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Green Files

Newsletter on environment audit and sustainable development issues

International Centre for Environment Audit and Sustainable Development (iCED)

This newsletter has been compiled by iCED Jaipur and is meant for circulation amongst IA&AD. This quarterly newsletter highlights issues on environment and sustainable development which can enable audit offices identify areas of audit concern. The newsletter comprises critical appraisal of national environmental acts, snapshots of recent news on environment, relevant Supreme Court judgements on environment issues as well as recent national and international audit reports pertaining to environment and sustainable development.

We look forward to your suggestions to make Green Files more relevant. Contributions to the newsletter are also welcome. These can be mailed to iced@cag.gov.in.

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I. United Nations Biodiversity Conference, October 2012, Hyderabad

2012 was declared the United Nations Decade on Biodiversity (UNDB) by the United Nations General Assembly through Resolution 65/161. This declaration serves to support and promote implementation of the objectives of the Strategic Plan for Biodiversity and the Aichi Biodiversity Targets. Its goal is to mainstream biodiversity at different levels. Throughout the United Nations Decade on Biodiversity, governments are encouraged to develop, implement and communicate the results of national strategies for implementation of the Strategic Plan for Biodiversity.

The eleventh meeting of the Conference of the Parties (COP 11) was held in Hyderabad, India, from 8 to 19 October 2012. This was the largest ever such conference organised in India and in which 170 countries participated. More than 400 side events – many organised by the World Bank, United Nations Development Program, Global Environment Facility, other countries and International and national NGOs took place.

Some of the conclusions at the end of discussions were:

1. Developed countries agreed to double the funding to support efforts in developing states towards meeting the internationally-agreed Biodiversity Targets, and the main goals of the Strategic Plan for Biodiversity 2011-2020 and towards meeting the Aichi Biodiversity Targets. All Parties agreed to substantially increase domestic expenditures for biodiversity protection over the same period. These targets and progress towards them will be reviewed in 2014.

2. New measures to factor biodiversity into environmental impact assessments linked to infrastructure and other development projects in marine and coastal areas were proposed.

3. The COP set targets to increase the number of countries that have included biodiversity in their national development plans, and have prepared national financial plans for biodiversity, by 2015.

4. Parties to the CBD agreed to classify a diverse list of marine areas, some renowned for containing 'hidden treasures' of the plant and animal world, as ecologically or biologically significant. Parties to the Convention also called for more research into the potential adverse effects of underwater noise from ships on marine and coastal biodiversity, and highlighted the growing concern on the adverse effects of marine litter. It also recognized the growing challenge of climate change impacts on coral reefs, which, Parties agreed, will require significant investment to overcome. There was also a call to fisheries management bodies to play a stronger role in addressing the impacts of fisheries on biodiversity.

5. For the first time, developing countries at COP 11, including India and several African states, pledged additional funds above and beyond their core funding towards the work of the CBD.

6. The conference also saw the launch of the Hyderabad Call for Biodiversity Champions. The programme will accept pledges from governments and organizations in support of the Strategic Plan for Biodiversity. The government of India this week committed over US$ 50 million as part of the programme. A decision on climate change and biodiversity called for enhanced collaboration between the CBD and UN climate change initiatives including Reducing Emissions from Deforestation and Forest Degradation (REDD+).

II. Environment Case law in India: M.C. Mehta v. Kamal Nath, (Beas River Case 1996)

1. Background of the case

The Court took notice of an article which appeared in the Indian Express stating that a private company "Span Motels Pvt. Ltd.", to which the family of Kamal Nath, a former Minister of Environment and Forests, had a direct link, had built a motel on the bank of the River Beas on land leased by the Indian Government in 1981. Span Motels had also encroached upon an additional adjoined area of land which was later leased out to Span Motels when Kamal Nath was Minister in 1994. The motel used earthmovers and bulldozers to turn the course of the River Beas, create a new channel and divert the river's flow. The course of the river was diverted to save the motel from future floods.

2. Decisions of the Supreme Court

The main pronouncements of the Supreme Court in this case are as follows:

- India's legal system - based on English common law - includes the public trust doctrine as part of its jurisprudence. The State is the trustee of all natural resources which are by nature meant for public use and enjoyment. Public at large is the beneficiary of the sea-shore, running waters, airs, forests and ecologically fragile lands. The State as a trustee is under a legal duty to protect the natural resources. These resources meant for public use cannot be converted into private ownership. The Himachal Pradesh Government has committed patent breach of public trust by leasing the ecologically fragile land to the Motel management. Both the lease transactions are in patent breach of the trust held by the State Government.
- The one who pollutes the environment must pay to reverse the damage caused by his acts. 'The Polluter Pays Principle` has been held to be a sound principle by this Court in Indian Council for Enviro-Legal Action v. Union of India [(1996).

3. The SC therefore ordered and directed as under:

- The public trust doctrine, as discussed by in this judgment is a part of the law of the land.
- The prior approval granted by the Government of India, Ministry of Environment and Forest and the lease deed in favour of the Motel are quashed. The lease granted to the Motel by the said lease deed in respect of 27 bighas and 12 bighas of area, is cancelled and set aside. The Himachal Pradesh Government shall take over the area and restore it to its original-natural conditions.
- The Motel shall pay compensation by way of cost for the restitution of the environment and ecology of the area. The pollution caused by various

constructions made by the Motel in the riverbed and the banks of River Beas has to be removed and reversed.

