

Emergency and Humanitarian Action

Office of WHO OFFICE OF THE WHO REPRESENTATIVE TO INDIA

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PART 1 - COUNTRY PROFILE (INDIA)

Context

The geographical location of the country and its religious, ethnic, caste & language diversities make India as one of the most emergency/disaster prone countries in the South East Asia. Natural disasters (flood, cyclone, drought, earthquake), complex emergencies (ethnic/ caste / religious violence, bomb blasts etc) are one of the commonest emergencies/disaster situations, seen in the country. Large number of industries, vast rail/ road/ air networks further enhances the risk of potential industrial disasters and accidents. It is uncommon for the country to experience one or other emergency/disaster situation round the year.

Administrative Division and structures of the health system (Data Source: 1991 Census of India):

	
No. of States	25
No. of Union Territories	7
No. of Districts	466
No. of Tahsils / Talukas	3,987
No. of CD Blocks	5,886
No. of Statutory Towns	2,987
No. of Census Towns	1,702
No. of Inhabited Villages	587,226
No. of Uninhabited Villages	47,095

Economy – overview (source –CIA):

The economy has posted an excellent average growth rate of 6% since 1990, reducing poverty by about percentage points. India has large numbers of well-educated people skilled in the English language; India is a major exporter of software services and software workers. The poor monsoon of mid-2002 has reduced agricultural output substantially. **GDP:** purchasing power parity - \$2.66 trillion (2002 estimates), **GDP real growth rate:** 4.3% (2002 estimates), **GDP - per capita:** purchasing power parity - \$2,540 (2002 estimates).

Social trends(source – WHO/SEARO):

From the 1991 population census, the literacy rate for males is 64.13% and for females is 39.29%. The changing economic situation created by urbanization, industrialization and new economic liberalization transformed the Indian social structure and values from a traditionally agrarian economy to a modern industrial order.

Lifestyle (source – WHO/SEARO):

The proportion of males 15 years who were regular smokers in the 1980s has been estimated at 32-7% (rural) and 46-63% (urban), and females 20-50% (rural) and 2-16% (urban). Currently there is an increasing trend in smoking among youth. Other significant changes in lifestyles relate to lack of physical activity among the affluent, increased use of fast foods, substance abuse, and violence, particularly against young women and children. The government has taken action to promote healthy lifestyles through sports, health education, setting up of no smoking zones, legislation banning smoking in public places, and establishing drug detoxification centres. A major constraint is the government revenue derived from tobacco, sponsorship of activities, especially sports events by tobacco companies, and high press advertising.

Demographic trends(source – WHO/SEARO):

The crude birth rate (CBR) declined from 29.5 in 1991 to 28.3 in 1995, while the crude death rate (CDR) declined from 9.8 to 9.0 per 1000 population over the same period. The total fertility rate (TFR) marginally decreased from 3.6 in 1991 to 3.5 in 1995. The annual population growth rate was reported as 1.97% in 1991 and 1.93% in 1995. The population, however, continues to grow as the decline in the birth rate is not as rapid as the decline in the death rate.

Life expectancy(source – WHO/SEARO):

For the period 1996-2001, the life expectancy at birth is estimated to be 62.4 years for males and 63.4 years for females.

Logistics (Source – CIA):

Railways:	total: 63,693 km (13,771 km electrified) broad gauge: 45,103 km 1.676-m gauge narrow gauge: 15,178 km 1.000-m gauge; 3,105 km 0.762-m gauge; 307 km 0.610-m gauge (2001)
Highways:	total: 3,319,644 km paved: 1,517,077 km unpaved: 1,802,567 km (1996)
Waterways:	16,180 km note: 3,631 km navigable by large vessels
Ports and harbours:	Chennai (Madras), Cochin, Jawaharlal Nehru, Kandla, Kolkata (Calcutta), Mumbai (Bombay), Vishakhapatnam
Airports:	335 (2001)
Airports - with paved runways:	total: 234 over 3,047 m: 14 2,438 to 3,047 m: 48 914 to 1,523 m: 75 under 914 m: 17 (2001) 1,524 to 2,437 m: 80

Airports - with total: 101
unpaved 2,438 to 3,047 m: 1
runways: 1,524 to 2,437 m: 7
under 914 m: 52 (2001)
914 to 1,523 m: 41

Heliports: 18 (2001)

Communication(source – CIA):

Telephones - main lines in use	27.7 million (October 2000)
Telephones - mobile cellular	2.93 million (November 2000)
Telephone system	<p>General assessment: mediocre service; local and long distance service provided throughout all regions of the country, with services primarily concentrated in the urban areas; major objective is to continue to expand and modernize long-distance network to keep pace with rapidly growing number of local subscriber lines; steady improvement is taking place with the recent admission of private and private-public investors, but, with telephone density at about two for each 100 persons and a waiting list of over 2 million, demand for main line telephone service will not be satisfied for a very long time domestic: local service is provided by microwave radio relay and coaxial cable, with open wire and obsolete electromechanical and manual switchboard systems still in use in rural areas; starting in the 1980s, a substantial amount of digital switch gear has been introduced for local and long-distance service; long-distance traffic is carried mostly by coaxial cable and low-capacity microwave radio relay; since 1985 significant trunk capacity has been added in the form of fiber-optic cable and a domestic satellite system with 254 earth stations; mobile cellular service is provided in four metropolitan cities</p> <p>international: satellite earth stations - 8 Intelsat (Indian Ocean) and 1 Inmarsat (Indian Ocean region); nine gateway exchanges operating from Mumbai (Bombay), New Delhi, Kolkata (Calcutta), Chennai (Madras), Jalandhar, Kanpur, Gandhinagar, Hyderabad, and Ernakulam; 4 submarine cables - LOCOM linking Chennai (Madras) to Penang; Indo-UAE-Gulf cable linking Mumbai (Bombay) to Al Fujayrah, UAE; India-SEA-ME-WE-3, SEA-ME-WE-2 with landing sites at Cochin and Mumbai (Bombay); Fiber-Optic Link Around the Globe (FLAG) with landing site at Mumbai (Bombay) (2000)</p>
Radio broadcast stations	AM 153, FM 91, shortwave 68 (1998)

