources, Agriculture, Information Technology and Land Resources etc. need to work out broad consensus for implementation of the main principles of these rural infrastructure building initiatives. Planning Commission need to move in a coordinated and harmonious manner with various development Minister and undertake periodic and close monitoring of the programme.

### ⇒ **Energy Scenario in India**

The International Energy Agency estimates India will add between 600 GW to 1200 GW of additional new power generation capacity before 2050. This added new capacity is equivalent to the 740 GW of total power generation capacity of European Union (EU-27) in 2005.

As the December 2011, India had an installed capacity of about 22.4 GW of renewal technologies-based electricity, exceeding the total installed electricity capacity in Austria by all technologies.

There are a few designated programmes, including renewable energy schemes that are now being implemented with some success.

Under Rajiv Gandhi Grameen Vidhyutikaran Yojana (RGGVY) programme, 90% capital subsidy was provided for rural electrification infrastructure. The remaining 10% was loan assistance on soft terms by REC. The scheme, inter-alia, provided for funding of electrification of all un-electrified Below Poverty Line (BPL) households with 100% capital subsidy. The scheme aimed at electrifying all un-electrified villages over a period of four years and provides access to electricity to all rural households. India has over 600,000 villages and hamlets put together, with over a 1000 Million households in the rural areas alone.

### THE NATIONAL SOLAR MISSION

The Government in November 2009 approved the Jawaharlal Nehru National Solar Mission, which creates policy condition for quick renewable energy diffusion across the country. 20,000 MW of solar energy is to be deployed by 2012 through leveraging domestic and foreign investments, engaging in research and

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development, manufacturing and deployment to make this sector competitive internationally. In 2010, the Mission had gained investments in 200 MW of grid-connected solar power plans, with another 500 MW to be implemented soon.

#### WIND AND HYDRO ENERGY EXPANSION

The Ministry of Non-conventional energy Sources has introduced generation-based incentives, where investors receive a financial incentive per unit of electricity generated over ten years. This should create a level playing field between domestic and foreign investors, which should drive more investment in this area. The Global Wind Energy Council (GWEC) estimates conservatively that the wind energy capacity in India could be 24 GW by 2010 and 30.5 GW by 2030. If all planned policies are implemented and all current targets met, capacity could be as high as 40 GW in 2020 and 108 GW in 2030.

Presently, small hydro (up to 25 MW) has capacity of over 15,000 MW in India. About 300 MW per year (2,700 MW total) is being installed, with 70% of investments coming from the private sector. Hydro projects up to 25 MW capacities are termed as small hydro, and this energy stream has a potential of over 15,000 MW.

The aim is to double the current rate of growth including 500 MW per year in the next few years.

⇒ **Status of ICT Infrastructure & And Services in Rural India**

#### BROADBAND

Improving broadband penetration is a key focus area for the Government and this is being addressed actively by the Department of Telecommunication (DoT) and the Department

of IT (DIT). The National Telecom Policy 2012 lists the use of mobiles as an instrument of socio-economic empowerment for citizens as a mission statement. It sets targets of 70% and 100% rural teledensity by 2017 and 2020 respectively. It lays special emphasis on providing reliable and affordable broadband access to rural areas. It also target provision of high speed and high quality broadband access to all village *panchayats* through a combination of technologies by the year 2014 and progressively to all villages and habitations by 2020. The draft National Policy on IT 2011 speaks of electronic delivery of public services and quality. This includes mobile value added services (mVAS).

⇒ **Rural India and Broadband enabled National Growth**

Contrary to the commonly held notion there is a fair demand for broadband in rural areas. Already there are more internet users in small towns than the top eight metros put together. Interestingly more than 20% users are school children and 10% users belong to lowest socio-economic strata. While only a minority of rural Indians may be able to afford individual access to broadband on account lack of computing devices and power, this does not imply a lack of demand for broadband enabled services. In interactions during the verification of USOF's wire line broadband scheme, it has clearly emerged that better off rural families across the country do buy computers for the same reasons as urban families do, i.e., children's education, knowledge and entertainment or as an aid to their incomes/business. They would relish good broadband connectivity as much as urban Indians do. The fact that the USOF scheme offers Rs 99/- and Rs 150/- monthly subscription plans (with

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no installation/registration/installation charges) is a plus point but 60% of rural users actually opt for higher value plans. With the availability of low cost devices like *Aakash* and as smart phones become increasingly affordable, the demand for individual access to broadband will increase further. There is also a healthy demand for public access broadband facilities. This is logical in the face of near absence of local infrastructure and services. Just as an urban Indian searches online when looking for a new or locally unavailable information, service or product, rural Indians too would like to research/access the same online. This is a rural reality even today. Booking journey tickets online is a simple example. If credit cards are a problem intermediaries (village level entrepreneurs (VLEs) with credit cards step in to facilitate transactions. VLEs also facilitate online money transfers, download mobile software etc. Skype is just as useful and popular amongst rural Indians as a means to reach out to relatives in cities/abroad. This demand will only grow as the rural literacy rate rises beyond the current 68.91% and knowledge and e-connectivity increasingly become key to empowerment. The demographic profile of our country means that more than 50%. Rural Indians are less than 25 years old. They have the same affinity for the worldwide web as urban youth.

#### Reflection of Some Recent Progress in Rural Infrastructure

- **India Awas Yojana (IAY):** During 2009-10, against the physical target of 40.52 lakh houses – 21.18 lakh houses have been constructed till January 2010 and 27.53 lakh houses are under construction.

- **Pradhan Mantri Gram Sadak Yojana (PMGSY):** Till December 2009, a total of 33,812 habitations have been connected by construction 97,583 km. rural roads; in addition, 1,84,353 km. existing rural roads have been upgraded.
- **National Rural Drinking Water Programme (NRDWP):** Against the target of covering 586 ‘not covered’, 2013 lakh ‘slipped back’ and 34,595 ‘quality affected’ habitations ..... 253 ‘not covered’ and 1.18 lakh ‘slipped back’ habitations were covered and 32,129 ‘quality affected’ habitations were addressed during the year 2009-10 by NRDWP and about 4,500 rural schools have reportedly been provided with drinking water facilities.
- **Total Sanitation Campaign (TSC):** For coverage under TSC, project in 606 districts of different States in the country have been sanctioned during 2009-10. The campaign has been successful in the construction of 125.2 lakh individual household latrines and 1.44 lakh school toilets.
- **Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY):** For the year 2009-10, RGGVY set a target to electricity 17,500 un-electrified villages and 47 lakh Below Poverty Line (BPL) Households against which 18,374 villages and 47.18 lakh Households were provided access to electricity.
- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):** During financial year 2009-10, 36.51 lakhs works were undertaken, of which 51% constituted

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water conservation, 16% rural connectivity, 14% land development and provision of irrigation facility to individual beneficiaries constituted around 17%.

⇒ **The Rural Roads Development Vision Plan (RRDPV) 2005**

The Rural Roads Development Vision Plan (RRDPV) 2005 (formulated in 2007), in its broad assessment of the physical and financial requirements for roads, found that investments in construction, upgrading and maintenance would need to increase from the current level of Rs 11,000 crores per annum to Rs 29,000 crores per annum by the 14<sup>th</sup> Plan (2022-27). The vision document states that the proposed current investment in a mere 0.9 percent of the GDP and therefore should be considered modest and realistic.

RRDPV observed that 80 percent of rural roads are in a poor condition due to a combination of factors including poor quality construction thought it has shown improvement with PMSGY projects. The Rural Development Agency established to coordinate and monitor PMSGY has set up a three-tier quality control mechanism with the state governments responsible for first two. However, in majority of the other rural road projects executed in other schemes do not have rigid quality control schemes, the result being standards are lacking technically.

Indira Awas Yojana (IAY) operators as a 100% subsidized centrally sponsored programme with the resources being shared on 75:25 basis between centre and the states.

⇒ **International Telecommunication Union (ITU)**

International Telecommunication Union has estimated that one per cent investment in

telecommunication result in 3 per cent increase in gross domestic product (GDP) which confirms the linkages between tele-density and GDP. The tele-density in India – the number of telephone lines for every 100 people is abysmally low. Teledensity in rural India is only 0.5 and one third of India's 6,00,000 villages area still without a village public telephone (VPT) which can save transport costs, fuel and time.

The VPTs have several benefits such as reducing migration from rural to urban areas and providing migration from rural to urban areas and providing communication assistance in disaster, relief and rescue operation. The overall tele-density stands at 3.8 whereas China has tele density of 9 and the World telephones were to be available on demand by 2001 but the waiting list in November 2001 was 3.2 million. The deregulation of the telecom industry and action on Internet telephony have received greater attention than proposals for rural and household telephones.

⇒ **Kisan Call Centre Services:**

In case of mobile phone based services central and state Government and private players are increasingly tapping into this widely available medium. An example of the same is the KCC services recently launched by the Directorate of Extension, Dept. of Agriculture and cooperation which offer expert advice on Agriculture related problems/queries. In the private sector, a good example is Bharti-IFFCo's joint venture whereby cheap mobile handsets costing less than Rs. 2000 are bundled with mobile value added services such as free daily voice message on marketing prices for their produce, farming technology weather forecasts daily farming and fertilizers availability.

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⇒ **Rural Broadband Kiosks**

Various studies have shown that both mobile and broadband content have shown a healthy demand from villagers for Agriculture, marketing tele-education and e-health services. The desire to learn English and other subject through mobile/ Internet Application is particularly strong and has a significant revenue potential in Rural India. Recognizing that relevant content in local languages is necessary to make rural broadband services meaningful USOF has encouraged the adoption of a franchisee model in partnership with professional content aggregators for the subsidized broadband scheme under its agreement with USOF, BSNL is to roll out about 28000 rural broadband Kiosks are meant for access to basic browsing and various types of commercial value added services including entertainment, Information, tele-education and telemedicine.

⇒ **Bharat Nirman; Intensifying Effort towards Achieving Millennium Development Goals (MDGs) Targets for Rural India**

Bharat Nirman has appeared to be a key player boosting rural India's journey towards achievement of MDG-targets. Some of the key goals addressed by this programme may be enumerated as follows:

**1. Poverty and Hunger Reduction:**

Studies by Planning Commission have revealed that inadequate rural infrastructure has been instrumental in accelerating the growth of rural poverty; and poor purchasing power among rural population ultimately leads to widespread hunger and food insecurity across rural India. Under Bharat Nirman – a

major impetus towards need based development of rural infrastructure and focus on irrigation has shown some tangible changes in this direction.

**2. Universalisation of Primary Education:**

Infrastructure has been a major barrier in access to education across rural India. Under Bharat Nirman, electricity, accessible roads and safe drinking water provisions have been promoted. This has encouraged more and more children and youth specially to come forward and avail educational facilities across the country.

**3. Health Related Goals: Goal 4,5 and 6 [Reducing Child & Maternal Mortality; Combating Diseases]:**

Provisioning of safe drinking water and facilitating water supply in under-served areas is appearing to be a boon for boosting up the health related goals under Millennium Commitments – be it child or maternal health and fighting diseases like HIV. Studies by developmental organizations like WHO and Water – Aid have brought into light that at any given point of time 20% of people around the world are effected by water borne diseases. Hence access to clean and safe drinking water under Bharat Nirman has been a positive initiative towards this direction. Accessibility to roads have helped in promoting institutional delivery across rural India reducing percentage of maternal and child mortality to a considerable number.

**4. Ensuring Environment Sustainability:**

Safe and adequate water supply has promoted hygienic sanitation

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practices across rural India. This has created a positive impact on environment sustainability.

⇒ **National rural Health Mission (NRHM):**

The National Rural Health Mission (2005-12) seeks to provide effective healthcare to rural population throughout the country with special focus on 18 states, which have weak public health indicators and/or weak infrastructure. These 18 states are Arunachal Pradesh, Jharkhand, Jammu & Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttarakhand and Uttar Pradesh. The Mission is an articulation of the commitment of the government to rise public spending on health from 0.9 percent of GDP to 2-3 percent of GDP.

NHRM aims to undertake architectural correction of the health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Programme and promote policies that strengthen public health management and service delivery in

the country. It has as its key components provision of a female health activist in each village; a village health plan prepared through a local team headed by the Health & Sanitation Committee of the Panchayat; strengthening of the rural hospital for effective curative care and made measurable and accountable to the community through Indian Public Health & Family Welfare Programmes, optimal utilization of funds & infrastructure, and strengthening delivery of primary healthcare. It seeks to revitalize local health traditions and mainstream AYUSH into the public health system. It further aims at effective integration of health concerns with determinants of health like sanitation & hygiene, nutrition, and safe drinking water through a district plan for health. It seeks decentralization of programmes for district management of health and to address the inter-state and inter-district disparities, especially among the 18 high focus states, including unmet needs for public health infrastructure. It also seeks to improve access of rural people, especially poor women and children, to equitable, affordable, accountable and effective primary healthcare.

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### ⇒ Nagoya Protocol and CBD

The Nagoya Protocol was adopted under the auspices of the Convention on Biological Diversity (CBD), the Nagoya Protocol is the instrument for the implementation of the access and the benefit sharing provisions of the CBD. In this regard, the CBD provides the substantive, institutional and procedural basis for the Nagoya Protocol. For example, the scope of the Nagoya Protocol is defined by the scope of access and benefit sharing provisions of the CBD. Moreover, institutional arrangements such as dispute settlement mechanisms and secretariat services for the Nagoya Protocol will also be those already established under the CBD.