- The Motel through its management shall show cause why pollution fine in addition be not imposed on the Motel.
- The Motel shall not encroach/cover/utilise any part of the river basin. The boundary wall shall separate the Motel building from the river basin. The river bank and the river basin shall be left open for the public use.
- The Motel shall not discharge untreated effluents into the river. We direct the Himachal Pradesh Pollution Control Board to inspect the pollution control devices/treatment plants set up by the Motel. If the effluent/waste discharged by the Motel is not conforming to the prescribed standards, action in accordance with law be taken against the Motel.
- The Himachal Pradesh Pollution Control Board shall not permit the discharge of untreated effluent into River Beas. The Board shall inspect all the hotels/institutions/factories in Kullu-Manali area and in the Board shall take action in accordance with law.

4. Significance of the Case

This was a landmark judgement as the Court invoked the concept of **public trust doctrine** in India, under which the Government is the trustee of all natural resources which are by nature meant for public use and enjoyment. The Court reviewed public trust cases from the United States; while noting that under English common law this doctrine extended only to traditional uses such as navigation, commerce and fishing, which now is being extended to all ecologically important lands, including freshwater, wetlands and riparian forests. The Court relied on these cases to rule that the Government committed patent breach of public trust by leasing this ecologically fragile land to Span Motels when it was purely for commercial use.

Source: http://www.elaw.org/node/2785 UNEP Compendium of Summaries of Judicial Decisions in Environment Related Cases.

III. Conservation of wildlife in India: a critical analysis

With a land mass of 329 million hectares and coast line of 7516 km, with oceans, lakes, rivers and mighty Himalayas and several other mountains ranges, the desert of Rajasthan, the plateaus, the wetlands and the islands of Andaman and Nicobar and Lakshadweep, India is home to an amazing variety of fauna and flora. There are about 75,000 species of animals, of which 340 species are mammals, 1200 birds, 420 reptiles, 140 amphibians, 2000 fishes, 50,000 insects, 4000 molluscs and several other species of vertebrates.

1. Need for Conservation

At the present estimate, 81 species of mammals, 38 species of birds, 18 species of amphibians and reptiles considered to be endangered in India. The Red list of threatened species, prepared by the International Union for Conservation of Nature (IUCN), has listed 132 species of plants and animals as Critically Endangered, the most threatened category, from India. Plants seemed to be the most threatened life form with 60 species being listed as Critically Endangered and 141 as Endangered. The threat level of as many as seven Indian bird species had increased in the last one

year, say experts. According to the latest figures, 15 species of Indian birds, including the great Indian bustard, Siberian crane and sociable lapwing are there in the list of Critically Endangered birds. In the lower risk categories, the agency included 14 bird species as Endangered and 51 as vulnerable ones.

2. Legal framework for conservation in India

Government of India has introduced various types of legislation in response to the growing destruction of wildlife and forests. These are:

1. The Wildlife (Protection) Act, 1972 (Last amended in 2006)

(a) Provides a powerful legal framework for prohibition of hunting, protection and management of wildlife habitats, establishment of protected areas, regulation and control of trade in parts and products derived from wildlife etc.

(b) Provides for several categories of Protected Areas/Reserves which are (i) National Parks (ii) Wildlife Sanctuaries (iii) Tiger Reserves (iv) Conservation Reserves (v) Community Reserves. National parks and Tiger Reserves are by law more strictly protected, allowing virtually no human activity except that which is in the interest of wildlife conservation. Grazing and private tenurial rights are disallowed in National Parks but can be allowed in sanctuaries at the discretion of the Chief Wildlife Warden. No wild mammal, bird, amphibian, reptile, fish, crustacean, insects, or coelenterates listed in four Schedules of the Act can be hunted either within or outside protected areas. On conviction, the penalty for hunting is imprisonment for a period ranging from a minimum of three to a maximum of seven years with fines not less than 10,000 rupees. Community reserves and conservation reserves are two new categories of protected areas that have been included under the Act. These two categories provide a greater role for local communities, stakeholders and civil society as well as the opportunity to protect many areas of conservation value that cannot be designated under strict categories such as wildlife sanctuaries or national parks.

(c) Prohibits the destruction or diversion of wildlife and its habitat by any method unless it is for improvement or better management and this is decided by the state government in consultation with the National and State Boards for Wildlife.

(d) Contains elaborate procedures for dealing with legal rights in proposed protected areas and acquisition of any land or interest under this law is deemed as an acquisition for a public purpose. However, with the enactment of The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, compliance of various provisions relating to tenurial and community rights must also be ensured.

(e) Other important aspects of the Act include procedures for the appointment of state wildlife authorities and wildlife boards, the regulation of trade in wildlife products and the prevention, detection and punishment of violations of the Act.

(f) The 2006 amendment introduced a new chapter (IV B) for establishment of the National Tiger Conservation Authority and notification of Tiger Reserves.

(g) The Wildlife Crime Control Bureau (WCCB) was constituted vide the 2006

amendment to monitor and control the illegal trade in wildlife products. The act provides for investigation and prosecution of offences in a court of law by authorized officers of the forest department and police officers.