Radios	116 million (1997)
Television broadcast stations	562 (of which 82 stations have 1 kW or greater power and 480 stations have less than 1 kW of power) (1997)
Televisions	63 million (1997)
Internet country code	.in
Internet Service Providers (ISPs)	43 (2000)
Internet users	5 million (2001)

Security (UNDP):

Except for the State of Jammu & Kashmir where UN security phase two is in effect, the remainder of country is in NO PHASE. Permits are required from Ministry of External Affairs (MEA) to visit some of the country categorized as Protected/Restricted. Applications should be sent at least four weeks in advance of travel date to the Ministry of External Affairs (Bhutan Section, Northern Division, South Block, New Delhi) on a form obtainable from MEA. Details of Protected/Restricted areas can be obtained from the Field Security Coordination Officer, India. Mr. David Pakes, tel: 91-11-4628877 ext 271 fax: 91-11-4627612, c 91-9810603142 email: david.pakes@undp.org. Ms. Brenda McSweeney, the UN Resic Coordinator/UNDP Resident Representative is the Designated Official, tel: 91-11-4628877, fax: 91-4627612/8330, email: brenda.mcsweeney@undp.org. Please email requests for security clearance to FS and/or travel details to same agency office in India or FSCO if no same agency in India

Food supply and nutritional status(source – WHO/SEARO):

Despite food grains sufficient, its distribution specially amongst vulnerable population has been challenging task. Resultantly, the proportion of newborns weighing less than 2500 grams at birth reported as 30% in 1993. The proportion of children under five years whose weight-for-age was less than minus 2 SD below the median was 53.4% (1992-93). It is estimated that 200 million people are exposed the risk of iodine deficiency disorders (IDDs) and that 63 million suffer from goitre. Surveys conducted in 275 districts have revealed that 235 districts are endemic for IDDs. In 1991, 87.5% of pregnant women were found to be anaemic (haemoglobin < 11g/dl). The National Institute of Nutrition in Hyderabad reported that 56% of children under five years of age had iron deficiency anaemia. The contribution of vitamin A deficiency to blindness was estimated to be 2% in 1975 and 0.04% in 1990.

A national IDD control programme was launched in 1992 which covers all states and union territories. The strategy is the use of iodated salt and all aspects of programme implementation are being addressed.

Anaemia contributed to 20% of maternal deaths in 1991. An intervention programme that commenced in 1992 prioritized pregnant women for iron and folic acid administration. During 1994/95, 85.8% of pregnant women were covered with the recommended daily dose of iron folate tablets.

The most susceptible group for vitamin A deficiency blindness are preschool children. The child survival programme seeks to administer five doses of vitamin A to all children under three years. During 1994/95, 72.6% of infants and 54.8% of 1-2 year old children were administered vitamin A.

Other actions include the Integrated Child Development Service (ICDS) programme which provides a package of services to 54 million beneficiaries comprising preschool children, pregnant women, lactating mothers, and the mid-day meal programme for primary school children. The following goals have been set to be achieved by the year 2000: reduction by 50% of moderate and severe protein-energy malnutrition (PEM) in preschool children, reduction of low birth weight to less than 10%, elimination of blindness due to vitamin A, reduction of iron deficiency anaemia among pregnant women to 25%, and reduction of IDDs to less than 10% in endemic districts.

Epidemiological Profile(source – WHO/SEARO)::

Mortality

The infant mortality rate (IMR) was reported to be 74 per 1000 live births in 1995 and the mater mortality ratio (MMR) for 1992-93 was estimated at 420 per 100,000 live births. Estimates for 1996 of number of deaths per year in children under five years from diarrhoeal diseases was 840,000, from ac respiratory infections 600,000 and from measles 330,000. Deaths from malaria were reported to be 14 (1995), cardiovascular diseases 2,386,000 (1990), traffic accidents 45,670 (1993), and work accidents : (1993). Between 1986 and 1993 the crude death rate (CDR) declined from 11.1 to 9.2 per 1000 populat (urban 9.3 and rural 5.8). Between 1980 and 1995 the IMR declined from 114 to 74, the main causes death being prematurity, ARI and diarrhoea. The number of reported accidental deaths in 1993 was 11,1 The main constraints are low literacy and income levels, sociocultural beliefs and practices, and subopti utilization of health facilities.