With the Nagoya Protocol, the fair and equitable sharing of benefits has been reaffirmed as a fundamental component of biodiversity strategies. In addition, a set of rules has been agreed upon to facilitate, promote and ensure its effective implementation. For business, particularly companies using biodiversity as the source and inspiration for innovative ingredients for food and personal care products, the Nagoya Protocol will mean growing calls for measures to consider and put in practice fair and equitable benefit sharing.

The Nagoya Protocol now clearly encompasses research and development to

identify new bioactive compounds and natural ingredients for food, supplement and cosmetic products. The Nagoya Protocol also foresees mechanisms that will facilitate and control the implementation of access and benefit sharing principles along the supply chain. As a result, the Nagoya Protocol reasserts the need for companies to monitor, understand and comply with access and benefit sharing requirements. In addition, by providing a clearer and more level playing field, it also opens up opportunities for companies already working towards ethical practices in their sourcing of biodiversity.

The main provisions of the Nagoya Protocol include:

- A definition of the objective, use of terms, scope and relationship with other international instruments of the Nagoya protocol.
- Elaboration on the principles and main requirements on the fair and equitable sharing of benefits and access to genetic resources and traditional knowledge.
- Several possible mechanisms for implementation, including a multilateral benefit sharing mechanism and an access and benefit-sharing clearinghouse.
- Measures to promote compliance with

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legal and regulatory requirements, as well as with mutually agreed terms.

- Measures of promote tools and awareness raising, capacity building and transfer of technology activities on access and benefit sharing.

The adoption of the Nagoya Protocol on 29 October 2010 marked a new era. The 193 Parties gathered at the historic meeting in Nagoya had made a commitment to contribute to sustainable development by agreeing to share the benefits arising out of the use of genetic resources on a fair and equitable basis.

The Strategic Plan was also discussed at Nagoya, which is comprised of a shared vision, a mission, strategic goals and 20 ambitious yet achievable targets, collectively known as the Aichi Targets. The Strategic Plan serves as a flexible framework for the establishment of national and regional targets and it promotes the coherent and effective implementation of the three objectives of the Convention of Biological Diversity.

The development of national targets, and the updating and revision of national biodiversity strategies and action plans (NBSAPs), will be key processes in fulfilling the commitments set out in the Strategic Plan. To support countries in these efforts, the Secretariat, together with global and regional partners and with the generous support of the Government of Japan and other donors, will be convening a series of regional and sub regional capacity-building workshops throughout 2011 and 2012.

The Strategic Plan is a transversal text covering all other subjects. It contains social, economic and ecological aspects and enlists the strategic objectives of the Convention. In 2012, the CBD adopted a Strategic Plan with a series

of goals. The general mission of the former Strategic Plan was to considerably reduce the speed of biodiversity loss by 2010 (2010 Biodiversity Target). Europe had an even more ambitious goal: to halt the loss of biodiversity within Europe by 2010. In-depth evaluations have shown that neither goal has sufficiently been met. These results will be reflected in the new and revised strategic plan for 2011-2020.

#### ⇒ **Xenonucleic Acid (XNA)**

The thinking could soon change. Synthetic biologists from MRC laboratory under the leadership of Vitor Pinherio and Philip Holinger have developed six alternative polymers called XNAs that can also store genetic information, replicate and evolve like the genetic systems consisting of DNA and RNA. The “X” in XNA stands for “xeno” a Latin prefix that means exotic or foreign. Scientists have used this term to indicate the synthetic nature of these molecules—that one to the ingredients typically found in the building blocks that make up RNA and DNA has been replaced by something different from what occurs naturally.

Stands of DNA and RNA are formed by joining together individual structural units called nucleotides. A nucleotide in turn is made up of two units — a nucleoside and a phosphate group. The nucleoside consists of one of 5 nitrogenous based – adenine, guanine, cytosine, thymine or uracil – and five-carbon sugar. In case on DNA, chains of 2-deoxyribose sugar (“D” in DNA) are connected by phosphate groups to form the backbone of a ladder-like structure. Each sugar is attached to one of four bases, which form the rungs of the ladder finally forming a twisted ladder-like structure called the double helix.

In case of RNA the backbone is composed

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or ribose sugar ("R" in RNA), rather than 2-deoxyribose sugar. While making the rungs of the ladder-like structure RNA uses uracil (U) instead of thymine (T) and finally unlike the double helix of DNA, RNA forms half a ladder – a single helix.

In case of XNAs, the sugars in the backbone ladder structure differ from that of four-carbon sugars 2-deoxy ribose and ribose sugar. The MRC team used various kinds of sugars varying from four-carbon sugars to seven-carbon sugars in order to polymerize and from the helix structure. If arabinose sugars is used for the backbone instead of deoxyribose, it is called and ANA. Similarly, if the sugar is cyclohexane (a six member ring) or threose (a four-carbon sugar) or a hexitol, it is called a CeNA, TNA and then HNA respectively.

One of these synthetic molecules FANA even contains a fluorine atom. All the XNAs use of same bases and the same phosphate groups as an ordinary DNA and nay of them can pair up with a complementary stand of DNA or RNA. These substitutions make XNAs functionally and structurally analogous to DNA and RNA, but they remain foreign molecules.

#### ⇒ **Implications of XNA Synthesis**

Scientists consider the discovery of XNAs extremely important owing to their far reaching implications and their special properties.

**Synthetic Life:** It is believed that XNAs might, in the future, help in the creation of synthetic genetic systems based on alternative chemical platforms, and hence entirely synthetic alternative novel forms of life that will not require DNA or RNA for functioning.

**Origin of Life:** It is also assumed that

XNAs and their enzymes might shed light on the origin of life and provide an answer to why life as we know it is based on the dominance of only two molecules – DNA and RNA. Some researchers believe that life might have been based on simpler genetic systems before the emergence of RNA and DNA. The capability of XNA to evolve strengthens the hypothesis of existence of a genetic system predating DNA and RNA and that DNA and RNA might have emerged as the building blocks of life, sheer accidentally, by what scientists call 'frozen accident' from the origin of life.

**Medicine and Therapeutics:** Medicine, too, could benefit from XNAs because of their non-bio-molecules like RNA, DNA, enzymes and antibodies are used as therapeutics, diagnostics and in biosensing applications. But a serious drawback of this technique is the short lifespan of such treatments and the difficult time they have in reaching their therapeutic targets as they are degraded quickly in the stomach and the blood stream. In such a scenario, XNA can be used as a potential therapeutic agent targeting diseased cells as they are more resistant to degradation and biological system don't have enzymes evolved enough to digest them.

**Exobiology:** Researchers feel that this discovery will have a strong impact on exobiology – the branch of science that is involved with looking for life on other planets. Till now DNA and RNA were being used as makers to monitor the presence of life on other planets but the emergence of XNA as a molecule that can store information, replicate and evolved suggests that DNA and RNA no longer might be the only markers for the search of life and that life forms based on XNA might exist on other planets.

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## **Cabinet approves proposal to place 12th Plan Document before National Development Council**

The Union Cabinet today discussed the Draft Twelfth Five Year Plan document (2012-2017), and approved the proposal to place the Plan Document before the National Development Council. The Plan proposes an acceleration of growth over the plan period to reach 9 percent in the terminal year, yielding an average growth rate of 8.2 percent for the plan period as a whole. It emphasizes that the growth must be both inclusive and sustainable, and to achieve these objectives it proposes a comprehensive game plan in terms of policies and programmes. The estimates show resource availability for the Twelfth Plan at Rs.80,50,123 crore in current prices for the Centre and States taken together. This implies the public sector resources for the Twelfth Plan (2012-2017) would be 11.8 per cent of GDP as against 1096 per cent realized during the Eleventh Plan (2007-2012). To achieve the targeted growth rate, the fixed investment rate should increase to 35 per cent of GDP (at constant prices) by the end of the Twelfth Plan, yielding an average fixed investment rate of 34 per cent of GDP (at constant prices) for the Twelfth Plan period as a whole. The projected average rate of gross domestic capital formation in the Twelfth Plan is 37 per cent of GDP, the projected gross domestic savings rate is 34.2 per cent of GDP and the net external financing needed for macro-economic balance would average around 2.9 per cent of GDP. In a first attempt at presenting scenario analysis, the plan emphasizes that the policy agenda outlined must be substantially implemented for all the virtuous cycles to come into play that will lead to Scenario One called the "Strong Inclusive Growth". This would also imply we can achieve inclusive and sustainable growth averaging 8.2 per cent over the Twelfth Plan period. The Plan emphasizes a broad definition of inclusiveness, which encompasses a spread of benefits to the weaker sections, including especially the SC/STs, OBCs and Minorities, and also regional balance in development. The plan emphasizes the need to speed up the pace of implementation of infrastructure projects, which is critical for removing supply bottlenecks which constrain growth in other sectors, and also for boosting investor sentiment to raise the overall rate of investment. The Plan contains ambitious programmes in health, education, water resource management, infrastructure development, and a number of programmes aimed at inclusiveness, most notably the National Health Mission (NHM), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the Pradhan Mantri Gramin Sadak Yojana (PMGSY), the Integrated Child Development Scheme (ICDS) and the National Rural Livelihoods Mission (NRLM). Considerable resources are being allocated for these programmes. It proposes that beneficiary payments across a large number of schemes, which have experienced leakages in the delivery system, may be carried out through the use of the Aadhaar (UID) platform.

### **Amendments to the Wild Life (Protection) Act, 1972**

The Union Cabinet today approved the following amendments to the Wild Life (Protection) Act, 1972:

- (i) **Amendment to Section 2:** Definitions of 'Gram Sabha', 'Panchayat', and 'Scheduled Areas' have been added to the Act.
- (ii) **Amendment to Section 18:** Provisions for having consultation with Gram Sabha in the event of the intention of the State Government for declaration of a Sanctuary has been included in the Act.
- (iii) **Amendment to Section 22:** Records of the Gram Sabha and the Panchayat during the inquiry by the Collector on the claims to be considered by him during the process of notification of the Sanctuary.
- (iv) **Amendment to Section 33:** Consultation with the Gram Sabha concerned for management and maintenance of a Sanctuary has been made mandatory.
- (v) **Amendment to Section 35:** Provisions for having consultation with Gram Sabha in the event of the intention of the State Government for declaration of a National Park has been included in the Act.
- (vi) **Amendment to Section 36D:** Representative of Panchayat or tribal community have been included in the Community Reserve Management Committee.
- (vii) **Amendment to Section 38:** Provision for having consultation with Gram Sabha in the event of declaration of a National Park by the State Government has been included in the Act. The Ministry of Panchayati Raj had advised additional amendments to these Sections.

**Background:**

The Wild Life (Protection) Act, 1972 (53 of 1972), provides the legal framework for the protection of various species of wild animals, management of their habitat and also for the regulation and control of trade in the products derived from wild animals. The Act has been amended from time to time. Due to emerging needs, the Ministry of Environment and Forests has proposed to further amend the said Act. Amendments had separately been proposed for incorporation of provisions of the Convention on International Trade in Endangered Species of wild fauna and flora (CITES), enhanced penalties for offences and other minor amendments.

The Union Cabinet in its Meeting held on 19th May 2011 had considered the above amendment proposal of the Ministry of Environment and Forests and approved the same.

**Official amendments to the Pension Fund Regulatory and  
Development Authority Bill, 2011**

The Union Cabinet today approved the introduction of certain official amendments to the Pension Fund Regulatory and Development Authority Bill, 2011. These official amendments have been necessitated in view of the recommendations of the Standing Committee on Finance which has examined the Bill. Based on the recommendations of the Standing Committee on Finance, the Government has decided to accept the following:

- (i) that the subscriber seeking minimum assured returns shall be allowed to opt for investing his funds in such schemes providing minimum assured returns as may be notified by the Authority;

- (ii) withdrawals not exceeding 25 per cent of the contribution made by subscriber will be permitted from the individual pension account subject to the conditions, such as, purpose, frequency and limits, as may be specified by regulations by the Pension Fund Regulatory Authority and Development Authority (PFRDA)
- (iii) the foreign investment ceiling in the pension sector at 26 per cent or such percentage as may be approved for the Insurance Sector, whichever is higher may be incorporated in the present legislation;
- (iv) to establish a vibrant Pension Advisory Committee with representation from all major stakeholders to advise PFRDA on important matters of framing of regulations under the PFRDA Act.
- (v) the membership of the PFRDA will be confined to professionals having expertise in economics, finance or law only.

The New Pension Scheme (NPS) has been made mandatory for all the Central Government employees (except Armed Forces) entering service with effect from 1.1.2004. 27 State / UT Governments have notified NPS for their employees. NPS has been launched for all citizens of the country including unorganised sector workers, on voluntary basis, with effect from 1st May, 2009. Further, to encourage people from the unorganised sector to voluntarily save for their retirement, Government has launched the co-contributory pension scheme titled "Swavalamban Scheme" in the Budget of 2010-11. As on 7th September, 2012 the number of subscribers under NPS is 37.45 lakh with a corpus of Rs. 20535.00 crore. In order to effectively invest and manage such huge funds belonging to a large number of subscribers and to ensure the integrity of the NPS, creation of a statutory PFRDA with well defined powers, duties and responsibilities is considered absolutely necessary and would benefit all NPS subscribers. The official amendments to the Bill will be moved in the next session of the Parliament.