2. The Indian Forest Act (1927) and Forest Acts of State Governments

The main objective of the Indian Forest Act (1927) was to secure exclusive state control over forests to meet the demand for timber. Most of these untitled lands had traditionally belonged to the forest dwelling communities. The Act defined state ownership, regulated its use, and appropriated the power to substitute or extinguish customary rights. The Act facilitates three categories of forests, namely reserved forests, Village forests and protected forests. Reserved forests are the most protected within these categories. No rights can be acquired in reserved forests except by succession or under a grant or contract with the government. Felling trees, grazing cattle, removing forest products, quarrying, fishing, and hunting are punishable with a fine or imprisonment. Although the Indian Forest Act is a federal act, many states have enacted similar forest acts but with some modifications.

3. The Forest Conservation Act (1980)

In order to check rapid deforestation due to forestlands being released by state governments for agriculture, industry and other development projects (allowed under the Indian Forest Act) the federal government enacted the Forest Conservation Act in 1980 with an amendment in 1988. The Act made the prior approval of the federal government necessary for de-reservation of reserved forests, logging and for use of forestland for non- forest purposes. This powerful legislation has, to a large extent, curtailed the indiscriminate logging and release of forestland for non-forestry purposes by state governments.

4. The Environment (Protection) Act (1986)

The Environment Protection Act is an important legislation that provides for coordination of activities of the various regulatory agencies, creation of authorities with adequate powers for environmental protection, regulation of the discharge of environmental pollutants, handling of hazardous substances, etc. The Act provided an opportunity to extend legal protection to non-forest habitats ('Ecologically Sensitive Areas') such as grasslands, wetlands and coastal zones.

5. The Biological Diversity Act (2002)
India is a party to the United Nations Convention on Biological Diversity. The provisions of the Biological Diversity Act are in addition to and not in derogation of the provisions in any other law relating to forests or wildlife.

6. National Wildlife Action Plan (2002-2016) replaces the earlier Plan adopted in 1983 and was introduced in response to the need for a change in priorities given the increased commercial use of natural resources, continued growth of human and livestock populations, and changes in consumption patterns.

(a) The Plan most closely represents an actual policy on protection of wildlife. It focuses on strengthening and enhancing the protected area network, on the conservation of endangered wildlife and their habitats, on controlling trade in wildlife products and on research, education, and training.

(b) The Plan endorses two new protected area categories: "conservation reserves," referring to corridors connecting protected areas, and "community reserves", which will allow greater participation of local communities in protected area management through traditional or cultural conservation practices. These new categories of protected areas are likely to bring in corridor areas under protection. The Plan contains various recommendations to address the needs of local communities living outside protected areas and outlines the need for voluntary relocation and rehabilitation of villages within protected areas. The Plan recognizes the need to reduce human-wildlife conflict and emphasizes the establishment of effective compensation mechanisms. It includes the restoration of degraded habitats outside protected areas as a key objective.

7. National Forest Policy (1998) is primarily concerned with the sustainable use and conservation of forests, and further strengthens the Forest Conservation Act (1980). It marked a significant departure from earlier forest policies, which gave primacy to meeting government interests and industrial requirements for forest products at the expense of local subsistence requirements. The NFP prioritizes the maintenance of ecological balance through the conservation of biological diversity, soil and water management, increase of tree cover, efficient use of forest produce, substitution of wood, and ensuring peoples' involvement in achieving these objectives. It also includes meeting the natural resource requirements of rural communities as a major objective. The Policy legitimizes the customary rights and concessions of communities living in and around forests, stating that the domestic requirements of the rural poor should take precedence over industrial and commercial demands for forest products.

As can be seen from this article, India has a strong set of laws, Acts and policies for the protection of forests and wildlife.

3. Assessment of the acts for conservation of wildlife

Poor governance, subjective and improper application of the law, and unilateral decision-making, mars the functioning of the National Board for Wildlife (NBWL), the apex body on conservation.

Some of the issues which plague poor governance of these laws are:

- The Wild Life Protection Act (WLPA) mandates that destruction or diversion of wildlife habitat, construction of tourist lodges, alteration of Protected Area boundaries, and their de-notification cannot be done without the approval or recommendation of the NBWL. However, since it is impractical for all 47 members of the NBWL to meet frequently to assess such proposals, the WLPA specifies that the NBWL may constitute a Standing Committee consisting of 10 members for the purpose. It has been observed that the Standing Committee has assumed all the powers of the NBWL and the stipulated "general superintendence, direction and control of the NBWL" over the Standing Committee is non-existent. The Standing Committee, chaired by the Minister for Environment and Forests, operates completely independently, without even getting its decisions ratified by the NBWL.
- While the full NBWL meets under the Chairmanship of the Prime Minister at most once a year, for a two hour ritual,

the Standing Committee meets every three months to decide the fate of 30 – 60 proposals, mostly relating to diversion of forestland from PAs. The proposals include dams, roads, highways, mines, power lines and other infrastructure projects that are harmful to PAs and their wildlife. Standing Committee meetings typically last a mere three hours, which is a grossly inadequate timeframe in which to make informed decisions on a large number of projects with complex dimensions. Often, the Agenda is sent to non-official members only two or three days before a meeting, instead of two weeks in advance as stipulated by the rules, giving them little time to study the proposals.

- Sections 29 (for Sanctuaries) and 35(6) (for National Parks) of the WLPA unambiguously prohibit the grant of permission to any activity that destroys wildlife and damages or diverts habitat, unless it is for the improvement or better management of wildlife therein. Therefore, every decision to clear a proposal must be backed by clear reasoning, in writing, as to how the project, or the decision to approve it, ensures improvement and better management of wildlife. However, a careful scrutiny of the Minutes of Standing Committee meetings during the last four years shows that over 80% of the proposals that have been approved cannot even remotely be categorized as projects that are for the improvement or better management of wildlife or its habitat, and that site inspections or impact assessments have been carried out in less than 20% of cases. Further, even where such inspections or assessments are conducted, and indicate potential damage to wildlife or habitat, most projects are cleared with a standard set of conditions, which is rarely enforced.