Morbidity(source – WHO/SEARO):

The number of reported cases of the following diseases are: leprosy 400,000 (1995), malaria 2,200; (1994), measles 26,986 (1991), neonatal tetanus 1896 (1995), polio 3406 (1995), and tubercul 1,249,000 (1994-95). The vaccine-preventable diseases (referred to in Section 6) have decli significantly since implementation of the EPI. In India about 14 million people are estimated to be suffer from active tuberculosis and about 0.5 million die of the disease each year. Currently, short t chemotherapy using DOTS has been introduced and accessibility to tuberculosis treatment cen improved. The prevalence of leprosy has declined from about 39 per 10,000 population in 1985 to abou per 10,000 in 1995. The spectacular reduction in this disease has been due to the new regimen of m drug therapy. The number of new cases detected annually has, however, remained more or less the same about 0.5 million.

Disability (source – WHO/SEARO):

Disability prevalence rates per 100,000 population estimated in 1994 are as follows: physical disabi 3574, visual disability 827, hearing 806, speech 510, and locomotors disability 2041. The incidence r per 100,000 population of these disabilities are: physical 173, visual 45, hearing 27, speech 10 . locomotors disability 105 (national sample survey).

HEALTH SERVICES:

Health policies and strategies(source – WHO/SEARO):

The health sector in India is characterized by:

- a government sector that provides publicly financed and managed curative and preventive he services from primary to tertiary level, throughout the country and free of cost to the consu (these account for about 22% of the overall health spending and 1.3% of the GDP), and
- a fee-levying private sector that plays a dominant role in the provision of individual curative c through ambulatory services and accounts for about 78% of the overall health expenditure . 4.7% of the GDP. Nationwide health care utilization rates show that private health services directed mainly at providing primary health care and financed from private resources, which co place a disproportionate burden on the poor.

The convergence of services to provide a holistic approach to population control has also been promoted March 1995 a separate Department of Indian System of Medicine and Homeopathy (ISM & H) was crea within the Ministry of Health and Family Welfare.

Some of the specific health services issues are mentioned below;

Intersectoral cooperation(source – WHO/SEARO):

In order to meet current needs and emerging challenges, a number of working groups were constitutec 1996 to comprehensively review the existing health situation in its totality. The following areas included: communicable diseases, health systems and biomedical research development, ISM & H, cl development, environmental health, health education and IEC, women's development, and requirements supportive and diagnostic services in primary, secondary and tertiary care.

Consultations have also been held with NGOs. Two other committees have been constituted, namely expert committee to comprehensively review the public health system in the country and the National Mission on Environmental Health and Sanitation. The recommendations of these consultations have been discussed by the concerned ministries and were to be submitted as proposals for the 9th FYP.

The active promotion of the panchayati raj (local administration) system from the village to the district measure directed towards ensuring intersectoral collaboration. Specific health areas that have effectively made use of intersectoral collaboration include malaria control, AIDS control programme, blindness control, nutrition, and water and sanitation to name a few.

Organization of the health system(source – WHO/SEARO):

The focus of the 8th plan has been to improve access to health care for the underserved and underprivileged segments of society, through consolidation and operationalization of the health infrastructure at all levels with emphasis on primary health care. In view of the high maternal mortality, upgrading of existing maternal health facilities and establishing first referral units (FRUs) have been prioritized. Many states have initiated major projects to upgrade their health services with assistance from funding agencies. Andhra Pradesh is implementing a Health Systems Project with World Bank assistance, and the states of Karnataka, West Bengal and Punjab are to follow. In support of Safe Motherhood, priority central assistance has been provided to establish FRUs in all 213 districts in six states where the maternal mortality is two to three times more than the national average. States in India have only recently begun to address issues relating to the organization of their health systems. Their capacity to bring about key policy reforms is still lacking. A substantial proportion of specialist posts in CHCs are vacant, and thus affects the functioning of first referral units. Other constraints relate to shortage of paramedical staff, support staff and inadequate involvement of NGOs.

Managerial process(source – WHO/SEARO):

The process has been initiated for decentralization of authority to the various levels to enable decision making at the right time. Besides this, the panchayati raj bodies are also being revitalized. Training facilities for health management are being augmented with the NIFHW playing a pivotal role.

Health information system(source – WHO/SEARO):

In pursuance of the national health policy for the establishment of an efficient and effective managerial information system, a computer-compatible health management information system (HMIS version 2) has been designed in collaboration with participating states, the national information centre (NIC) and WHO. The system is being implemented in phases.

Community action(source – WHO/SEARO):

The concept of community participation is contained in national health policy. The broad areas of community participation at grass roots level are seen in the village health services scheme, the Anganwadi scheme of ICDS, and the formation of village level committees. Community action has also been successfully used in disease control programmes such as malaria and in areas such as the provision and maintenance of drinking water schemes and sanitation. The main constraint to community action is the low priority given to health by the community in contrast to schemes that provide direct financial benefit.

Immunization(source – WHO/SEARO):

The proportion of infants reaching their first birthday who were fully immunized according to national immunization policies in 1992-93 was 27.5% (urban 41.5% and rural 23.4%). By individual vaccines coverage was as follows: DPT3 46.9%, OPV3 48.3%, measles vaccine 32.7%, BCG 58.7%, and pregnant women who received two doses of TT 53.8%.

HIV/AIDS(source – NACO/GOI):

The first evidence of HIV infections in India was documented at the Madras Medical College, Chennai in 1986. India is the most densely populated country in Asia and the second most populous country in the world, with 960 million people. India faces enormous public health problems including a high prevalence of diarrhoeal disease, tuberculosis, malaria, hepatitis and sexually transmitted diseases.