**Background:**

- The following recommendations of the SCF have not been accepted:
- As regards the recommendation of SCF for compulsory insurance of the funds of subscribers by pension fund managers, a provision has already been made in the PFRDA Bill, to protect the interest of the subscribers by ensuring safety of contribution of subscribers and also by keeping the operational costs in check,
  - As regards the selection of pension fund managers in such a manner that one third of all such fund managers are from the public sector, since a provision has already been made in the PFRDA Bill that at least one of the pensions fund shall be from the public sector which sets a floor, the ceiling can be any number based on objective criteria. The Pension Fund Regulatory and Development Authority Bill, 2005 was initially introduced in the Lok Sabha in March, 2005 to provide for a statutory PFRDA. However, since the Bill and the official amendments, based on the recommendations of the Standing Committee on Finance, could not be considered by

the Lok Sabha, and the Bill lapsed on dissolution of the 14th Lok Sabha. The Government had announced in the Budget 2011-12 that the revised PFRDA Bill would be moved in Parliament. Accordingly, the PFRDA Bill, 2011 was introduced in the Lok Sabha on the 24th March, 2011 to provide for a statutory regulatory body, the Pension Fund Regulatory and Development Authority (PFRDA) under the provisions of the Bill. The legislation sought to empower FRDA to regulate the New Pension System (NPS). The PFRDA Bill, 2011 was referred to the Standing Committee on Finance on the 29th March, 2011 for examination and report thereon. The Standing Committee on Finance gave its Report on 30th August, 2011. Based on the recommendations of Standing Committee, a Cabinet Note, to introduce additional recommendations of the Standing committee on Finance was moved on 19th December, 2011. Since the PFRDA Bill, 2011 was deferred in the Winter Session of the Lok Sabha, therefore the Cabinet Note was withdrawn.

### **Cabinet approves amendment of the Competition Act, 2002**

The Union Cabinet has approved the proposal of the Ministry of Corporate Affairs to further amend the Competition Act, 2002, with a view to fine tune it and to meet the present day needs in the field of competition, in the light of the experiences gained in the actual working of the Competition Commission of India in the last few years.

Major amendments approved by the Cabinet relate to changing the definition of “turnover”, “Group”, reducing the overall time limit of finalization of combinations from 210 days to 180 days and insertion of a new Section 5A enabling the Central Government to lay down, in consultation with the Competition Commission of India, different thresholds for any class or classes of enterprises for the purpose of examining acquisitions, mergers and amalgamations by the Commission. The other amendments relate to procedural aspects in working of the Commission.

#### **Background**

The proposal after its initial consideration in April, 2012 was referred to a Group of Ministers to examine it in details, with particular reference to jurisdiction of sectoral regulators on Competition related issues. The Group of Ministers considered the issues referred to it by the Cabinet and while endorsing the original proposal also proposed amendment in the Competition Act requiring other regulators to mandatorily refer matters impinging on “Competition” to the Competition Commission of India, and vice-versa to concerned regulators by CCI, on matters relating to those regulators. To this extent the original proposal has been modified.

### **Cabinet approves Amendments to the Companies Bill 2011**



The Union Cabinet today approved the proposal to make official amendments to the Companies Bill, 2011.

The Companies Bill, 2011, on its enactment, would allow the country to have a modern legislation for growth and regulation of corporate sector in India. The existing statute for regulation of companies in the country, viz. the Companies Act, 1956 had been under consideration for quite long for comprehensive revision in view of the changing economic and commercial environment nationally as well as internationally. In view of various reformatory and contemporary provisions proposed in the Companies Bill, 2011 together with omission of existing unwanted and obsolete compliance requirements, the companies in the country would be able to comply with the requirements of the proposed Companies Act in a better and more effective manner.

The Salient features of amendments approved by the Cabinet are as follows:

1. The words 'make every endeavour to omitted from Clause 135(5). Such clause is also amended to provide that the company shall give preference to local areas where it operates, for spending amount earmarked for Corporate Social Responsibility (CSR) activities, The approach to 'implement or cite reasons for non implementation' retained. (Amendment of Clause 135).
2. To help in curbing a major source of corporate delinquency, Clause 36 (c) amended, to also include punishment for falsely inducing a person to enter into any agreement with bank or financial institution, with a view to obtaining credit facilities. (Amendment in Clause 36).
3. Provisions relating to audit of Government Companies by Comptroller and Auditor General of India (C&AG) modified to enable C&AG to perform such audit more effectively. {Amendment in Clauses 143(5) and (6)}.
4. Clause 186 amended to provide that the rate of interest on inter corporate loans will be the prevailing rate of interest on dated Government Securities. (Amendment in Clause 186).
5. Provisions relating to restrictions on non audit services modified to provide that such restrictions shall not apply to associate companies and further to provide for transitional period for complying with such provisions. (Amendment in Clause 144).
6. Provisions relating to separation of office of Chairman and Managing Director (MD) modified to allow, in certain cases, a class of companies having multiple business and separate divisional MDs to appoint same person as 'chairman as well as MD. (Amendment in Clause 203).
7. Provisions relating to extent of criminal liability of auditors particularly in case of partners of an audit firm reviewed to bring clarity. Further, to ensure that the liability in respect of damages paid by auditor, as per the order of the Court, (in case of conviction under Clause 147) is promptly used for payment to affected parties including tax

- authorities, Central Government has been empowered to specify any statutory body/authority for such purpose. (Amendments in Clause 147 and 245).
8. The limit in respect of maximum number of companies in which a person may be appointed as auditor has been proposed as twenty companies. {Amendment in Clause 141(3) (g)}.
  9. Appointment of auditors for five years shall be subject to ratification by members at every Annual General Meeting (Amendment of Clause 139(1)).
  10. Provisions relating to voluntary rotation of auditing partner (in case of an audit firm) modified to provide that members may rotate the partner 'at such interval as may be resolved by members' in stead of 'every year' proposed in the clause earlier. {Amendment in Clause 139(3)}.
  11. 'Whole-time director' has been included in the definition of the term 'key managerial personnel' {Amendment of Clause 2(51)}.
  12. The term 'private placement' has been defined to bring clarity. (Amendment in Clause 42).
  13. Approval of the Tribunal shall be required for consolidation and division of share capital only if the voting percentage of shareholders changes consequent on such consolidation {Amendment of Clause 61(1) (b)}.
  14. Clarification included in the Bill to provide that 'Independent Directors' shall be excluded for the purpose of computing 'one third of retiring Directors'. This would bring harmonisation between provisions of Clause 149(12) and rotational norms provided in clause 152. (Amendment in Clause 152).
  15. Provisions in respect of removal of difficulty modified to provide that the power to remove difficulties may be exercised by the Central Government upto 'five years' (after enactment of the legislation) in stead of earlier upto 'three years'. This is considered necessary to avoid serious hardship and dislocation since many provisions of the Bill involve transition from pre-existing arrangements to new systems. (Amendment in Clause 470).

## **Background**

1. The Companies Bill, 2011 was introduced in the Lok Sabha on 14th December, 2011 and was considered by the Parliamentary Standing Committee on Finance which submitted its report to the Honourable Speaker, Lok Sabha on 26th June, 2012. The report was laid in Parliament on 13th August 2012. Keeping in view the recommendations made by such Committee it was decided to make certain modifications in the Companies Bill, 2011 through official amendments.
2. In view of the developments taking place nationally as well as internationally, and with the intent to modernize the structure for corporate regulation in India and also to promote the development of the Indian corporate sector through enlightened regulation and good

corporate governance practices, a decision has been taken to revise the existing Companies Act, 1956 comprehensively. Various stakeholders viz Industry Chambers, Professional Institutes, Government Departments, Legal Experts and Professionals etc. were consulted in the process and accordingly, the Companies Bill 2009 was introduced in the Lok Sabha on 3rd August, 2009 which was referred to Parliamentary Standing Committee on Finance for examination and report, which submitted its report to the Parliament on 31st August, 2010.

3. Keeping in view the recommendations made by the Standing Committee and consultation with various Ministries/Departments etc. a revised Companies Bill, 2011 was prepared which was approved by the Cabinet on 24th November, 2011. The revised Bill was introduced in the Lok Sabha on 14th December, 2011. On introduction of the Companies Bill, 2011, the Companies Bill, 2009 was withdrawn.
4. The Companies Bill, 2011 was referred to the Parliamentary Standing Committee on Finance for examination and report. The Committee examined the Bill and presented its report/ recommendations to the Speaker, Lok Sabha on 26th June, 2012. The report was laid in the Parliament on 13th August, 2012. Keeping in view the recommendations made by the Committee and the inter-ministerial consultation held with concerned Ministries/Departments, it has been decided to make official amendments to the Companies Bill, 2011.

### **Constitution of Twentieth Law Commission**

The Union Cabinet today approved the constitution of 20th Law Commission for a period for three years from 01.09.2012 to 31.08.2015. The details are as follows:

The terms of reference of the 20th Law Commission will include :

(i) identification of laws which are in harmony with the existing climate of economic globalization, (ii) exploring suitable measures for equal redressal of citizens grievances related to the field of law, (iii) examination of laws which affect the poor and carrying out post-audit for socio-economic legislations, (iv) to take measures to harness the law and legal process in the service of the poor, (v) to eliminate delays, speedy clearance of arrears of cases and reduction in costs, (vi) examining existing laws with a view to promote gender equality and suggesting amendments to such cases, (vii) to examine the impact of globalization on food security and unemployment and recommend measures for the protection of the interests of the marginalized. The 20th Law Commission will be headed by a full-time Chairperson and will consist of four full-time Members (including Member-Secretary), Secretary, Department of Legal Affairs ( as ex-officio Member), Secretary, Legislative Department (as ex officio Member) and five part-time Members that, This time, Secretary, Department of Legal Affairs and Secretary, Legislative Department have been added to the Commission as ex officio Members with a view to achieve better implementation of Law Commission Reports. Further, before concretizing its recommendations, the Commission will consult the nodal Ministry /Department(s) and such other stakeholders as the Commission may feel

necessary for the purpose. The Law Commission of India is a non-statutory body constituted by the Government of India from time to time. The Commission was originally constituted in 1955 and is reconstituted every three years. The tenure of the Nineteenth Law Commission has ended on 31st August, 2012.

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⇒ **India's Current Account Deficit at a Glance**

A sharp reduction in the current account deficit (CAD) from \$21.8 billion in the last quarter of 2011-12 (January-March 2012) to \$16.8 billion in the first quarter of the current year (April-June 2012) appears to have brought some joy to macroeconomic planners. It has been possible to bridge the lower CAD with almost the same level of capital flows that obtained during the previous quarter. India's balance of payments is back in surplus. Important as this development has been in the management of the external economy, it is unwise to exaggerate its significance. The level of deficit is still way above what is considered prudent and manageable. Besides, the fall in the CAD is due to all the wrong reasons — falling imports that corroborate the slowdown, and decelerating exports. The outlook for software export earnings is not bright amidst the global slowdown. Expressed as a percentage of GDP, the CAD has fallen from 4.5 per cent to 3.9 per cent. Most experts have projected the CAD for 2012-13 at 3.5 per cent or lower, on the basis of certain key assumptions: that the economy will grow at a reasonably fast clip of around 6.5 per cent; oil prices will not go very much higher than current levels of around \$100 a barrel; and most important of all, the actions of the European

Central Bank and the Federal Reserve will help in bringing economic growth in Europe and the U.S. back on track. The last point will have an all-round bearing on India's external economy. It could help India's faltering exports regain traction. Second, there would be far less uncertainty on the movement of capital flows to India.

There is of course a flip side to all of this. India's growth has already slipped by most accounts to below five per cent. The cheap money policy of the Federal Reserve will boost inflation worldwide. Although it is customary to view the CAD on a par with the fiscal deficit — the menace of twin deficits as they are usually referred to — it is the latter that has received greater attention. Besides, the government seems determined to adopt questionable means to finance the deficit rather than be proactive in reining it in. For instance, recent announcements to ease external commercial borrowings and encourage capital market flows from abroad might have had the intended effect of boosting stock prices. But these are not sound policies from the point of view of the macroeconomy. Encouraging foreign currency borrowing to take advantage of the surfeit of funds circulating abroad is hardly the right strategy for an economy whose level of short-term debt has been rising and exchange reserves falling.

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⇒ **OECD's Indian Connection**

- The Organisation for Economic Co-operation and Development (OECD) is engaged in advanced talks with the Ministry of External Affairs to open an India office. The possibility of India joining it is also on the cards, though that could be the long-term outcome of an ongoing dialogue.
- The OECD, with headquarters in Paris, is one of the world's largest forums for nations to work together to promote policies to improve the economic and social well-being of people.
- An OECD team is in New Delhi for the Fourth OECD World Forum on Statistics, Knowledge, and Policy to discuss ways of measuring well-being and how it can contribute to effective and accountable government policy.
- India is among five countries, others being Brazil, China, South Africa and Indonesia, where the OECD has established a process of "an enhanced engagement" with the possibility of membership, based on an OECD Ministerial Council mandate. It recently submitted three reports on Indonesia's economics, regulations and agricultural sector.
- In China, along with the WTO, it recently completed a detailed report on trade and value-added services.
- The OECD's prescription for India is that it should not be overly obsessed with China, since in the long run India's growth will be sustainable and durable and is impacted by its democratic character, while its weakness lies in

delayed decision-making due to excessive deliberation.