- Penalty for poaching is right now very low as such, it is not a deterrent. Most wildlife products fetch very attractive prices abroad, so there is incentive to commit poaching as the risks are low and returns are high.

- No separate courts have been set up to try wildlife related crimes, as such, these cases get lost in the courts, taking years to reach a conclusion.

- The national and international illegal trade in wildlife has grown to mammoth proportions and is seriously threatening the existence of many species of plants and animals

- Involvement of local communities is protection and conservation of wildlife is very low currently. Efforts are being made to evolve ecotourism projects which will be run by locals with a share of profits devolving to them.

- Contribution of wildlife conservation to quality of life poorly understood and not acknowledged. Inability of present accounting system to adequately reflect contribution of wildlife conservation to national growth and quality of life

- There is poor infrastructure support for field level management, poorly equipped and lowly motivated field cadre, with limited opportunities to improve knowledge and skills

- Management focus is only on a few charismatic species like tigers, river dolphins etc. Various ecosystems like marine, mountains, deserts not adequately represented in the PA network; as such no conservation efforts focused on species which inhabit such ecosystems

- Increasing loss and fragmentation of wildlife habitats and ever increasing biotic pressure

Sources: *article by Adhideb Bhattacharya & Ankit Shrivastav on http://www.mightylaws.in/532/conservation-wildlife-india-relevant-laws; article by Shekar Dattatri and Praveen Bhargav on http://www.conservationindia.org/; Report of the working group on wildlife, ecotourism and Animal Welfare, Ministry Of Environment and Forests, submitted to Planning Commission in October 2011; State of Environment Report in India 2011.*

IV. Snapshots: Environment news

Marshland lost to govt apathy: Dumping, Encroachment Have Reduced Jahangirpuri Marshes By 400 Acres, New Delhi

Environmentalists say that the Jahangirpuri marshes, located in the north, are one of Delhi's three critical eco-systems, along with the Yamuna and the Ridge. However, while the latter have at least been protected by law, government agencies are not even sure of marshland's area. Large scale dumping, massive encroachments and no help from land owning agencies have reduced the size of the marshes from around 700 acres in the 1960-70s to nearly 300 acres at present.

Ganga basin becoming India's cancer centre

Increasing amounts of industrial waste are being pumped into the Ganga river, transforming its waters into killer pollutants. A survey conducted by the National Cancer Registry Programme under the Indian Council of Medical Research has found that the heavy metals and mercury in the water have resulted in the highest gall bladder cancer cases in the world of people living on the flood plains of the river.

Uttarakhand tops in environmental standards

Uttarakhand tops the list of best-performing States and Union territories in terms of environmental well-being. Uttarakhand is followed by Himachal Pradesh, Chandigarh, Sikkim, and Andhra Pradesh on the Planning Commission's Environmental Performance Index (EPI) list. Environmental well-being is one of the considerations for devolution of funds to the States under the Gadgil formula.

Balotara water not even fit for bathing, says HC

Rajasthan: A study has proved that in Balotara and Pali the water has so much fluoride that children there are now being born with twisted bones. In Balotara the water is not even fit for bathing," Justice Bhandari said. A monitoring committee of the high court recently reported that the state government was discharging sewer water without passing it through water treatment plants. Polluted water was still being discharged into the Kanota Dam. Untreated industrial water was also being discharged into a couple of lakes and dams.

Tiger habitats in Western Ghats landscape shrinking

Tiger habitats in the mountain chain of the Western Ghats are shrinking,

although forests in the eco-sensitive zone have registered a remarkable rise of wild cats, says an Environment Ministry document. Experts have cited the shrinking habitat in the Western Ghats as a major reason behind the man-animal conflict. According to the document, tiger-occupied forests in Western Ghats landscape, which was recently inscribed to the World Heritage List by UNESCO, was 29,607 sq km. But it has registered a decline of about 11.5 % compared with 2006.

Unplanned urbanisation on hills hurting ecology

The rapid urbanisation of Guwahati and the consequent boom in population and construction activities since the last couple of decades has pushed the city's fragile eco-system comprising its forested hills to the brink. Guwahati has 18 hills right within its municipal area. Apart from adding to the natural beauty of the city landscape, these hills are also crucial for the maintenance of a sound environment.

Only 1% forest land demarcated, rest prone to encroachment in Jammu

In what could be termed as insensitivity towards the green gold wealth, only one % of forest land has been demarcated in Jammu district by the Forest Department thereby leaving 99 % area prone to encroachment by the land grabbers. Moreover, 123 saw mills are operating within the prohibited area in contravention of the ban imposed by the Supreme Court and incidents of illicit felling and consequently the outstanding damages cases have been increasing year after year due to the slackness of the Forest Department officers.

Haryana bypasses MoEF for golf course

The Haryana government has chosen to bypass the Ministry of Environment and Forests (MoEF) in order to have prime Aravalli forest land transferred to build a golf course. Instead, they have submitted an application directly in the Supreme Court where they have shown 160 acres of Aravalli forest land to be "barren land". This, they believe can be converted to build a golf course, waterways and an amusement park. The Aravalli forest stretch that the developers are eyeing is part of a 350 acre Aravalli forest stretch.