According to the [National AIDS Control Organisation](#) (NACO) 22.73 per 1000 persons in India are HIV positive (March 31, 1998: screened 3298238 -+ve 74960). Projections using the statistics of NACO indicate an infection rate of 25 per 1000 by the turn of the century. In India as on March 31, 1998, 5204 persons have been diagnosed as having AIDS of which 21.06% are women. Probable source of infection in India

- 74.73% through sex.
- 7.30% through injecting drug users.
- 7.05% through blood transfusion.
- 10.92% others.

Most information on the HIV epidemic is derived from limited studies of groups such as sex workers, truck drivers, and injecting drug users, who are regarded as most vulnerable to HIV. The studies of Bombay female workers, who number at least a few hundred thousands, estimate that over 50% were infected with HIV by 1994. As the first to bear the brunt of the epidemic, such groups were often mistakenly viewed as reservoirs of infection, and stigmatised as core transmitters and were the only groups targeted for intervention.

The virus has spread with great rapidity along India's western and eastern coasts, and inward to reach parts of the country. The epidemic varies widely from one region to the next, reflecting the country's great diversity.

Reports from the National AIDS Control Organisation, New Delhi confirm the rapid growth of the HIV infection, initially among women in prostitution and their male clients, STD Clinic patients, Commercial Blood donors and subsequently among other population groups that include voluntary blood donors and antenatal women.

Recent testing of pregnant women in Mumbai shows infection rates around 2.4% in 1996. In Pondicherry the rate among pregnant women is around 4%. Among truck drivers in the state of Tamilnadu, HIV infection quadrupled from 1.5% in 1995 to 6.2% just one year later. In the North-eastern state of Manipal where the epidemic took off quickly among male drug injectors, some drug clinics registering HIV rates as high as 73% in 1996. In some other states, by contrast, only a few cases of HIV and no cases of AIDS have yet been reported.

It is clear that many people are having unprotected sex with non-monogamous partners. With effective mixing of population, there is now an alarming spread of HIV among general population as well, mostly through sex between people who do not realise they may be transmitting or acquiring the infection during unprotected sexual intercourse. The virus does not discriminate between the rich and the poor, caste, creed and knows no boundaries. It has penetrated through every strata of Indian Society.

India is in the threshold of becoming the most affected country in the world in terms of new infections and in terms of total number of infections and in terms of persons living with AIDS.

Prevention and control of locally endemic diseases(source – WHO/SEARO):

The national tuberculosis control programme has not achieved the desired results. In 1992 the program was reviewed and a revised control programme formulated with short term course chemotherapy using DOTS strategy. The problem of protein-energy malnutrition (PEM) and micronutrient deficiency disorders are quite significant and are being dealt with through a number of national programmes with well defined goals. Diarrhoeal diseases, which are still a major cause of morbidity and mortality in infants and children are being addressed through the promotion of exclusive breast-feeding, good child feeding practices, and the timely use of ORT during episodes of diarrhoea. Acute respiratory infections (ARIs) are a leading cause of death due to pneumonia in children under five years. A strategy aimed at early recognition of the signs of pneumonia and timely referral has been very effective in reducing mortality. HIV/AIDS is predicted to be a major problem in India. A total of 22,529 seropositive cases were reported up to March 1996, but this number does not convey the actual magnitude of the problem. Of the noncommunicable diseases, cancer and cardiovascular diseases are emerging as major health concerns that will require considerable financial resources for case management.

1. Malaria(source – GOI)::

In the year 1999 (upto 25th October), a total 8,81, 716 malaria cases including 3,87,125 P. F. cases have been reported. During 1999, malaria incidence in the country has shown a decrease by (-) 3.16% in malaria cases and an increase by (+) 2.60% in Plasmodium Falciparum (PF) cases as compared to corresponding period of 1998.

National Anti Malaria Programme (NAMP) is a centrally sponsored National Health Programme, operated on 50: 50 cost sharing basis between the Central and State Governments. The Centre provides material assistance to the States, including anti-malarials, insecticides. In addition 100% cash assistance is provided to the North-Eastern States for programme implementation.

With the implementation of Modified Plan of Operation (MPO) the total malaria cases came down from 6.47 million in 1976 to 2.18 million cases in 1984. The malaria situation since then has been contained around 2 to 3 million cases annually.

2. Filaria(source – GOI):

The National Filaria Control Program was launched in 1955. Following measures are undertaken in the programme: (i) Delimitation of the problem in hitherto unsurveyed areas; and (ii) Control in urban areas through recurrent anti-larval measures and anti-parasitic measures by 206 control units and 199 clinics giving treatment with diethylcarbamazine to clinical cases and microfilaria carriers. During 1997, in view of the recommendations made in support of revised single day DEC mass therapy as a supplement to existing NFCP strategy in highly endemic areas, it was proposed to implement this strategy in 13 districts on a pilot basis. However, eight districts were covered in the States of Kerala, Orissa, UP, and West Bengal during November, 1997 and in the month of August, 1997 in Tamil Nadu by observing Filariasis Control Day (FCD). Approximately 49.7% to 94% coverage (achievement) was observed in these districts by giving single day DEC therapy. The Centre provides DEC tabs for the mass therapy campaign and cash assistance for IEC activities in the States through Regional Directors, Regional Offices for Health and Family Welfare. Filariasis Control Programme is a continuing 5 years project implemented by the states in the high endemic districts.