- Furthermore, the OECD recently announced that the information technology sector will boom during the downturn — good news for India's IT companies and Nasscom. It has said the total ICT spend will reach \$4,406 billion in 2012, of which 58 per cent will be on communications services and equipment, 21 per cent on computer services, 12 per cent on computer hardware and 9 per cent on software.
  - Deeply concerned at the global economic slowdown, the OECD believes that this is the fifth year of the crisis. There is additional concern at trade flows having slowed down; while the world economies came out of the low point in 2009, growth seems to be dipping once more with the slowdown back again.
- ⇒ **'Match-making' theory wins U.S. scholars Economics Nobel**
- Two American scholars were awarded the Nobel economics prize on Monday for studies on the match-making that takes place when doctors are coupled up with hospitals; students with schools; and human organs with transplant recipients.
  - The work of Alvin Roth and Lloyd Shapley has sparked a "flourishing field of research" and helped improve the performance of many markets, the Royal Swedish Academy of Sciences said.
  - Mr. Roth (60) is a professor at Harvard University in Cambridge, Massachusetts, and Harvard Business School in Boston. Right now he is a visiting professor at Stanford University in California. Mr.

Shapley (89) is a professor emeritus at University of California Los Angeles.

- Citing “the theory of stable allocations and the practice of market design”, the award focused on the problem of matching different agents in a market in situations where prices aren’t the deciding factor.
- Mr. Shapley made early theoretical inroads into the subject, using game theory to analyse different matching methods in the 1950s and 1960s.
- Together with U.S. economist David Gale, he developed a mathematical formula for how 10 men and 10 women could be coupled in a way so that no two people would prefer each other over their current partners.
- While that may have had little impact on marriages and divorces, the algorithm they developed has been used to better understand many different markets.
- In the 1990s, Mr. Roth applied it to the market for allocating U.S. student doctors to hospitals. He developed a new algorithm that was adopted by the National Resident Matching Program, which helps match resident doctors with the right hospitals.
- Similar formulas have been applied to efforts to match kidneys and other human organs to patients needing a transplant, the academy said.

⇒ **Deal on Scottish independence referendum**

- The British and Scottish governments signed a historic deal that will allow Scotland to hold a referendum in 2014 on whether it wants to remain part of

the United Kingdom or secede from the 300-year-old political union.

- Under the terms of the agreement signed by Prime Minister David Cameron and Scotland’s First Minister and the leader of the ruling Scottish National Party (SNP) Alex Salmond in Edinburgh, voters will be asked to say “yes” or “no” to a single question: whether they want an independent Scotland?
- The voting age will be reduced to 16. Mr. Cameron’s Conservative Party and the two other mainstream national parties — Labour and the Liberal Democrats — will campaign for a “No” vote.
- The agreement was criticised by unionists who accused Mr. Cameron of “surrendering” to the SNP. He defended it saying that he wanted to “show respect to the people of Scotland”, who had voted for a party that wanted a referendum. But he insisted that Scotland would be “better off” with the U.K.

⇒ **First woman chief of AU takes charge**

- Nkosazana Dlamini-Zuma waved an African Union flag, tapped a wooden gavel and became the first woman to take office as the Chairperson of the African Union Commission (AUC) at the A.U. headquarters in Addis Ababa.
- Prior to her election, Dr. Dlamini-Zuma held positions as Health Minister under Nelson Mandela’s post-apartheid Cabinet in 1994 and as Foreign Minister under President Thabo Mbeki, but won most praise for transforming the Ministry of Home Affairs in the Cabinet of her former husband, and current South

African President, Jacob Zuma.

- Her ascension as AU Chairperson is a break with a tradition that has called for major regional powers like South Africa, Kenya, Nigeria and Egypt to refrain from controlling the A.U. chair.

⇒ **Red marks in India's green report card**

CBD, having a very broad and all encompassing meaning, that includes all life forms and ecosystems. It is one of the most widely accepted international treaties, with 193 nations being a party to it. India ratified the CBD in 1994, and is now the host nation for the 11th Conference of Parties (COP 11), currently underway in Hyderabad. The "high level segment" is on the last two days.

The working groups are discussing various technical issues from the last COP in Aichi, Japan. Civil society groups are organising side events at the venue. One of the most important issues is the operationalisation of the biodiversity targets decided on at Aichi. India is chairing the discussions, and leading the global discussion until the next COP in two years.

Considering India's role, it is worth examining the efforts at conserving our own biodiversity. There have been some well known success stories for critically endangered species. The only population of Asiatic lions in the world, in the Gir National Park, have more than doubled its numbers, moving from "critically endangered" to "endangered." The Chambal river Gharials are doing well. The one-horned rhino has made a spectacular comeback, from about 200 to nearly 3,000 today. But, are these stories representative of what is happening in India? The major problem with "biodiversity" is its all encompassing,

immeasurable nature, especially with the CBD definition. According to scientist David Takacs, "though it has considerable technical and scientific resonance, it defies precise scientific definition."

There is the "Linnean shortfall" of knowledge, where we have been able to document only a small proportion — about 1.4 million of the 12-18 million species that exist on the planet. Exciting new species are being identified every day, some even becoming extinct before they are formally named and identified. The Wallacean shortfall refers to the incompleteness of our understanding of geographical distribution of species across the globe. With this huge gap in our knowledge of biodiversity, the approach taken across the world is to identify and protect important landscapes as well as "flagship" or "umbrella" species, covering large home ranges.

This is where things start to go badly wrong. Though the marine realm is the largest repository of biodiversity, far larger than the terrestrial landscape, we barely consider oceans worthy of conservation. All our efforts focus on the terrestrial world.

India is home to three of the world "biodiversity hotspots," the Western Ghats-Sri Lanka region, the Himalayas and the Indo-Burma region. The Western Ghats are currently being ripped apart by large-scale legal and illegal mining, large development projects and even private hills stations like Lavasa. The hills have recently witnessed a very comprehensive conservation prioritisation and planning exercise by the Western Ghats Ecology Expert Panel (WGEEP), which suggests an intelligent and democratic zonation plan with varying levels of exploitation. But most

politicians object to the recommendations of the panel, arguably driven by kickbacks from the extractive industries or a short-sighted approach to “development.” Vast tracts of the Indo-Burma hotspot will be submerged by a series of dams, supposedly to cater to India’s ever expanding power needs.

Next, is the species based approach. India’s two main flagship programmes — “Project Elephant” and “Project Tiger,” have been in place for a few decades now. Though their success is debated, they have been doing a reasonably good job of protecting these two species. But India Inc is now catching up with our charismatic beasts. Central India, globally recognised as one of India’s best metapopulation of tigers, is being carved up for coal mining. A proposal for an Elephant reserve in Chhattisgarh never saw the light of day since there is coal under the elephant forests. India’s Forest Advisory Committee (FAC) and the Minister of Environment and Forest (MoEF) have been fighting desperately to stop the indiscriminate industrial expansion into India’s natural forests. But both the FAC and MoEF were chastised for “slowing down India’s galloping economy.”

A 1,000-year-old Sal forest in Mahan was denied clearance for a coal plant because of the rich biodiversity and tiger presence. But with industrialists requesting the Prime Minister’s intervention, the clearance is now likely to go through. The needs of biodiversity conservation versus development must be carefully balanced. Especially for India where almost half the population has little access to electricity and lives below the poverty line. But frighteningly, there appears to be no balance. The scale rests firmly on the side of development. From Montek Singh

Ahluwalia, to Manmohan Singh, to P. Chidambaram, there is a public proclamation that India’s “development” cannot be held up by the environment. There is no understanding of the CBD’s Aichi mission of “*sustaining a healthy planet and delivering benefits essential for all people* .” The “National Investment Board” (NIB) proposal, by which the government seeks to bypass laws and constitutional provisions, is an environmental disaster. Projects with large investments of above Rs.1,000 crore will be exempt from social and environmental clearances. This will be decided solely by the head of the NIB.

⇒ **New Wetlands Economics Report (in Indian Context)**

A major report that will help countries understand the economic value of inland wetlands, which cover a vast area of the earth’s land surface and provide key ecosystem services, was released at the conference of the Convention on Biological Diversity. The message of the report is simply, ‘drain it, lose it.’

Inland wetlands cover at least 9.5 million sq km of the earth’s surface, and together with coastal wetlands, 12.8 million sq km. Restoration of this particular type of ecosystem is the most expensive. These water bodies provide clean water for drinking and agriculture, cooling water for the energy sector; they also regulate floods. Agriculture, fisheries and tourism sectors depend heavily on the health of wetlands.

“In 100 years, we have managed to destroy about 50 per cent of the world’s wetlands, which is a stunning figure,” said Achim Steiner, Executive Director of the United Nations Environment Programme, at the release of the final consultation draft of the report titled “The

Economics of Ecosystems and Biodiversity for Water and Wetlands” (TEEB for wetlands). The perception that wetlands are not essential to the functioning of societies and economies, contributes to their destruction. The TEEB report has been commissioned by the Ramsar Convention. India, a signatory to the Convention, has 25 wetlands listed under the covenant (such as Chilika) and about 150 identified wetlands of national importance. The country is being persuaded by international monitors to put in place management plans for the protected sites. Progress in this regard is “partial,” according to Ritesh Kumar, conservation programme manager of international NGO Wetlands International – South Asia.

India’s challenge is to define wetlands on sound lines, and apply the rules it issued in 2010 for conservation and management of these water bodies. Building activity in fast-expanding cities is draining wetlands, and many are also being filled with garbage. There is almost no conservation response from local and State governments, an activist said at the release of the report.

⇒ **e-Atlas of marine bird areas launched**

An *e-Atlas of Marine-Important Bird Areas* , was launched by the BirdLife International at the ongoing 11th Conference of the Parties (COP11) to the Convention on Biological Diversity (CBD).

The inventory, covering 3000 Important Bird Areas (IBAs) worldwide, was described as a major contribution to marine conservation and a vital resource for meeting the CBD target of protecting 10% of marine and coastal areas by 2020. It will also be crucial to the process of

describing Ecologically or Biologically Significant marine Areas (EBSAs) and will have significant input into the siting of offshore energy infrastructure, according to a note circulated at the COP11. The e-Atlas will be available exclusively online. Like Google Map, it will be dynamically updated as new sites are identified and new data about them become available. It will be linked to other BirdLife data resources.

Seabirds are now the most threatened group of birds. They present unique conservation problems, since many species travel thousands of kilometres across international waters . “Given the vast distances they cover, the long periods they spend at sea and the multiple threats they face there, identifying a network of priority sites for their conservation is vital to ensure their future survival,” said Ben Lascelles, BirdLife’s Global Marine IBA Coordinator.

⇒ **Biodiversity Funding Talks in a Crucial Stage**

Negotiators from over 190 countries sat late into the night on Thursday, trying to end the stalemate in funding talks as the Convention on Biological Diversity draws to a close.

It is hoped that a combination of rising pressure from poor countries, and lowered expectations from India and the U.N. may help to wring some monetary support from richer countries to help protect the world’s vanishing plants, animals and natural habitats.

While progress was made on other fronts, especially on marine biodiversity, several decisions were being held hostage to the budget debate. Countries are not willing to commit themselves to further conservation measures until they are sure that the money will be available to



carry them out. A group of developing countries — the G-77 and China — have drafted an internal statement, threatening to suspend the implementation of the Aichi Targets (global biodiversity conservation goals with a 2020 deadline) unless rich countries come forward with funding.

“A high-level U.N. expert panel had estimated an annual funding need of \$130-\$440 billion to meet Aichi targets. We are not expecting those kinds of resources, simply because negotiators have not come with that kind of mandate at all. There is just no possible comparison between needs and commitments,” she said. “What we are expecting is a political commitment that there will be a structure on resource mobilisation in the CBD.”

Rich nations want “robust baselines” — an assessment of needs and existing funding — as well as a solid reporting framework — to provide accountability for how the money will be spent, before they are willing to set any specific goals. Poorer nations proposed using data from the OECD — an organisation of all industrialised nations — itself as a baseline to determine interim funding, asking for a doubling of resources until the next conference scheduled for 2014.

⇒ **Newsweek ends 80-year run, goes all-digital**

*Newsweek* announced on Thursday that it would end an 80-year run as a print magazine at the end of the year, taking the venerable publication all-digital to cope with a harsh media environment.

It will be available on the web and on tablets via a paid subscription, with “select content” available on The Daily Beast website. Like other U.S. magazines and newspapers, *Newsweek* has

been grappling with a steep drop in print advertising revenue, steadily declining circulation and the migration of readers to free news online.

⇒ **NTCA to create a national data base for tigers**

The National Tiger Conservation Authority (NTCA) will soon create a national data base for tigers, the flagship species of India, and each one of the big cats will have a unique identification number and code. The UID will be one of the new initiatives of the NTCA taken up as part of better bio-monitoring of tigers. Experts say this will not only help in enhanced monitoring but give the exact estimate of the tiger population in the country. Camera trap will be used to photograph the tigers from both sides to avoid variation in stripes and a UID allotted to each of them. Another initiative being piloted in Corbett National Park is live electronic surveillance by providing cameras with video recording facility on towers that will help in tracking the movement of animals, human interference and checking poaching, he said.