Karnataka decides to close private resorts near sanctuaries

The Karnataka Government has decided to order closure of all private commercial resorts located in the vicinity of wildlife sanctuaries in the state to curb harmful effects on forests and wildlife. It was also decided to shut all the forest department's guest houses located inside forests in the state, the Minister for Forests stated. New guest houses would be built outside the forests for carrying out administrative and other works of the department, the Minister said.

Biodiversity boon for Arunachal tribes

Arunachal Pradesh is helping tribal residents use 'globally significant medicinal plants' for livelihood security through community

management of forests. The State has a staggering 500 medicinal plant species, and more than half the forests come under the control of the indigenous people. Tribal practitioners have stated that had set up seven Medicinal Plant Conservation Areas (MPCAs).

Toxic smog shrouds New Delhi

New Delhi was, in the end of October 2012, enveloped in a cloud of toxic smog thought to be the worst occurrence of air pollution in a city long accustomed to dirty air, with the density of dust particles in some places reaching 30 times the guidelines set by the World Health Organisation. The grey-white 'haze' that covered the city since October 28, say experts, is actually smog that is linked to the rapid rise in particulate matter and nitrogen dioxide levels.

Silent Valley buffer zone to be made wildlife sanctuary

The State government is planning to declare the 148 sq. km. buffer zone of Silent Valley National Park as the new Bhavani-Kadalundi Wildlife Sanctuary "for ensuring long-term protection of the entire bio-diversity of the area" that include the unique rain forests of Silent Valley. The draft notification on constituting a new wildlife sanctuary in the State sent by the Forest Department underlined the ecological, faunal, floral, geomorphologic, natural and zoological significance of the area.

Riverine ecology of India is fast eroding

With increasing discharges into the sea, India's rivers are dying. Outflows into the rivers have led to untold damage to fragile ecology and biodiversity of the Indian river systems. Environment experts attending the 11th Conference of Parties (CoP-11) to the United Nations Convention on Biological Diversity warn that India will lose its mega biodiversity tag if the river systems are not restored immediately.

Illegal construction on Wetland

KOLKATA: Even after the East Kolkata Wetland Management Authority (EKWMA) had served stop work notice to a proposed vocational training centre for an illegal construction at the protected area in Sonarpur, the latter asked for a no-objection certificate allegedly with political backing. The builder, who had sought for the NOC, had already constructed the building at Chak Kolar Khal Mouja in Sonarpur before the wetland authorities could serve stop work notice. EKWMA had served stop work notice to the foundation a year ago.

26 states draw up national action plan for conservation of bears

Action plans drawn up by 26 states for conservation and welfare of bears was used to draw up a common national plan which will be released during the 21st international conference on bear research and management in Delhi in November. The animals are under threat from trade of body parts, habitat degradation, conflicts with people, and poaching for meat.

Firms may be penalized if solar targets are not met

Top 50 corporate and industrial majors and most of the electricity generation and distribution companies in the country belonging to various state governments may face punitive action for not meeting the solar power generation targets mandated under the renewable purchase obligations (RPO).

Vegetables grown near thermal plant toxic

A new study by School of Environmental Sciences, Jawaharlal Nehru University (JNU), has found vegetables grown near thermal power plants to be highly contaminated with heavy metals and polycyclic aromatic hydrocarbons (PAHs)— a group of potent atmospheric pollutants. The study links dietary intake of contaminated vegetables with the rising cases of cancer in the national capital.

Groundwater in Delhi toxic

Groundwater in India is becoming toxic, says data submitted in Parliament by the water resources ministry. The record submitted in answer to a question by Congress MP Shruti Chowdhry presents a countrywide map of where groundwater has become unfit for drinking and where contamination levels have breached government standards of safety.

ONGC well in K-G block leaking gas; environment damage feared

A deepwater well in a Krishna Godavari basin block operated by state-run Oil and Natural Gas Corp (ONGC) has been leaking gas for two months and there are now fears of environment damage due to the uncontrolled flow. The well G-1-9 in Bay of Bengal has been leaking gas since August-end and all efforts by ONGC to contain the flow have so far been futile.

Installing bio-toilets a teething problem for Railways

The Railways are facing technical hitches in installing environment-friendly bio-toilets in trains, forcing an extension of the deadline for implementation of the project. All new passenger coaches will have bio-toilets by 2016-17, but retrofitting of the existing coaches are expected to be completed by 2021-22. The Ministry of Drinking Water and Sanitation will fund 50 % of the retrofitting cost of two lakh units in the existing 50,000 coaches.

Climate change threatens coffee crops

Wild arabica coffee may be extinct in 70 years, making it harder for plantations to survive long-term, scientists warn. Rising temperatures due to climate change could mean wild arabica coffee is extinct in 70 years, posing a risk to the genetic sustainability of one of the world's basic commodities, scientists said on Wednesday.

Monsoon may fail more often due to climate change

The Indian monsoon is likely to fail more often in the next 200 years threatening food supplies, unless governments agree how to limit climate change, a study has shown. The monsoon rains could collapse about every fifth year between 2150 and 2200 with continued global warming, blamed mainly on human burning of fossil fuels, and related shifts in tropical air flows, it said.