3. Kala- Azar(source – GOI):

Kala-azar is a serious public health problem in Bihar and West Bengal. After its resurgence in Bihar in the early seventies, the disease spread from the four districts to adjoining areas. Now about 36 districts in Bihar and 10 districts of West Bengal are affected by Kala-azar. The disease is however prevalent predominantly in the districts adjoining the Ganges. The increasing trend of the disease is evident from the fact that

the total number of cases which were 17,806 with 72 deaths in 1986 rose to a total of 77,102 cases with 1,419 deaths in 1992. During 1997 and 1998 total cases and deaths due to Kala-azar have been 17,429 and 13,542 and 255 and 221 respectively. Total Kala-azar cases of 6,694 and deaths 220 have been reported during 1999 till August, from Bihar, Delhi, West Bengal and Sikkim. The strategy of Kala-azar control broadly includes three activities; (i) Interruption of transmission for reducing vector population by undertaking indoor residual insecticidal spray twice annually; (ii) Early diagnosis and complete treatment of Kala-azar cases; and (iii) Health education for community awareness.

During 1998-99, a budgetary provision of Indian Rs. 10 million (US \$ 208,000 approximately) has been made in respect of this programme. This provision is for supply of insecticide DDT and drugs sodium antimony gluconate and pentamidine.

4. Japanese Encephalitis (JE) (source – GOI):

The disease is caused by a virus and manifests as high fever, convulsions, confusion, stiffness of the neck and coma etc. The fatality rate of this disease is very high and those who survive do so with various degrees of neurological complications. JE is spread by a mosquito principally *Culex tritaeniorhynchus* which usually breeds in rice fields and swampy and marshy areas.

Of late, JE has become an important public health problem and has been reported from 24 States/UTs. Number of cases and deaths due to JE reported from the country are indicated in Table 4.5.3. Major activities for control of Japanese Encephalitis include: (i) Case Management; (ii) Development of a safe and standard indigenous vaccine; (iii) Sentinel surveillance including clinical surveillance of suspected cases; and

Studies to identify the high risk groups by measuring the bloods level of antibodies; (v) Epidemiolog monitoring of the disease for effective implementation of prevention and control strategies; and (vi) Vec Control including residual spraying of space spraying.

5. Dengue fever (source – GOI):

Dengue Fever is a viral disease which is transmitted through the bites of female Aedes mosquitoes. India, the virus was first isolated during the fifties. Outbreaks of dengue have been reported from vari parts of the country primarily from urban areas. There are four sero-types of dengue virus and all the f are prevalent in India. Dengue viral infection may remain asymptomatic or manifest either undifferentiated febrile illness (viral syndrome), Dengue fever (DF) or Dengue Hemorrhagic Fever (DF). The primary infection leads to classical dengue fever for that particular serotype. Subsequent infection any other serotype may sometimes precipitate Dengue Hemorrhagic fever (DHF) which is usually m prevalent among children and may cause fatality in some Cases.

During 1996, an outbreak of Dengue was reported in Delhi. The first suspected case was admitted to India Institute of Medical Sciences on 20th August, 1996 and the first death was reported as on 22- 8- 19. As per reports received from Health Directorate of the Government of National Capital Territory 10, cases and 423 deaths due to dengue have been reported from the States like Haryana, Punjab, U Pradesh, Karnataka, Maharashtra and Tamil Nadu during 1996.

6. Leprosy (source – GOI):

A steady increase in the number of leprosy cases through successive decades occurred after independe in 1947 starting with 1.37 million in 1951 reaching 4.0 million estimated cases in 1981. The prevalence disease was 57/ 10, 000 in 1981. The main factor to account for this progressive rise were rapid increase the population, better case detection activities and greater community awareness leading to volunt reporting.

With the implementation of MDT services under the programme since 1983 a large number of lepr cases are being discharged as disease cured. For the first time in 1987 the number of cured cases excee new cases detected. Since then with rapid extension of MDT services to other endemic areas, percentage of discharged cases has been increasing. During the year 1998- 99 the number of dischar cases was 0.77 million as against new case detection of 0.78 million cases. So far the programme has b able to treat and discharge from the registers about 12.19 million cases out of which 8.33 million are du cure with MDT.

In March, 1999 there were in the country and the prevalence rate was 5.19/ 0000. India today ra foremost among the countries saddled with leprosy sufferers accounting for 60.9% of the global recor leprosy patient level. About 14- 20 percent of the patients are children. The proportion of multi- bacill cases among total cases is 56% and among new cases the same is 32%. The deformity among ne detected cases in a year is 3.76%.

Distribution of the disease is uneven, although it is present throughout the country. The inter State variat in the prevalence rates and the percentage of population at risk were quite substantial, High number patients are now present mainly in the State of Uttar Pradesh, Bihar, Orissa, West Bengal, and Mad Pradesh. At present these five States contribute 71% of the country's caseload. Though the prevalence disease was high earlier in Tamil Nadu, Andhra Pradesh, Pondicherry, Maharashtra, the same has redu remarkably in these States.

7. TB Control Programme (source – GOI):

Tuberculosis continues to remain one of the most pressing health problems in India. About 14 mill population are estimated to be suffering form active TB of whom 3 – 3.5. million are highly infectiv India accounts for nearly one third of Global T. B. burden and every year has more than 2 million r cases of tuberculosis. Approximately 2.9 million people die from tuberculosis each year World wide; ab one fifth of them in India alone. Nearly 500,000 die from the disease – more than 1, 000 per day- one ev minute. The spread of HIV/ AIDs would increase number of TB cases as well as deaths.