“E-eye” project encompassing short range infra-red night vision and long range thermal camera stations, remotely operated cameras and wi-max devices, will enable sounding of alerts not only at the local park level but to the NTCA headquarters whenever there is destructive activity. This will apart from the Monitoring System for Tigers Intensive Patrolling and Ecological Status (MSTriPes), the software developed by the Wildlife Institute of India (WII), to boost tiger conservation efforts through patrolling intensity and spatial coverage.

⇒ **Aadhaar-enabled service delivery system launched**

The Union Government launched a new

Aadhaar-enabled service delivery system here on Saturday with a promise of eliminating fraud, black-marketing, pilferage in schemes and bribery through a reliable mechanism of direct cash transfer to beneficiaries in a transparent manner.

Prime Minister Manmohan Singh and United Progressive Alliance chairperson Sonia Gandhi inaugurated the ambitious programme which seeks to integrate the government-run flagship schemes with the Aadhaar card system at a public meeting in this small town near Jaipur. The launch marked second anniversary of the Unique Identification Citizenship Number Project.

In addition to getting the benefit of the social sector schemes promoting financial inclusion, those holding the Aadhaar card with a 12-digit number can offer proof of identity and address anywhere in the country.

The Mahatma Gandhi National Rural Employment Guarantee Act's wages and pensions and scholarships will be paid through the card after the integration, even as the UID is already an online identity platform used for authenticating beneficiaries.

#### ⇒ **India's tuberculosis challenge**

Tuberculosis was declared a global health emergency in 1993, but it has been growing unchecked. Today, TB is causing millions of deaths every year globally. Like any infectious disease, TB is prevalent even in developed countries. But it is a more serious problem in the developing and populous countries.

India and China together account for nearly 40 per cent of the global burden. The World Health Organisation's Global Tuberculosis Report 2012 reveals the magnitude in the two countries, and why India has the most number of patients. In India, the prevalence is 3.1 million at best and

4.3 million at high. In China, the figures are 1.4 million and 1.6 million respectively. Even in prevalence rate (per one lakh population a year), India is 249 at best and 346 at high. China fares better: 104 at best and 119 at high.

In 2011, India again topped the list for incidence (the number of new cases detected in a year). It had 2 million to 2.5 million, compared with China's 0.9 million to 1.1 million. If global incidence during 2011 was 8.3 million to 9 million, "India and China accounted for 26 per cent and 12 per cent respectively," the WHO report notes. Mortality is also high in India. About three lakh people will die this year.

There are other differences between China and India. The percentage of TB patients who are also HIV positive is 6.5 in India; China's figure is 2.3 per cent. This could be because only 23 per cent of TB patients were tested for HIV in China compared with India's 45 per cent.

There is a significant, but apparent, reduction in prevalence and mortality when compared with 1990 levels. Increases in treatment success percentages have been registered for new cases — from 25 per cent in 1995 to 88 per cent in 2010.

According to the WHO report, the detection rate for new and relapse cases is almost the same in 1995 and 2011 — 58 in 1995 and 59 in 2011. But it was 71 per cent in 2011 among new sputum positive (NSP) patients alone, notes a May 2012 paper in the *Indian Journal of Medical Research*. "TB case-finding has stalled".

The government has woken up. After it took some dramatic and bold initiatives over the last one year, TB detection and management is no longer the same. In June 2012, the government

banned serological tests. There are plans to go out and test certain target groups. But the landmark decision was making TB a notifiable disease. This has made it mandatory for laboratories, hospitals, nursing homes and doctors, both in the public and private sector, to report every TB case detected. The government system would kick in once a case is notified to ensure correct diagnosis and complete adherence to treatment during the entire duration of treatment. Two important panels have made recommendations to engage the private sector in multiple ways to rein in TB.

This is where the approaches that India and China adopted to fighting TB diverged. Of the 37 notifiable diseases in China, TB ranks No. 1. It pulled out all the stops by 2000. "The concept of acceptance of the problem, identifying its requirement and the political will of TB eradication has set China on a progressive path," notes a paper published in the journal *Interdisciplinary Perspectives on Infectious Diseases*.

⇒ **Outcomes of Convention of Biological Diversity (Hyderabad)**

The strongest message to emerge from the global conference of the Convention on Biological Diversity in Hyderabad is that countries allowing their natural capital to be rapidly depleted and destroyed in pursuit of short-term goals are dangerously risking their future. Many examples from around the world underscore the importance of diverse plant and animal species to agriculture, human health, climate and the complex web of interactions that make up an ecosystem. It is important to note, for example, that the latest update of the IUCN Red List of Threatened Species classifies 20,219 of the 65,518 species

listed, as facing extinction. Given the rising threat, the Conference of the Parties to the CBD have done well to commit themselves to a doubling of biodiversity funding for developing countries, although from a modest baseline. India, which has assumed the presidency of the conference and is itself biodiversity-rich, must show leadership by mainstreaming ecosystem concerns in development policy. It has won plaudits by allocating \$50 million towards building technical and human capacity to attain biodiversity conservation goals in the country. But the real test lies in its commitment towards strengthening and implementing national laws on environment protection, forests, wetlands, marine areas, wildlife, tribal welfare, air quality and urban development. Some key laws, notably the Environment (Protection) Act, are weakly enforced at present, if at all. State governments share a considerable part of the blame for rendering the law sterile.

Arguably, some of the most important takeaways for participants of the Hyderabad meet come from the findings of The Economics of Ecosystems and Biodiversity studies. They show that nature is critically important to the livelihood of millions, and in India, 47 per cent of the 'GDP of the Poor' comes from ecosystem services.

It is heartening that Prime Minister Manmohan Singh acknowledged this contribution of natural capital to the economy of the less affluent — in comparison with conventional GDP measurements. There are valuable insights also for urban areas in the 'Cities and Biodiversity Outlook' study. A preliminary assessment of Bangalore, for instance, has demonstrated the value of biodiversity to slum livelihoods, in the form of food and herbal medicines. Local body

governments, however, were found to have insufficient knowledge on sustainable development. These are pointers to the work that lies ahead. The CBD's Strategic Plan for Biodiversity and its Aichi Targets for 2020 call for speedy action to stem losses. India must lead by example over the next two years.

⇒ **Lost childhood**

The alarmingly high prevalence of child marriages in India became known globally when International Day of the Girl Child was celebrated for the first time on October 11. According to UNICEF, girl child marriages in India stood at 43 per cent in 2007-2008; it was 54 per cent in 1992-1993. A recent report of the United National Population Fund (UNPFA) also underlines the magnitude of the problem. Forty-seven per cent of women between the ages 20 to 24 were married before they turned 18 during the period 2000-2011, it stated. In 2006 alone, 11 States had 40 to 61 per cent of women in the 20-24 age group who were married by age 18. No wonder that India accounts for over 40 per cent of the world's child marriages. Three consecutive household surveys (1992-1993, 1999 and 2005-2006) show the rate of child marriage among girls below 15 years had fallen from 26 per cent in 1992-1993 to 18 per cent in 2005-2006, an overall drop of 30 per cent. The corresponding rate of reduction during the same time period in girls below 18 years was only 12.5 per cent. While this drop, for girls below 15 years, provides some reason to cheer, it is "still not sufficient to guarantee children their full rights," UNFPA notes.

The slow pace of decline is frustrating as the spectre of child marriage manifests itself in multiple ways — the abrupt termination of education and life-threatening health problems. A

body of evidence indicates that teenage girls are less aware of contraceptives, very often do not have access to them and lack the bargaining power to use them. Thus they end up with unwanted pregnancies at a very early stage. Complications from pregnancy and childbirth are the prime cause of death in teenage mothers and their babies in low- and middle-income countries. Lack of education, rural settings and poor economic status are some of the key determinants of teenage wedlock. The UNFPA report indicates that girls from rural areas in India were twice more likely to be married than urban girls. Those with nil education were thrice more likely to become victims compared to those with secondary or higher education. While minor girls from the poorest families had a 75 per cent possibility of being married, 16 per cent from the richest households ended up the same way. Aside from poverty and lack of education, social norms and perceptions are important factors too. Hence the approach to deal with the two strata should have many commonalities and yet be different. Providing education, creating awareness and offering incentives linked to delayed marriages are more important for the lower strata. Changing social perceptions should be the priority in the case of rich parents.

⇒ **First test of Rajoy regime's austerity policies in Spain**

Two northern regions in Spain were holding elections for their legislatures on Sunday in the first popular test of the central government's stringent austerity policies since it came to power late last year.

A deepening financial crisis and how best to address the nation's separatist tensions were the main issues facing political leaders and voters

in the turbulent Basque region and in north-western Galicia. With 2.7 million voters, Galicia is a traditional stronghold of the ruling Popular Party and the homeland of Prime Minister Mariano Rajoy, so an upset there would rock the PP regionally and nationally.

Spain is in its second recession in three years and has near 25 per cent unemployment. The government's austerity measures have led to protests across the country, some of which have ended in clashes between demonstrators and police. The financial crisis has also brought to the fore calls from some of Spain's 17 semi-autonomous regions for greater independence. Spain has separatist groups in Galicia, the Basque region and prosperous and influential Catalonia.

About 1.8 million Basque voters were likely to oust Socialist leader Patxi Lopez, who ruled thanks to an agreement with the PP from the 75-seat legislature. The Basque region has been wracked by decades of separatist violence.

Mr. Lopez was jostled by demonstrators carrying placards backing violent Basque separatist group ETA as he voted early on Sunday.

ETA, which stands for Basque Homeland and Freedom, is classified as a terrorist group by the European Union, the United States and Spain. It was decimated by arrests over recent years and announced a definitive cease-fire last year but Spain insists it must lay down its arms and dissolve.

⇒ **Armstrong stripped of Tour de France titles**

Lance Armstrong was stripped of his seven Tour de France titles and banned for life by the governing body of cycling following a report from the U.S. Anti-Doping Agency that has accused

him of leading a massive doping programme on his teams.

International Cycling Union (UCI) president Pat McQuaid said the USADA's report had been accepted and they would not appeal to the Court of Arbitration for Sport. "Lance Armstrong has no place in cycling and he deserves to be forgotten in cycling," Mr. McQuaid said at a news conference. "This is a landmark day for cycling."

⇒ **A sobering report on hunger**

One in eight people, or 12.5 per cent of the world's population, is chronically undernourished today says the latest State of Food Insecurity (SOFI) report. The grave ethical and practical implications of this abominable statistic from the three Rome-based United Nations agencies are obvious. Not least because mass hunger is a man-made phenomenon. Historically, hunger and starvation have been caused not by shortfalls in food production but rather by distortions in commodity markets, deficiencies in distribution and political inaction. We also know the long-term effects of chronic malnourishment on maternal and neonatal health and developmental outcomes among children. That said, a positive finding from SOFI is that the number of malnourished people has declined overall in the past two decades. So the Millennium Development Goal of halving the number of the hungry and malnourished in developing countries by 2015 is still within reach, provided governments initiate effective intervention. But progress has by no means been uniform. Asia and Latin America are on track to meet this target, while Africa has fallen behind due to regression in Sub-Saharan Africa. The proportion of the malnourished in South Asia has in fact increased from 32.7 per cent to 35, while South-Eastern Asia has seen a nearly 50 per cent



decline. Fiscal hawks who tend to view public investment in basic services as an impediment to growth ought to take notice of this contrast.

Indeed, the key message in the report is that economic growth by itself is not sufficient to eradicate hunger and malnourishment (just as relatively modest growth is not an excuse for poor nutritional results). Among the remedies proposed are a greater impetus to agriculture, where most of the poor are concentrated, and nutrition and gender sensitive policies. It lays particular emphasis on the public provision of goods and services in health care and sanitation for the most needy. The world financial, food and fuel crises of 2007-2008 have eroded the nutritive gains achieved in earlier years, says the report. But the impact may have been an indirect one of the negative influence food price spikes exert on dietary choices. A common refrain during the recurrent food crises of recent years has been that small-holder farming, rather than large-scale land acquisitions by giant corporations, must be strengthened to protect the worst affected. Policy and decision-makers would do well to remember this. Equally, the costs and benefits of the diversion of food grains and feed for the production of biofuels cannot be overlooked, especially since the jury is out on the latter's environmental effects.

⇒ **NSE, MCX, BSE among top 20 global derivatives bourses**

Three Indian bourses — NSE, MCX and BSE — have made it to the world's top 20 derivative exchanges, ahead of their peers in global financial centres such as London, Singapore and Hong Kong.

While the list is topped by the CME Group, as per a list compiled by the Futures Industry Association (FIA) for trading volumes between

January and June 2012, the National Stock Exchange is ranked fifth.

Among other Indian bourses, MCX is ranked at 10th and BSE at the 18th position.

After the CME Group, Korea Exchange is ranked second, Eurex at third and NYSE Euronext at fourth.

**ERADICATION OF POLIO**

The global campaign to eradicate polio will require all of this if it is to succeed. The polio virus remains stubbornly entrenched in pockets of Nigeria, Pakistan and Afghanistan and the campaign is set to miss a 2012-end deadline to end transmission of the wild, or natural polio virus globally.