Rising seas prompt Panama's islanders to move inland

Every rainy season, the Guna people living on the Panamanian white sand archipelago of San Blas brace themselves for waves gushing into their tiny mud-floor huts. Rising ocean levels caused by global warming and decades of coral reef destruction have combined with seasonal rains to submerge the Caribbean islands for days on end. Once rare, flooding is now so menacing that the Guna have agreed to abandon ancestral lands for an area within their semi-autonomous territory on the east coast of the mainland.

Source:http://www.indiaenvironmentportal. org.in/

V. State in Focus: Gujarat

Gujarat is the fastest growing State in terms of industrial development with predominance of chemical, petro-chemicals, drugs and pharmaceuticals – both bulk and formulation, distilleries, dyes & dye-intermediates, textile, pesticide and fertilizer industries, all of which have high potential of pollution and deleterious impact on environment. The story of "Golden Corridor" from Vapi to Ahmedabad and now stretching up to Mehsana is well known not only due to the concentration of industrial growth gravitating to the main North-South railway and road artery of the State, but also due to the pollution related problems manifest in this corridor based industrial growth. In all areas of environmental sustainability, be it air, water and land, golden corridor manifests complex factors of environment concern.

CPCB in a study of the level of pollution in 88 industrial clusters all over India found that the industrial clusters of Ankelshwar as the most polluted in India, followed by Vapi, Vatava in 27th place, Bhavnagar in 39th place, Junagarh in 41st place, Vadodara in 57th place, Rajkot in 59th place and Surat in 79th place.

Economic growth leads to rapid urbanization which in its wakes cause strain on infrastructure and throws up several problems connected with environment. Particularly, the complex problem of air quality in the cities is posing a major challenge in the State, some of which are as follows:

Air Quality

Rapid growth of urban, industrial, transportation and communication activities have resulted in deterioration of Air Quality particularly in major urban and industrial areas of Gujarat. CPCB has identified a list of cities with polluted where the

prescribed National Ambient Air Quality Standards (NAAQS) are being violated. These cities have been identified based on ambient air quality data obtained under National Air Quality Monitoring Programme (NAMP). These cities are Ahmedabad (high RSPM[1], SPM[2] due to industries, vehicles), Ankleshwar (high RSPM, SPM due to industries), Jamnagar (high RSPM, SPM due to industries, vehicles), Rajkot (high RSPM, SPM due to vehicles, natural dust), Surat (high RSPM, SPM due to industries, vehicles), Vadodara (high RSPM, SPM due to industries, vehicles) and Vapi (high RSPM, SPM due to industries)

Marine Environment

Gujarat has about 1600 kms. of coastline constituting one third of the Indian coast. The coast line is dotted with 42 ports and harbours and 5 major terminals. The effluents generated by various activities along the coast line in various stretches are a cause of concern. As Gujarat is number one state in fish production and highest salt production, its coastal waters are required to be protected in a sustainable way. Some of the areas where pollution levels are high are Kandla, Porbandar, Mundra, Vadinar, Okha, Pipav Diu, Daman, Veraval and Tapi basin.

Water pollution

The Biochemical Oxygen demand (BOD)[3], one of the most important indicators of pollution, was highest in all over India in Amlakhadi at Ankleshwar (714 mg/L). Other places where water pollution is very high in Gujarat are: Khari at Lali village, Ahmedabad (320 mg/L), Sabarmati at Ahmedabad (207 mg/L); Damanganga d/s Daman at Kachigaon (112 mg/L); Chandola Lake at Ahemdabad (36 mg/l). Due to high BOD, the dissolved oxygen in these stretches was observed most of the time either nil or very low. When DO becomes very low or nil, it means that only anaerobic (oxygen free) bacteria survive and all aquatic plants and animals in the river/lake are dead.

Faecal Coliform[4], another important indicator of pollution in India, is found to be high in Khari at Lali Village, Ahmedabad ($7.5x10^{5}$); Sabarmati at Ahmedabad ($1.1x10^{6}$ to $4.6x10^{5}$) and Damanganga at Silvasa ($1.2x10^{6}$).

Waste management

Gujarat has facilities to treat only about 60 % of municipal solid waste generated. Gujarat is the biggest generator of hazardous waste in the country, generating almost 30% of

[1] Respirable Suspended Particulate Matter
[2] Suspended Particulate Matter
[3] Biochemical oxygen demand or B.O.D is the amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific time period. Aording to designated best use criteria for Cladd B water (suitable for outdoor bathing), the Biochemical Oxygen Demand needs to be 3mg/l or less.
[4] Presence of fecal coliform bacteria in water is highly dangerous to human health. Ideally, there should be zero contamination of fecal coliform bacteria in water and the water with high level of fecal coliform is not fit for even bathing,

total hazardous waste produced in India. District Bharuch and district Ahmedabad in Gujarat is the top producer of hazardous waste in India. Though Gujarat produces almost 11 lakh tones of hazardous waste every year, it has treatment facility for only 4.5 lakh tonnes, for the balance 60% no waste treatment exists, posing threats to environment and public health. It also has 2 illegal hazardous waste dumpsites as reported by Central Pollution Control Board

Forests and wildlife

The recorded forest area of the state is 9.66 % of the total geographical area while the forest cover is 7.46 % of the geographical area. The state has 4 National Parks and 23 wildlife sanctuaries and 8.72% of the total geographical area of a state is under the protected area network. Gujarat contributes significantly to the richness of India's bio-diversity, supporting some of the rare and endangered wildlife. As per study made by Gujarat Ecology Commission (1996), Gujarat has 4320 species of plants out of 46286 found in India and about 2758 species of animal out of 77548 species found in India. It is also home to the endangered Asiatic lion, Wild-Ass etc.