India launched the National Tuberculosis Control Programme (NTCP) in 1962 which was integrated v the Primary Health Care Delivery system and implemented through District Tuberculosis Centres (DTC) which 446 have been established. In addition, there are 47,600 TB beds in the country, 330 TB clinic:

urban areas and 17 State TB Training and Demonstration Centres. The beds are utilized as adjunct domiciliary treatment programme mainly for serious cases. Now 100% requirement of anti TB drugs provided from Central Government and these are made available to patients free of cost.

Achievements : Under N. T. P. around 1.5 million cases of tuberculosis are detected every year of which 25% are sputum positive and rest are radiologically active cases. Treatment completion is around 30%. Mortality rate of 80 per 100,000 of population in 70's has been reduced to 50 per 100,000 of population in 1993.

Revised National Tuberculosis programme : In 1992 the NTCP was reviewed by a committee of experts. The committee found that NTP has not made any significant epidemiological impact on problem of Tuberculosis. Based on the findings of this review committee, a Revised Strategy for National TB Control Programme (RNTCP) was evolved with the objective of laying emphasis on cure of infectious cases through administration of directly observed short course chemotherapy to achieve a cure rate of over 80% and augmentation of case finding activities to detect 75% of estimated cases, only after having achieved desired cure rate. This strategy was pilot tested with SIDA assistance in 1993- 94 on a population of 2 million and thereafter was expanded for assessing its technical and operational feasibility to 17 project sites, covering a population of 13.85 million. These project sites demonstrated good quality of diagnosis with sputum conversion rate of nearly 90% and a cure rate of over 80%.

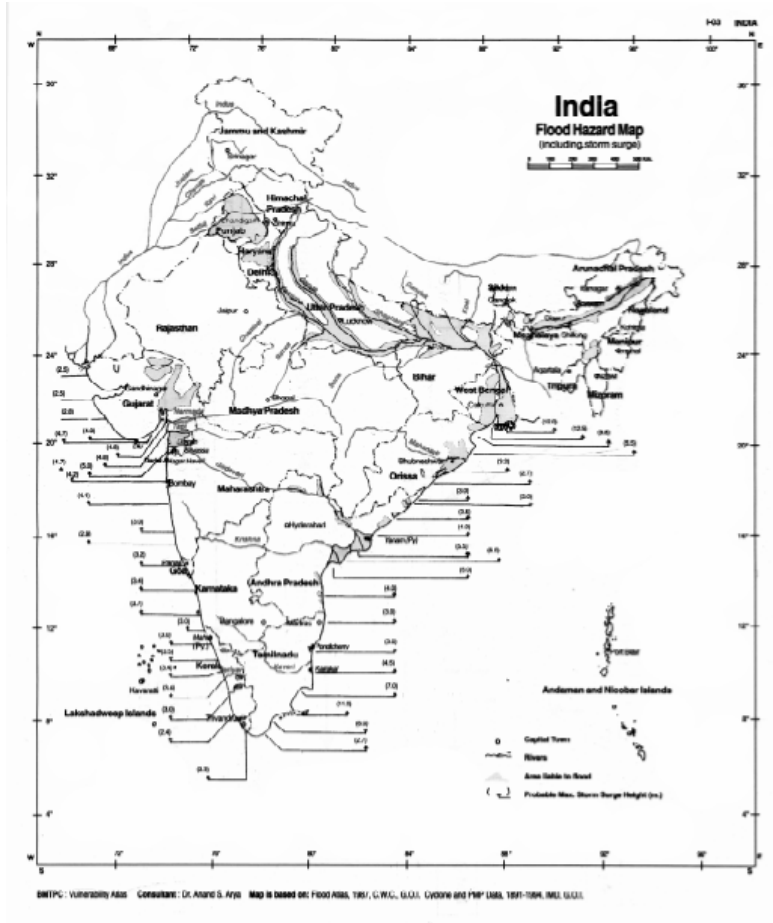
Having proven the technical and operational feasibility of the revised strategy, Government of India decided to extend the revised strategy in the country in a phased manner to 102 old districts covering a population of 272.21 million over a period of 3 years in 15 States with World Bank Assistance. This strategy included strengthening the NTP in 203 short course chemotherapy (SCC) districts with a population of 4.8.10 million. Under RNTCP, so far, quality of diagnosis in almost all expansion areas has been good ; sputum conversion rate remains high at 87%.

Water supply and sanitation (source – WHO/SEARO):