Eradication campaigns are the most ambitious and technically complex of global health programmes. Consider what polio eradication involves: it aims to wipe off the face of the earth the virus that causes polio. This virus is one of the most basic forms of existence on earth — a sliver of RNA encased in a protein coat, visible only through powerful electron microscopes. This speck of genetic material has to be hunted down and driven to extinction. Because it can only reproduce in human beings, if enough humans are immune to it, the virus will eventually find no place to reproduce and will die out. The polio campaign's strategy is to build enough population immunity through large-scale immunisation campaigns to drive the virus to extinction. But with hundreds of thousands of non-immune children born every minute in countries where the polio virus still exists, this is not an easy task.

The polio eradication campaign argues that all that is required is a greater effort by the governments of Nigeria, Pakistan and

Afghanistan to implement their polio immunisation campaigns more effectively so that large numbers of children are not missed.

But it is more than a question of greater effort. Disease control and eradication programmes are not merely about health; they are also about politics and governance. Health and politics are intertwined, and global disease eradication campaigns are where the global and the local meet and often clash.

One reason Afghanistan, Pakistan and Nigeria are struggling is because the polio campaign has become enmeshed in the geopolitical fault lines of the post 9/11 world. In all three countries, the polio campaign is seen by Islamist militants and clerics as a proxy for western interests. In Pakistan, tribal leaders in North Waziristan have banned polio immunisation teams from entering the province in protest against U.S. drone attacks against suspected Taliban targets. The use by the CIA of a Pakistani doctor to get intelligence on Osama bin Laden through a hepatitis B vaccination campaign threw a cloud of suspicion over all international immunisation campaigns.

In Afghanistan, many parts of the 13 districts in the south where polio persists are no go areas for polio vaccination teams. The polio campaign hopes that importance of eradicating the disease will triumph over politics and vaccination teams will be allowed to work in the midst of conflict.

This could happen but it does not mean that local communities will embrace the idea of polio vaccination. Polio is not a major public health issue in the countries it exists in. Malaria, measles, diarrheal diseases, lower respiratory tract infections and malnutrition are the major causes

of illness and death in children. Yet when their children suffer from these common illnesses, people often need to travel long distances and pay money to get medical care. In contrast, vaccination against polio is delivered to their doors free. This raises suspicion and anger: why has polio been given such priority, and if it is possible to deliver polio vaccine like this, why can't other more urgent health care also be brought to people's door steps?

Issues like this tend to be dismissed by the polio campaign as stemming from ignorance, and elaborate communication campaigns have been devised to get people to accept polio immunisation. But those who refuse polio vaccination for their children are not ignorant; they are pointing to the gap between their health priorities and health priorities set by international organisations. Polio has been difficult to eradicate partly because of this gap between local and global priorities. A key lesson for future global health programmes is to find ways to reduce this democratic deficit between what people in developing countries feel their greatest health needs are, and the kind of programmes that are developed at the global level by the WHO and international donor agencies.

The polio eradication campaign is a crusade, and like all crusades, is eternally optimistic about the chances of success. But with time and money running out, the future of the polio eradication programme is still an open question.

#### ⇒ **Recommendations of Srikrishna Panel**

Suggesting far-reaching legislative reforms in the financial sector, a government-appointed panel, said key regulators such as the Securities and Exchange Board of India (SEBI), the

Insurance Regulatory and Development Authority (IRDA), the Pension Fund Regulatory and Development Authority (PFRDA) and the Forward Markets Commission (FMC) should be merged into a Unified Financial Agency (UFA).

The Financial Sector Legislative Reforms Commission, headed by former Justice B. N. Srikrishna, has also suggested setting up of a financial redressal agency (FRA) to address consumer complaints against companies across the financial sector.

The Approach Paper, on which the Commission will seek comments from the stakeholders, underlined the need for establishing an independent debt management office (DMO) and a Financial Sector Appellate Tribunal (FSAT) to hear appeals against regulators.

Under the existing architecture, the financial sector is regulated by eight agencies: the RBI, SEBI, the IRDA, the PFRDA, the FMC, SAT, deposit insurance agency DICGC and the Financial Sector Development Council (FSDC). As per the proposal, there would be five new agencies besides the RBI and the FSDC. The new ones would be UFA, FSAT, FRA, DMO and Resolution Corporation.

At present, while the stock market is regulated by SEBI, the activities in the commodities market are looked after by the FMC. The insurance sector is regulated by the IRDA, while the PFRDA is responsible for managing the pension sector.

The UFA, it said, would deal with all financial firms other than banking and payments. It would also yield benefits in terms of economies of scale in the financial system. At present, there are over 60 Acts and multiple rules and regulations that govern the financial sector.

### ⇒ Prohibition of Employment as Manual Scavengers & their Rehabilitation

The Supreme Court's unyielding criticism of the government for not eradicating the practice of manual scavenging was the springboard for the Ministry of Social Justice and Empowerment to introduce the Prohibition of Employment as Manual Scavengers and their Rehabilitation Bill, 2012 in the Lok Sabha on September 3. Welcomed as a panacea for the historically iniquitous, caste-ordained practice of manually handling human waste, the new Bill indicates renewed commitment but lacks a detailed vision for liberating manual scavengers. Such lack of detail in the new Bill is more pronounced when contrasted with a competent 2011 Draft Bill prepared by P.S. Krishnan, former Secretary to the Government of India.

Drafted by the Ministry of Urban Development under the Narasimha Rao government, its legislation under *Entry 6* (public health and sanitation) of the State List in the Constitution of India is the major lacuna in the 1993 Act. This is because privileging public sanitation accords only marginal importance to the objective of liberating persons employed as manual scavenging labour. And a tangential focus on manual scavengers explains the other lacunae in the Act: the narrow definition of a manual scavenger and the absence of a clause on rehabilitation for them.

The decision to amend the Act to fill the lacunae was foregone to avoid a lengthy and painful amendment process, since the Ministry of Law is understood to have objected to amendments to the 1993 Act under any other *Entry* but *Entry 6*.

The new Bill — legislated under Entry 24 (welfare of labour and working conditions of the Concurrent List) — may be appreciated for: (1) a somewhat broadened definition of a manual scavenger; (2) its clause on prohibition of hazardous cleaning of sewer and septic tanks; and (3) clauses on severe penalties and rehabilitation. However, these provisions stop short of taking the bull by the horns when compared to the 2011 Draft, thoughtfully titled Total Liberation, Comprehensive Rehabilitation & Humanisation of Working Conditions Act, 2011.

Laudably, the opening declaration of the 2011 Draft is a national apology on behalf of the state to the sanitation workers, expressing deep regret for the humiliation and untouchability to which the latter have been subjected over centuries. The Draft subsequently cautions against interpreting manual scavenging thinly and includes within its ambit, sewage and septic tank cleaning (in the wake of egregious human rights violations associated with manhole deaths across India).

In addition to training them as caretakers of public parks/gardens, plumbers or electrical repair workers, the 2011 Draft directs the Ministry of Railways to set aside a quota to absorb ex-scavengers as railway catering staff. It also duty binds the Central and State governments to provide proper housing with adequate sanitation, road infrastructure and, most importantly, quality schools up to Class XII for the children of all SC communities from which manual scavengers are drawn. A remarkably detailed rehabilitation plan in the 2011 Draft is motivated by a three-fold realisation: (1) to restore the dignity of life to the entire community of sanitation workers; (2) to secure, through educational opportunities, better

vocations for future generations traditionally vulnerable to being recruited as manual scavengers; and (3) to clearly spell out the tasks of every Ministry, PSU, and private sector organisation in order to make them enforceable.

Unlike the 2011 Draft, the clause on rehabilitation in the new Bill is similar to a checklist of items on offer. It is seemingly benevolent in monetary terms but is measly in vision. Moreover, it conceives rehabilitation to be targeted and subject to eligibility, based on identification surveys in rural and urban areas. Strikingly, it proposes that final lists of urban manual scavengers born out of the survey be displayed publicly ‘to invite objections from general public,’ further dictating inclusion or exclusion of persons. This is akin to a ‘public pillory,’ believes independent law researcher Dr. Usha Ramanathan, exposing the workers to public scorn and ridicule, ‘for fear that a few extra might get rehabilitated.’ The government is relying on the MoRD’s Socio Economic and Caste Census (SECC), 2011 enumeration for identification of manual scavengers in rural India. The new Bill is silent on the use of SECC (already under criticism from the Right to Food activists for its insensitive methodology and high likelihood of exclusion errors in identifying BPL families).

A truly laudable provision in the new Bill is its unsparing penalty for offence (both cognisable and non-bailable). It imposes an initial fine of Rs. 50,000 or imprisonment up to one year or both. Appallingly, no offender has been prosecuted in the last two decades under the 1993 Act. A stringent penalty clause then ought to entail retrospective punishment for offences committed and not exempt public servants from prosecution. For purposeful enforcement, a body like the

National Monitoring and Enforcement Authority, proposed in the 2011 Draft, should be instituted. Besides eminent social workers, including Scheduled Caste persons, this body should also provide representation to the invisible workforce of devoted individuals (members of the SKA, Garima Abhiyan and similar organisations) whose unwavering struggle in fighting for the rights of manual scavengers remains unrecognised.

⇒ **G deal between two Countries**

Hailemariam Desalegn was presiding over his first international summit after taking office after the death of Prime Minister Meles Zenawi, who ruled Ethiopia for 21 years and oversaw a muscular and interventionist foreign policy. Meanwhile, Thabo Mbeki, former South African President and pan-African statesman, was determined to illustrate that the African Union could contain the fallout of the division of Sudan, till recently the continent's biggest country, without external supervision.

The summit was expected to address a number of post-secession issues, most importantly an oil-agreement that would give South Sudan access to northern ports and processing plants. In January this year, a dispute over transit fees had led to the suspension of all oil production in the South and, as every reporter in the palace had noted, denied South Sudan 98 per cent of its state revenues.

The crucial oil deal had been hammered out in August, granting South Sudan the right to process and transport the oil for between \$11 and \$9 a barrel depending on the pipeline in use; but the Presidents struggled to find a consensus on the exact contours of a safe demilitarised zone between the two armies or the status of Abyei, an oil-bearing territory claimed by a settled

community allied to the south and itinerant Arab pastoralists from the North.

The South also agreed to pay the North \$3.028 billion as a one-time transitional financial agreement and the two countries agreed to jointly lobby for a reduction in Sudan's \$40 bn external debt, failing which the two countries will resume negotiations to agree on how best to apportion the sum.

*The agreements between Sudan and South Sudan reveal the complexity of separating two nations while testing the African Union's ability to contain the troubles without external help.*

⇒ **Super optic highway to connect 2.5 lakh villages**

The government's largest-ever Rs. 20,000 crore (\$4 billion) investment in building a National Optic Fibre Network (NOFN), popularly known as the Bharat Broadband Project, is set for commercial testing and deployment this month.

The project, based on a unique PPP or Public Private Panchayat Model, is laying "incremental fibre" to the "pre-last mile" stage aimed at reaching 2.5 lakh gram panchayats. The government is expected to make the project public in the next few weeks, with 61 gram panchayats spread across Ajmer (30), Visakhapatnam (16) and North Tripura (15) likely to be available for commercial tests with complete electronic equipment in place.

These pilot projects will be the first real test of fostering e-services in these panchayats.

The NOFN super optic highway will connect 2.5 lakh villages and last mile connectivity will be given through mobile-wireless broadband."

The deployment of e-services is a challenge by itself. The content, services and applications



are expected to come from both the private sector and the government. The phasing of these e-services, capacity building in such rural areas and most importantly, need to create an entire range of interlocutors or “para-technicians”, who will work as a conduit between the average rural citizen and Internet access, is the next phase of the challenge.

A majority of the funding for this network is being sourced from the Universal Service Obligation Fund (USOF), to which consumers contribute a small percentage every month through their monthly telephone bills.

The barriers to reaping the full benefits of this massive investment are at three levels. The first is affordable devices, preferably wireless and ready for early use. The second challenge relates to relevant, local content. The third is by way of successful introduction of telemedicine, e-governance, e-learning and e-commerce applications that form the fulcrum of the nation’s e-infrastructure.

Mobile operators and ISPs have been working closely with Bharat Broadband teams to seek commercial opportunities. It is clear that early days will have teething problems, but for the most part, transport infrastructure should be in place by the end of 2013.

The immediate next challenge for entrepreneurs would be to build a sustainable business model that can deliver continued technological support and financial returns — preferably through killer applications that suit the Indian rural palette.

⇒ **Deepak Parekh panel for hiking power charges, rail fares**

Suggesting big-ticket reforms to attract investment in the infrastructure sector, a high-

level committee, on Wednesday, recommended increasing electricity charges and rail fares.

The high-level committee on financing of infrastructure, which is headed by HDFC Chairman Deepak Parekh, also pitched for 100 per cent foreign direct investment (FDI) in the telecom sector. The limit at present is 74 per cent.

The panel also suggested raising prices of natural gas. These recommendations are aimed at attracting Rs.51.46 lakh crore for funding the infrastructure sector during the XII Plan (2012-17), according to the report, which was presented to Prime Minister Manmohan Singh earlier in the day.

The government, the report says, should draw “a time-bound action plan...with a view to improving the enabling environment for private investment, which is expected to finance about 47 per cent of the projected investment during the XII Plan.”

The share of private sector in infrastructure funding was 37.53 per cent during the XI Plan, the report says, adding that the contribution of public sector is estimated to decline to 53.32 per cent during the XII Plan from 62.47 per cent in the previous Plan.