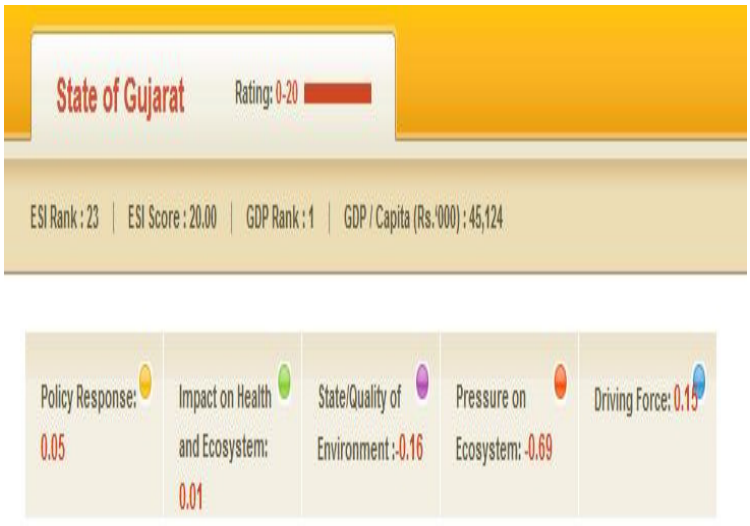
Environment Legislation in Gujarat

Some of the environment legislation relevant to Gujarat are:

- Forest (Conservation) Act, 1980, amended 1988
- The Water (Prevention and Control of Pollution) Act, 1974, amended 1988
- The Air (Prevention and Control of Pollution) Act 1981, amended 1987
- The Environment (Protection) Act, 1986, amended 1991
- S.O.16(E), [4/1/2002] - Gujarat State Coastal Zone Management Authority
- The Indian Wildlife (Protection) Act, 1972, amended 1993
- The Wild Life (Protection) Amendment Act, 2002

Environment Sustainability Index (ESI) for Gujarat

Environmental Sustainability Index (ESI) is a comparative analysis of environmental achievements, challenges and priorities among Indian states. It is designed to sensitize, inform and empower citizens and policy makers. It aggregates quantitative data on states' initial endowment and resource use trajectory, magnitude of pollution and its impact on human health & ecosystem vitality, policy & societal response to maintain and improve present environmental conditions into a composite index that provides the overall picture of state-level sustainability. Dimensions of sustainability both as historical conditions and present efforts are mapped through 40 indicators. Gujarat state falls in the least sustainable (bottom 20 percentile) state with a ranking of 23rd out of 28 states.



VI. Recent Environment audit report: Audit Report (Civil), Gujarat For the Year ended March 2011(Water Pollution in rivers, lakes and ground water in Gujarat)

The objectives of Performance Audit were to ascertain:

- Whether overall status and quality of water in rivers, lakes and ground water had been adequately assessed;
- Whether adequate policies and programmes had been formulated, legislations enacted and effective institutions put in place for prevention of pollution besides treatment and restoration of polluted water at source and whether schemes formulated for the purpose were implemented and monitored efficiently and effectively;
- Whether risks from polluted water to health of living organisms and its impact on environment were adequately assessed and those risks effectively disseminated to the impacted target group; and
- Whether Common Effluent Treatment Plants were functioning properly and whether effluents reaching the treatment plants and Final Effluent Treatment Plants conformed to the norms.

The findings of audit are as follows:

Clean, safe and adequate freshwater is vital for the survival of organisms, human beings and other species. Water pollution and contamination weakens or destroys natural ecosystems that support human health as well as biodiversity. Water pollution can lead to serious problems with disease and death of human beings, animals, plants and vegetation. While the government had prepared an inventory and quality assessment of river and ground water in the state, only an inventory of lakes had been prepared but their water quality assessments were not carried out. Assessment of contaminants present in river/lake/ground water and quantification of the impact of human activities contributing to pollution were also not carried out. The government has not identified major aquatic species, birds, plants and animals facing risk due to pollution of rivers and lakes and was totally unaware of the risks to human health being posed by polluted water sources. The quality of planning was poor due to the absence of such assessments. Further, the state had not laid out a pollution control policy.

The implementation of National River Conservation Plan in the state left much to be desired. Sampled pollution control programmes of Sabarmati River at Ahmedabad though seemingly working, did not succeed in bringing down pollution levels to the prescribed norms. Present

status of Sabarmati shows the presence of fecal-related disease causing pathogens as well as organic pollution at the outskirts of the city limit. No action was taken by the government to check the deterioration in quality of ground water. Gujarat Pollution Control Board failed to take effective steps to control unauthorized disposal of untreated waste by industries. Continuous monitoring of water quality through the creation of an adequate monitoring mechanism was also missing. Water Quality Review Committee responsible for monitoring the control of water pollution in the state was not working at the desired level. Its meeting were held infrequently and records of follow up action were not maintained.

http://saiindia.gov.in/english/home/Recent/Recent.html

VII. International Audit Report: China: Audit Investigation Findings of Energy Conservation and Emission Reduction of Enterprises in 20 Provinces , May 2011

In accordance with the provisions of the Audit Law of the People's Republic of China, the National Audit Office (CNAO) conducted audit investigations on the energy conservation and emission reduction situation from 2007 to 2009 of electric power, steel and cement industries in the 20 provinces, autonomous regions and municipalities (hereinafter referred to as the 20 provinces) of Hebei, Shanxi, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Jiangsu, Zhejiang, Anhui, Fujian, Shandong, Henan, Hubei, Hunan, Guangdong, Guangxi, Chongqing, Sichuan, Guizhou and Shaanxi.