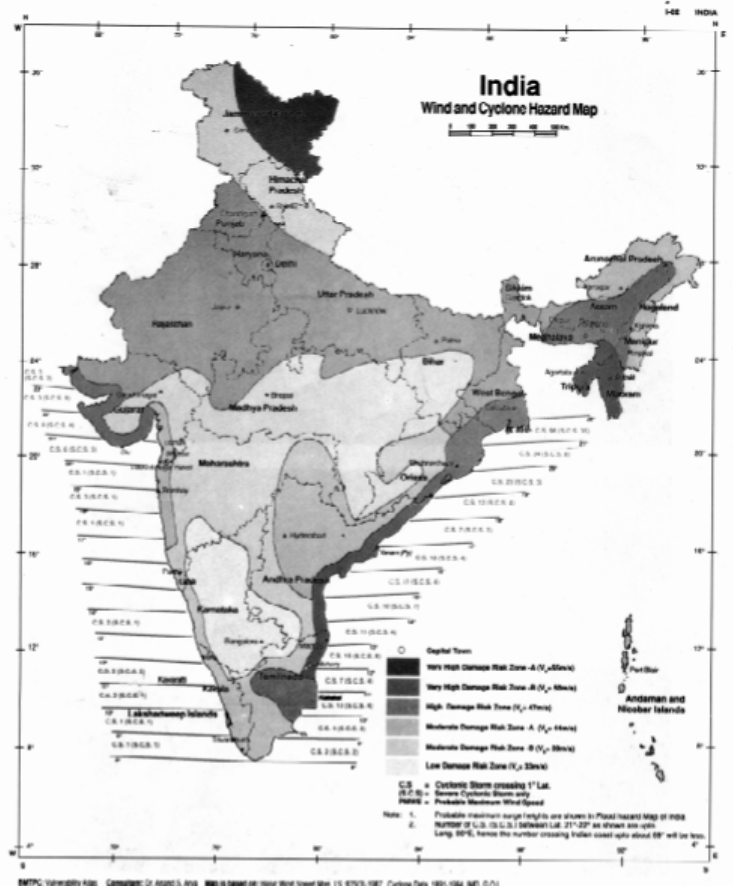
The proportion of the population with safe drinking water available at home or with reasonable access was 84.3% in 1993 for urban areas and 82.4% in 1995 for rural areas. The proportion of the population with adequate excreta disposal facilities was 49.9% in 1993 in urban areas and 3.7% in 1995 in rural areas.

PART 2 - HEALTH SECTOR
EMERGENCY PREPAREDNESS IN
INDIA

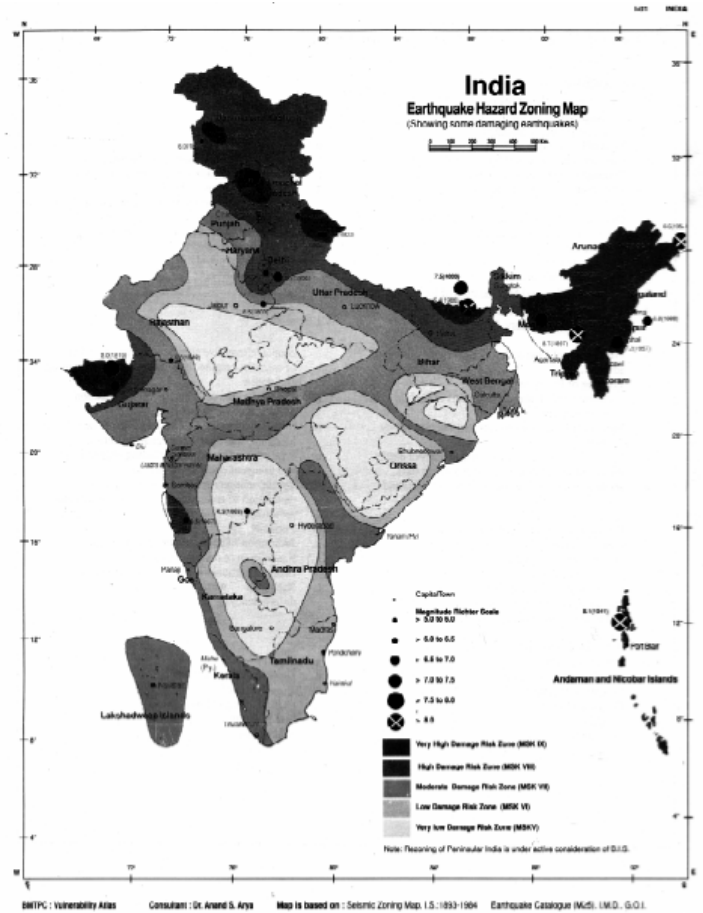
Flood Hazard Map of India



Cyclone Hazard Map of India



Earthquake Hazard Zoning Map of India



EMERGENCY/DISASTER SCENARIO

High Risk Population -source – Government of India (GOI):

The India is among the world's most disaster-prone areas with a population of more than one billion. The geographical statistics of India show that almost 57% of the land vulnerable to earthquake, 28% to drought, 8% to cyclones and 12 % to floods. 12% land is prone to very severe earthquakes, 18% to severe earthquakes and 25% damageable earthquakes. Dense population, poverty, deprivation and death due disasters add to the health, social and economic burden of an already impoverist society.

Rainy Season(source – GOI):

As per rainfall pattern seen from data for the past 14 years, out of approximately million hectares rain fed areas, about 40 million hectares are more prone to scanty deficient or no rain during South West Monsoon season which is the main season rainfall in the country. Approximately 80% of the total rainfall in the country precipitated during the South West monsoon in North, North-East, Central and West India while the southern peninsula receives about 60% rainfall during the South-W monsoon and the remaining during post monsoon and winter season. It is noted that frequency of deficiency of rainfall in monsoon is mainly in nine meteorological s divisions namely Saurashtra, Kutch and Diu; Gujarat Region, West Rajasthan, E Rajasthan, Marathwada; Haryana, Chandigarh and Delhi; Hills of West U.P; Nagala Manipur, Mizoram and Tripura; and Kerala.

Floods in India affect about 30 million people annually and drought about 50 milli Coastal areas experience two or three tropical cyclones of varying intensity each ye The Himalayan regions are prone to earthquakes.