Suggesting a slew of reforms in various sectors, including rail, power, coal, gas supply and telecom highways, the report says that the projected investment of about Rs.51 lakh crore during the XII Plan should not be taken for granted.

It says, while underlining the need for promoting the Public-Private Partnership (PPP) model of development for projects in sectors such as rail, ports, airports and highways.

The committee has suggested rationalisation of gas allocations and pricing policy within the

next two months as further delay would impact the viability of gas-based power stations.

With regard to rail fares, the report calls for “rationalisation of the prevailing uneconomic rail fares, which have not been revised for a decade”.

It has suggested greater involvement of private sector in rail projects and revamping of the Railway Board on commercial lines.

The Committee has suggested that the progress of projects and award of contracts in the infrastructure sector should be monitored on a monthly basis by the Cabinet Committee on Infrastructure (CCI).

With regard to highways, the committee suggested that the National Highways Authority of India should draw a month-wise plan to award contract for 10,000 km during 2012-13.

The government, it adds, should expeditiously set up the long-awaited Express Authority of India, and ensure that engineering procurement and construction projects for 5,000 km are awarded in the current fiscal.

It wants the government to permit 2G licencees to raise funds through external commercial borrowings (ECBs).

⇒ **Five points on the future of nuclear power in India**

A truly independent AERB successor, the proposed Nuclear Safety Regulatory Authority (NSRA), with transparency, significant powers and, ideally, international representation, would also serve the cause of safety in future. That the AERB has acted fairly and independently so far does not guarantee that it will always do so.

Another point is that the NSRA cannot draw on independent nuclear expertise in India because none exists outside the DAE (one

reason for international representation). We should encourage investments by the private sector, subject to NSRA oversight, and encourage leading non-DAE institutions, such as the Indian Institutes of Technology, to develop programmes in nuclear engineering. Meanwhile, the NSRA will require civil engineers, seismologists, radiation safety specialists, and other experts besides nuclear scientists, who exist independently of the DAE.

**Emergency preparedness and liability:**

In the event of a disaster at Kudankulam, it is impossible to evacuate such an area rapidly, and medical facilities are inadequate. But this is not unique to nuclear power. Cyclones, floods, industrial accidents all occur regularly and we have not learned our lessons. The DAE should take the lead in ensuring disaster preparedness near its installations, but cannot be blamed for our country’s larger failures.

**The future:** Unwarranted scaremongering is a problem on all sides. First, genuine concerns are diluted when bundled with alarmist nonsense. S.P. Udayakumar claims in his “Thirteen Reasons Why We Do Not Want the Koodankulam Nuclear Power Project” (Transcend Media, August 2011) that the radiation from a nuclear plant’s normal operation is dangerous (this was addressed in my previous article), that coolant waste will affect fish populations (studies show no observable effect), and that the VVER-1000 reactors are “untested” (the design was developed between 1975 and 1985 and is in use in several countries since 1980, and new safety features in Kudankulam are in addition to, not replacing, existing features). It may be tempting to use these claims to discredit the anti-nuclear activists, but the good points that they make should not be ignored, especially when

going forward to new nuclear installations. Second, this makes it hard to conduct a rational dialogue, or to address genuine worries while dispelling unfounded ones.

⇒ **Prithvi II missile tested successfully**

- India successfully test-fired its indigenously developed, nuclear-capable ballistic missile Prithvi II from a test range in Odisha.
- Prithvi is India's first indigenously built ballistic missile. It is one of the five missiles being developed under the country's Integrated Guided Missile Development Programme.
- The medium-range missile, with flight duration of 483 seconds and reaching a peak altitude of 43.5 km, has the capability to carry a 500 kg warhead.
- Prithvi uses an advanced inertial guidance system with manoeuvring capabilities and comes within metres of its target.
- The missile has been successfully flight tested in the past as part of training exercises. India is now likely to test Dhanush missile, the naval version of Prithvi with the same range, from the same defence base on Friday.

⇒ **Electronic IPO from January 1**

The Securities and Exchange Board of India (SEBI) has decided to introduce electronic IPOs from January 1, 2013.

"The facility to submit the application forms would be available in more than 1000 locations which are part of the nationwide broker network of the stock exchanges and where there is a presence of the brokers' terminals (broker centre)," said SEBI in a circular to market

participants. In the first phase, around 400 broker centres would be covered by January 1, 2013 and the remaining centres would be covered by March 1, 2013.

⇒ **Nuclear-capable Dhanush successfully test-fired**

India successfully test-fired the nuclear-capable Dhanush ballistic missile for its full range of 350 km from a naval ship off the coast.

This follows the successful flight-testing of the land-based Prithvi-II ballistic missile for a similar range.

The surface-to-surface Dhanush, a naval variant of Prithvi-II, was fired by personnel of the Strategic Forces Command (SFC) at 11.25 a.m. as part of regular training. The missile rose from the ship and splashed down near the pre-designated target in the Bay of Bengal with an accuracy of less than 20 metres. All the mission objectives were met in a flawless performance, official sources said.

All the radars, telemetry stations and electro-optical systems tracked and evaluated the performance in real time.

The single-stage, liquid-propelled Dhanush, already inducted into the Army, is one of the five missiles developed by the Defence Research and Development Organisation under the Integrated Guided Missile Development Programme.

⇒ **Australia unveils colossal telescope**

Australia unveiled a colossal radio telescope that will allow astronomers to detect distant galaxies and explore the depths of the universe with unprecedented precision.

The Australian SKA Pathfinder telescope, at the remote Murchison Radio-astronomy Observatory in the Western Australian desert, is

made up of 36 antennas, each 12 metres in diameter.

The Aus\$140 million (\$140 million) facility can survey the sky much faster than existing telescopes, with the antennae sensitive to faint radiation from the Milky Way, giving it the ability to detect distant galaxies.

The telescope is part of Australia's contribution to the broader \$2.5-billion SKA project, jointly hosted with South Africa and New Zealand, which will have far greater capabilities.

That project will use a forest of antennae, spread across remote terrain, to pick up radio signals from cosmic phenomena that cannot be detected by optical telescopes.

It will be 50 times more powerful than current radio telescopes and will explore exploding stars, black holes, dark energy and traces of the universe's origins some 14 billion years ago.

⇒ **Another step towards Space Inc.**

American firm Space Exploration Technologies (Space-X) aims for its next big launch into orbit on Sunday — the first of 12 flights in its \$1.6-billion contract with NASA to bring supplies to and from the International Space Station (ISS).

Space-X, owned by billionaire Paypal co-founder Elon Musk, is one of several private companies working with NASA to send flights to and from the ISS. NASA has been relying on Russian spacecraft for the last year, after retiring its fleet of shuttles.

⇒ **U.S. to oppose major revisions of global telecom rules**

The United States will oppose any major revision to 24-year-old global telecommunications regulations at an international conference in

December, the head of the U.S. delegation said, insisting the Internet must remain free and open.

“We need to avoid suffocating ... the Internet space through well-meaning but overly-proscriptive proposals that would seek to control content or seek to mandate routing and payment practices,” said Terry Kramer, the special envoy named for World Conference on International Telecommunications (WCIT) in Dubai at the end of the year.

Speaking to reporters in Geneva, Kramer said Washington was eager to cooperate with other nations to reach a consensus on alterations to global regulations set up by the U.N.'s International Telecommunication Union (ITU) in 1988, but stressed that only minimal changes would be acceptable.

⇒ **British-Japanese duo clinch Nobel Medicine**

Shinya Yamanaka of Japan and John B. Gurdon of Britain won the Nobel Medicine Prize for their groundbreaking work on stem cells. The pair was honoured ‘for the discovery that mature cells can be reprogrammed to become pluripotent.

The two discovered “that mature, specialised cells can be reprogrammed to become immature cells capable of developing into all tissues of the body”.

By reprogramming human cells, “scientists have created new opportunities to study diseases and develop methods for diagnosis and therapy,” the Nobel committee said.

Gurdon is currently at the Gurdon Institute in Cambridge, while Yamanaka is a professor at Kyoto University in Japan.

Due to economic crisis, the Nobel Foundation has slashed the prize sum to eight

million Swedish kronor (\$1.2 million, 930,000 euros) per award, down from the 10 million kronor awarded since 2001.

⇒ **Re-usable insulin pen from Sanofi**

- Sanofi India, announced the launch of AllStar, its first indigenously-manufactured reusable insulin pen.
- AllStar was custom-made for patients in India. It would help improve insulin initiation and compliance and bring ease and reassurance to the lives of patients, giving them the convenience of international standards at an affordable price, he said. Incidentally, India has the second highest number of diabetics in the world estimated at 62 million.

⇒ **Include the poor in biodiversity conservation**

Protecting biodiversity is humanity's insurance policy against the unprecedented biodiversity loss and ecosystem degradation which has occurred in recent decades, undermining the very foundations of life on earth.

This is why this week's 11th Conference of Parties to the Convention on Biological Diversity in Hyderabad, which India is hosting, is so important. The thousands of experts and officials representing nearly 200 countries attending the conference carry the enormous responsibility of facing the difficult trade-offs that lay at the heart of biodiversity management.

In the race to increase national income, countries around the world are over-exploiting biodiversity by failing to integrate environmental measures in fisheries, agriculture, infrastructure and mining. This approach is understandable when governments are trying to quickly raise living standards but the risk of mismanaging biodiversity

far outweighs short-term gains, reducing the ability of the environment to sustain the present generation, let alone meet the needs of future generations.

A key theme of the conference is the impact of biodiversity loss on the poor. Dependent directly on nature for food, clean water, fuel, medicine and shelter, poor households are hit hardest by ecosystem degradation.

In India, where ecosystem services account for 57 per cent of a poor household's income and nearly a quarter of the country's population depends on non-timber forest produce for their livelihood, important community-based models for managing diversity are showing impressive results.

An example of this is the village of Gundlaba in Odisha where the 1999 super cyclone destroyed habitats and livelihoods, mangroves and forests belonging to coastal villages. Fearing that their community may not recover, the village women formed a Forest Protection Women's Committee. During the past 12 years, the committee has worked together to regenerate mangroves and other forests. Forest cover has gone up by 63 per cent and fish catch has increased from one to five kilograms per family.

The story of Gundlaba shows that the weight of ecosystems in the lives of the poor represents an important opportunity for achieving broader social and economic goals. Proper and intelligent management of ecosystems at the local level can help to turn local economies around and give destitute households a chance to increase their incomes. This is an important lesson to share with the world.

Investing in the protection of biodiversity is another important lesson. A government of India



initiative to increase coral reef cover in the Gulf of Mannar Biosphere Reserve on the Tamil Nadu coast, which the United Nations Development Programme (UNDP) and Global Environmental Facility are proud to have supported, has resulted in diversified livelihoods at the local level and increased income. As a result of this programme, more than 24,000 women now have access to more credit from microenterprises and thousands of young people have taken up new vocations after receiving technical training.

⇒ **Plan panel to have discretionary powers on release of funds to States**

Giving itself discretionary powers on release funds to States under various Central schemes, the Planning Commission has decided to restructure 16 Centrally Sponsored Schemes (CSS) into Additional Central Assistance (ACA) Schemes. The new funding pattern will be effective from 2013-14.

While restructuring the CSSs will give more flexibility to the States to utilise the funds, it will also give the Planning Commission absolute control over the quantity of money to be released. CSS funds are routed through the Ministries, but once the new system is in place as many as 11 ministries will lose monetary control over their ambitious schemes.

Experts fear the new funding pattern could be used as a political tool by the Centre to discriminate between States on the basis of the party in power. More so, since the parliamentary elections are scheduled for 2014.

The schemes to be restructured include flagship programmes such as the Integrated Child Development Scheme, the Mid Day Meal Scheme, the Sarva Shiksha Abhiyan, the Mahatma Gandhi National Rural Employment

Guarantee Scheme, the Indira Awas Yojana, the Pradhan Mantri Gram Sadak Yojana, and the yet-to-be launched National Health Mission.

Some other important schemes to be restructured are the Rashtriya Krishi Vikas Yojana, the Rajiv Gandhi Drinking Water Mission and Sanitation Mission, the Backward Regions Grant Fund, and the National Rural Livelihood Mission.

It is the Ministries concerned that release funds for the CSS. But, under the new set up the Planning Commission will release the funds directly to the States on the recommendation of the Finance Ministry. The ministries concerned will only monitor the implementation of the schemes, which would be evaluated by an external agency.

The Union Cabinet approved the proposal at its meeting when the draft document for the 12th Plan was cleared. According to the Cabinet note, the Plan proposed rationalisation and restructuring of the CSS for improving efficiency. Details of the other schemes will be worked out in consultation Ministries concerned.

⇒ **Receptors on cell surfaces sense environment**

Sensors on the cell surface are called receptors. Robert J. Lefkowitz and Brian K. Kobilka are awarded the 2012 Nobel Prize in Chemistry for having mapped how a family of receptors called G-protein-coupled receptors (GPCRs) work. In this family, we find receptors for adrenalin (also known as epinephrine), dopamine, serotonin, light, flavour and odour.

⇒ **Nobel Prize in Medicine**

The discovery holds hope for treating diseases like Parkinson's and diabetes by growing customised tissue for transplant and has spurred

new studies. Two scientists from different generations won the Nobel Prize in medicine Monday for the groundbreaking discovery that cells in the body can be reprogrammed into completely different kinds, work that reflects the mechanism behind cloning and offers an alternative to using embryonic stem cells.