The audit investigation findings are as follows:

1. Energy Conservation and Emission Reduction Achieved Good Results

- Audit investigation findings show that since 2007, the relevant localities and enterprises attached great importance to energy conservation and emission reduction work, to conscientious implementation of the arrangements and requirements of the Party Central and the State Council, to an increase of investment, to improving rules and regulations, to establishing and fully-fledging the accountability mechanisms, thus ensuring the smooth progress of energy conservation and emission reduction work. And good results were achieved.

- Central and local finance increased funding input to support the implementation of key energy conservation and emission reduction projects. From 2007 to 2009, the 20 provinces cumulatively invested 124.187 billion yuan of special funds for energy conservation and emission reduction. In this way, the funding input effectively supported the successful implementation of key energy conservation and emission reduction projects.
- The state's relevant departments and local governments took active measures to effectively promote energy conservation and emission reduction work. The National Development and Reform Commission, the Ministry of Finance and other departments successively worked out and adopted more than 30 systems and measures,

including target assessment, awards instead of subsidies, emission reduction verification, elimination of outdated production capacity, etc; in addition, they organized and conducted special inspections to ensure that energy conservation and emission reduction policies were in place and carried out. As of the end of 2009, 15 provinces have completed the planned task of shutting down small thermal power plants ahead of the "Eleventh Five-Year" plan, 16 provinces have completed the plan of eliminating outdated cement production capacity ahead of the "Eleventh Five-Year" plan, 8 provinces have completed the plan of eliminating outdated steel production capacity enterprises ahead of the "Eleventh Five-Year" plan.

- The enterprises strengthened energy-saving technological transformation, reduced energy consumption and emissions. From the year of 2007 to 2009, key enterprises in the 20 provinces that used financial incentive funds implemented 2,002 projects on energy conservation technological transformation, reduced energy consumption equivalent to 52.8515 million tons of standard coal; installed 2,843 sets of desulphurization facilities, and reduced 10.73 million tons of sulfur dioxide emission.

2. Audit Investigation Findings and Rectification Situation

The audit investigation findings show that the state's relevant departments and local governments attach great importance to energy conservation and emission reduction; so the measures taken were concrete and effective, the execution by relevant enterprises was forceful, the overall effect of energy conservation and emission reduction was remarkable; there were no major cases occurring in violations of law and discipline in the management and use of state finance invested funds. However, the audit investigation also found that some enterprises were not up to standard in the management and use of special funds for energy conservation and emission reduction; some enterprises in violation of regulations built new high energy consumption projects; in some enterprises the new construction projects were not up to national standards for pollution prevention; some enterprises were not sufficiently thorough in eliminating outdated production capacity; and in some enterprises there were irregularities in land use and other issues.

After the audit investigation noted these problems, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Industry and Information Technology, the National Bureau of Energy and other departments have carried out investigations, urged the various localities to take corrective actions; and they have committed themselves in the improvement of relevant policies and systems so as to give impetus to the progress of energy conservation and emission reduction work. In accordance with the law, 20 relevant persons have been held accountable. Specifically:

(i) 11 enterprises diverted or misappropriated 57 million yuan of special funds for business and other expenses; 14 enterprises extracted 86

million yuan of special funds by fabricating false declaration information, multiple or repeated declarations and other means; 15 enterprises over-received 62 million yuan of energy conservation and emission reduction special funds due to laxity in verification by the relevant departments.

After the audit investigation noted the above issues, as of the end of March 2011, the relevant localities pressed the 11 enterprises to return in full to the original channels the 57 billion yuan diverted and misappropriated; the relevant unites retrieved 144 million yuan of funds extracted or received in excess by 26 enterprises; 10 persons responsible were punished; enterprises and individuals who violated regulations were fined by 6.62 million yuan. In addition, 4.3481 million yuan of funds received in excess by 3 enterprises is in the process of being recovered.

(ii) After the audit investigation noted the above problems, the National Development and Reform Commission carried out a special verification work on irregular iron and steel projects. Relevant localities and enterprises also actively conducted rectification of other issues regarding irregular expansion of production capacity; 10 persons responsible have been dealt with. As of the end of March 2011, 39 enterprises have improved or are submitting approval procedures for thermal power projects, 72 enterprises have taken measures such as eliminating equivalent capacity, improving the procedures for approval, etc., 40 enterprises have stopped construction, suspended production to undergo consolidation or are working hard to improve approval procedures.

(iii) As of the end of 2009, in 8 enterprises there existed issues of over-reporting of closed-down and stopped installed capacity, lack of thoroughness in disposal of eliminated outdated production capacity equipment, etc., as to 121 enterprises, there existed issues of over-reporting of eliminated outdated production capacity, etc., involving; as to 54 enterprises, there existed issues of failure to eliminate outdated production capacity that should have been eliminated, etc.

After the audit investigation noted the above problems, as of the end of March 2011, 8 enterprises have closed down or dismantled small thermal power units, 105 enterprises have eliminated outdated iron production capacity, 39 enterprises have eliminated or included in the plan for elimination of outdated cement production capacity.