The work of British researcher John Gurdon and Japanese scientist Shinya Yamanaka who was born the year Gurdon made his discovery holds hope for treating diseases like Parkinson's and diabetes by growing customized tissue for transplant.

And it has spurred a new generation of laboratory studies into other illnesses, including schizophrenia, which may lead to new treatments.

⇒ **“India lags behind Bangladesh in improving Global Hunger Index despite economic growth”**

India has lagged in improving its Global Hunger Index (GHI) score despite strong economic growth, according to the 2012 Global Hunger Index report released for the seventh year by the International Food Policy Research Institute (IFPRI), Welthungerhilfe, and Concern Worldwide.

The 2012 index — The Challenge of Hunger: Ensuring Sustainable Food Security under Land, Water, and Energy Stresses — points out that Bangladesh, India and Timor-Leste have the highest prevalence of underweight children under five, more than 40 per cent in each of the three countries.

The report suggests that Bangladesh has overtaken India on a range of social indicators, including how fast it has reduced child mortality.

In India, 43.5 per cent of children under five are underweight, which accounts for almost two-

thirds of the country's alarmingly high GHI score. From 2005-2010, India ranked second to last on child underweight — below Ethiopia, Niger, Nepal, and Bangladesh.

The report, says that South Asia has the highest regional 2012 GHI score — 22.5 — thus the highest hunger levels of the regions covered in the Index. Yet compared with the region's 1990 GHI score, its 2012 GHI score is 26 per cent lower, indicating improvement in the region's hunger situation.

⇒ **Digital divide widens even as costs drop globally**

The digital divide between the most and least developed countries — measured in terms of costs, quality and connectivity — continues to grow, according to data released by the International Telecommunications Union (ITU).

Global broadband prices have dropped nearly 75 per cent between 2008 and 2011, yet the poorest countries, particularly in Africa, continue to have the highest connectivity costs in the world.

“Today the Least Developed Countries [LDCs] are also the LLCs [Least Connected Countries],” said Andrew Rugege, Regional Director of the ITU for Africa, adding that African countries needed to rationalise price regimes and increase investments in information and communication technologies (ICT).

The ITU report, *Measuring the Information Society 2012*, ranks 155 countries on the basis of the ICT Development Index, which measures ICT access, use and literacy, and the ICT Price Basket, a country-wise indicator of ICT affordability. South Korea has the most advanced telecommunication infrastructure in the world, while Niger was ranked the worst.

Despite India's widely reported advances and investments in the telecommunication sector, the country is ranked 119th in the world in the ICT Development Index, below Zimbabwe, Bhutan and Ghana. India fares slightly better in the affordability index, and is ranked 85th out of 161 countries in the ICT Price Basket (IPB) Index.

The IPB index measures communication costs as a percentage of Gross National Income (GNI) per capita, and highlights the tremendous regional disparities in connectivity costs. For instance, the average African mobile user can expect to pay to almost 20 per cent of her monthly income on mobile connectivity costs, compared to the average Asian who would pay less than 10 per cent, while the average European would pay a per-cent-and-a-half.

⇒ **The docile dolphin in danger**

- Dolphins were declared India's National Aquatic Animal in 2009.

⇒ **Coastal and marine biodiversity**

The ongoing, major event in Hyderabad, where 193 countries which are parties to the Convention of Biological Diversity (CBD), are in session — for the Eleventh Meeting of the Conference of Parties (COP 11) to the Convention — has come at an appropriate time when countries and people around the world are revisiting sustainable development frameworks and agendas. India is leading the global discussions on biodiversity and development between now and the next COP meeting, that is expected to be held in 2014.

All the recent international events on environment/biodiversity place a special emphasis on "coastal and marine" issues, primarily due to their significance to humanity and the threat to

marine biodiversity. The ocean covers 71% of the surface area of the globe and constitutes over 90% of the habitable space. It contains the blue whale (the largest animal ever to have lived on earth) as well as microorganisms. Coastlines supporting fragile ecosystems include mangroves, coral reefs, seagrass and seaweeds.

Mangrove forests host a unique variety of fish and crabs, birds, monkeys, deer and even tigers. Coral reefs are known as the "rainforests of the sea." Even though coral reefs occupy only 0.1% of the sea, one-third of all known marine species live on them. Seagrasses support different aquatic lives including marine turtles and juvenile prawns. About 1km of seagrasses absorbs approximately the same carbon-dioxide as 50km of tropical forests! Seaweeds are important marine living resources with a lot of commercial value. From time immemorial people have lived on the coasts and fishing. At present 41% of the world's population lives within 100 km of the coast. Human dependence on the marine and coastal ecosystems is significant.

- Life in the sea produces a third of the oxygen that we breathe.
- The ocean absorbs approximately 30% of CO<sub>2</sub> that has been emitted by human activities since the 'Industrial Revolution'; this has helped in limiting the overall extent of global warming substantially.
- Fisheries directly employ almost 200 million people and provide over 15% of the dietary intake of animal protein.
- Marine bio-products are raw materials for manufacturing industries such as paints, fertilizers, skin lotions, toothpastes and medicines.

- The divergent chemical deposits in the marine environment are an asset, and might even yield new anti-cancer drugs.
- The shore provides for marine transportation, recreation, tourism and salt production.
- Mangroves can protect the coastal aquifers from seawater intrusion and safeguard the coastal communities from natural calamities like cyclones and tsunami.
- Coastal wetlands play an important role in water quality regulation by capturing and filtering sediments and organic waste transits from inland.

India has a coastline of about 7,500 km, of which about 5,400 km belongs to peninsular India and the remaining to the Andaman, Nicobar and Lakshadweep Islands. With less than 0.25% of the world's coastline, India accommodates 63 million people, approximately 11% of the global population, living in low elevation coastal areas.

Even though humanity has benefited from the marine and coastal ecosystems, our activities (on land and ocean) have made critical impacts on their quality and renewability. Large-scale burning of fossil fuels is causing the ocean to become warmer and more acidic. The average sea surface temperature has increased by 0.4 degree Centigrade since the 1950s, which is a threat to the marine ecosystems, and 'coral bleaching' is a symptom. Since 1880, the sea level has risen by an average of 22 cm.

Dam construction and diversion of the flow of rivers have intercepted the transport of the much needed freshwater, sediments and nutrients to the coast, leading to disequilibrium in the ecosystems. Coastal urbanisation has squeezed

sandy beaches and marsh lands. Toxic pollutants and non-biodegradable wastes such as plastic disposals adversely affect the reproduction, growth and behaviour of marine wildlife. Non-native species released from aquaria and ships' ballast water discharge also assault the ecosystems and outcompete the native species. Even the noise generated by shipping and industrial activity can prevent species like whales from communicating with each other across miles of the ocean. Over-hunting has reduced the stock of many species. The great auk and the sea mink have become extinct, and species such as the great whales have been hunted to a fraction of their original population. Today, more than four million fishing vessels, including industrial trawlers, are engaged in fishing to the tune of 140 million tonnes/year. It has been estimated that up to 13% of global fisheries have 'collapsed.' The commercial fisheries make vulnerable many deep sea species, retarding their reproduction and growth rates. Once the main fish stock has been depleted, it will take decades and potentially centuries to recover. Further 30-35% of critical marine habitats such as seagrasses, mangroves and coral reefs have been destroyed, primarily due to anthropogenic interventions.

#### ⇒ Threat to Sundarbans

The world's largest mangrove forest, the Sundarbans, is increasingly becoming vulnerable to rising sea levels and frequent natural disasters.

The Sundarbans form an archipelago straddling India and Bangladesh, and are part of the delta of Ganga, Brahmaputra and Meghna basin. The Indian part of the delta comprises of 102 islands (of which only 54 islands are inhabited) in 19 blocks of West Bengal's North 24 Parganas and South 24 Parganas districts.

About a million people in the Sundarbans coexist with 26 species of true mangroves, 234 species of birds and 47 species of mammals, including the Royal Bengal tiger, all of which face a threat from global warming.

⇒ **BHEL gains eligibility for Maharatna status**

Recording exponential top lines for the third successive year, power equipment manufacturer major Bharat Heavy Electricals Limited (BHEL) has gained eligibility to acquire the Maharatna status. Maintaining its growth momentum, BHEL registered a 20 per cent growth in its top line and achieved the highest ever turnover of Rs. 49510 crore in 2011-12 and its profit after tax (PAT) shot up by 24 per cent for a high of Rs. 7040 crore. With his achievement, the BHEL, currently enjoying the status of Navratna, has claimed to have become eligible for the Maharatna status which would enjoy greater financial and administrative powers for better growth prospects.

⇒ **A liability for our nuclear plans**

In the context of the ongoing debate on Kudankulam, the question of nuclear liability has come to the fore again. General Electric and Westinghouse, who were the serious bidders, explained to us the practice in the United States whereby the owner-operator of the plant assumed the nuclear liability risk. The operator indemnified suppliers of equipment because the financial risk of a nuclear accident, though very remote, could not be reasonably factored in by the chain of suppliers involved in a nuclear project, in their contracts. The owner-operators of nuclear power plant, who were mostly investor-owned utilities, were asked to take insurance up to a limit available in the market. The U.S government assumed

liability beyond the insurable limit up to another limit set under the Price-Anderson Act, passed by the U.S Congress. The limit set under the Price-Anderson Act has been increased progressively from time to time.

General Electric, chosen to build Tarapur, wanted an indemnity protection similar to what it was extended in the U.S. Initially, it insisted that there should be legislative protection. On the Indian side, we felt it was premature to pass a law as we were then thinking of building only a small number of nuclear power units to demonstrate the economic feasibility of nuclear power under Indian conditions. We persuaded G.E. that a protection in the contract, which was in any case approved by the Government of India, would be adequate. When an agreement with the Atomic Energy of Canada Ltd. (AECL) was drawn up for building the first two reactors at Rajasthan, a similar indemnity protection was extended to AECL and its suppliers. Since India took up building nuclear power units of its own design, indemnity protection has been a part of nearly all supply contracts.

One may ask, in hindsight, if India did the right thing in extending such nuclear liability protection in the past. If we had not done so, we would not have been able to import our first two reactors from the U.S., nor the second pair from Canada. There is no doubt whatever that India gained a great deal by building the Tarapur reactors with U.S. collaboration. India learnt early the problems of operating nuclear power units in our grid systems and also in managing a complex nuclear installation with our own engineers and technicians. In the case of cooperation with Canada, India was able to get the basic knowhow of the pressurized heavy water reactors



(PHWR). Thereafter, we progressed on our own to design and build 16 PHWRs in seven locations. Now we are building four 700 megawatt PHWRs of our own design. Four more will follow soon and possibly another four will also be built, thus making a total of 12 PHWRs of 700MW each. Therefore, early cooperation with Canada helped us to become a designer and builder of nuclear power plants.

India took up the task of drafting a nuclear liability Act whose primary purpose was to ensure prompt compensation to any member of the public who might have suffered injury, death or damage to property due to a nuclear accident. Much of the debate in India took place in the context of the Bhopal tragedy, which was also being considered by Parliament at the same time. In this atmosphere, the legislation that was passed included a right of recourse for the operator against the supplier in case of latent or patent defects or wilful misconduct. We must remember that for our own projects based on our own technology, we depend on a large number of Indian suppliers. The value of these contracts may run into several hundred crores or maybe as low as a crore or less. These suppliers cannot be expected to cover themselves for large value risks of long duration. Therefore, under the rules to be drafted, the Department of Atomic Energy has tried to inject realism by defining the duration of the risk to be the product liability period or five years, whichever is less, and a cap on the risk being the value of the contract. We find that long-standing suppliers of DAE and NPCIL are unhappy to go along even with these caps, as they feel that carrying large contingent liabilities on their books hurts their credit ratings. They, therefore, prefer to move to non-nuclear activities,

even though they have acquired valuable nuclear expertise on work done earlier.

#### THE 2008 AGREEMENT

The 2008 agreement provides that India would extend indemnity protection for Units 3 and 4, on the same lines as Units 1 and 2. I had in fact negotiated the earlier agreement in 1988, in keeping with the prevailing international practice. If India wants the Units 3 and 4 agreement to comply with its 2010 liability legislation, there is a danger that the entire 2008 agreement may be reopened.

Some of our legal experts point out that the law of the land is "Polluter Pays". This may be so on paper. In practice, all our thermal power stations are putting out carbon dioxide, which is a pollutant. Are they paying for that? Similarly, all our cities are putting out sewage and solid waste to the environment. Again, sadly, they are not paying for that. In fact nuclear energy poses the least pollution hazard; there is no fly ash, acid rain, or carbon dioxide released into the environment. Units 1 and 2 of Kudankulam were built under a contract entered into in 1988 (and renewed in 1998), before our liability legislation of 2010. We are finding great difficulty in moving ahead with Indian designed and built projects due to some of the provisions of the 2010 legislation. We must arrive at a solution whereby electric power generation growth is assisted to the maximum extent possible, while ensuring that the safety of the people is in no way adversely impacted. With regards to Kudankulam 1 and 2, the delay of one year has already pushed up the tariff from Rs. 3 per KWH to Rs 3.25 per KWH. Any further delay will similarly increase the cost of power to the consumers.