Emergency management structure (source – GOI):

The Indian government has constituted the' National Crisis Management Committee to d with different types of crises situations. The Committee consists of nodal and supp Ministries to handle them. The list is as follows:

CRISIS	NODAL MINISTRY
Natural disaster (except drought) and Civil Strife	Ministry of Home Affairs
Drought	Min. of Agriculture
Biological Disaster	Ministry of Health
Chemical Disaster	Ministry of Environment
Nuclear accidents and leakages	Deptt. Of Atomic Energy
Railway accidents	Ministry of Railways
Air accidents	Ministry of Civil Aviation

RESPONSIBILITIES

Under the delegated responsibilities between the central and state governments, disas management is the responsibilities of the state government which includes disas preparedness, response and mitigation measures. Responsibility of the central Governm is confined to coordination at the national level, lay down policies and guidelines consultation with the expert committee, finance commission and the state governments.

Coordination structure at the central government level:

Nodal & Support Ministries:

The Nodal Ministry is mainly responsible for taking all actions to deal with a particu crisis situations. Some situations may require action by more than one Ministry

Department. The Secretary of the Nodal Ministry coordinates activities of all support Ministries/Departments. Each Nodal Ministry has prepared detailed Contingency Plans dealing with crisis situations falling in the areas of their responsibility. Copies of Contingency Plans have been furnished by the Nodal Ministries to the CMG and supporting Ministries and Departments. These Contingency Plans may be revised and updated from time to time. After the 2001 earthquake in Gujarat, the plan has been substantially revised in order to focus attention on disaster preparedness as well as mitigation measures as a comprehensive plan.

Crisis Management Group:

Each Nodal Ministry has established a Crisis Management Group (CMG) for dealing with the crises which fall within the ambit of its responsibility. The Crisis Management Group is mainly responsible for dealing with a crisis situation and for reporting all developments to the CMG seeking its directions and guidance as and when necessary:

Control Room of the Ministry:

By and large each nodal Ministry has established a control room, which is activated immediately after a crisis situation is reported. Senior officer from the existing hierarchy has been designated in charge of the control room who have draw up a plan for its management during crisis situations, on a 24 hour basis. The control room have adequate communications facilities to communicate with the crisis point, the concerned State Government and with other concerned Ministries: in the Government of India and particular with the control room of the Cabinet Secretariat. Hot line facilities where necessary has been set up in consultation with Department of Telecommunications.

National Crisis Management Committee:

The National Crisis Management Committee(NCMC) is the apex body of high level officials of the Government; of India for dealing with a major crisis which has serious national ramifications. The composition of the committee would be as under:

- | | |
|--------------------------------------|----------|
| 1. Cabinet Secretary | Chairman |
| 2. Secretary of Nodal Ministries | Member |
| 3. Secretaries of Support Ministries | Member |

An officer of the Cabinet Secretariat has been nominated Convenor of the NCMC.

In addition to these, the Secretary of the Nodal Ministry and/ or the Head of Department directly responsible; for dealing with a particular situation of crisis, are also opted as member of the NCMC.

When a situation is to be handled also by NCMC it gives such directions to the Crisis Group of the nodal Ministry as deemed necessary. The Secretary of the Nodal Ministry responsible for ensuring that all developments are brought to the notice of the NCMC promptly.

District/State Plans:

Most of the actions in a crisis situation are taken at the field/district and state levels which the district/State Committees has been set up and contingency Plans have been prepared by the State authorities. The Nodal Ministries has issued detailed guidelines to State Governments for the preparation of local Contingency Plans. State Government

have established a State Crisis Management Committee under the Chief Secretary, with Secretaries and Heads of the Concerned Departments/Organizations, as members.

State Governments have established a well-equipped Control Room for quick receipt of information and dissemination of command instructions.

Response Mechanism:

Immediately on the occurrence of a crisis the local Action Plan is put into effect by local/district and the State authorities. If the situation has wider ramifications and warrants a response at national level, the State Government contacts the nodal Ministry of the Central Government and seeks the required help. The concerned nodal Ministry activates its control room, summons a meeting of the Crisis Group and puts into operation its contingency plan. The Secretary of the nodal Ministry informs the Cabinet Secretary about the crisis situation and who, if he considers it necessary, calls a meeting of the National Crisis Management Committee.

Natural and State Centres for Disaster Management Program (NCDM) in India:

A centrally funded scheme is in operation since 1992-93 to focus on disaster preparedness with emphasis on mitigation measures and to increase the level of awareness in the community about disasters, prepare them adequately to face the crisis situation. The following activities under the scheme are in progress;

- Human Resources Development,
- Research and Consultancy Services.
- Documentation of major events,
- Operation of Faculty on NDM in State level training States.
- Operation of National Centre of Disaster Management.
- Public education and community awareness program.

Under this program, following **achievements** have been made;

- Setting up of a National Centre for Disaster Management in the Indian Institute of Public Administration in 1995.
- Setting up of separate Disaster Management Faculties in State Administrative Training Institutes in 18 out of 25 States. These States are Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.
- Documentation of major events like UP and Maharashtra earthquakes, research studies on land slides in Kerala, Sikkim and Uttar Pradesh, Research study on Drought in Rajasthan.
- Preparation of source book for use of trainees of the Lal Bahadur Shastri National Academy of Administration,
- Organised/sponsored about 100 training Programs/workshops on various aspects of Natural Disaster Management

- Public education and community awareness campaign through newspapers, post stationery, audio-visual media and observation of World Disaster Reduction Day annually.

Disaster management structure in health sector (source – GOI):

National Level

The Emergency Medical Relief Division of Directorate General of Health Services in Ministry of Health & Family Welfare is the technical unit exclusively meant for management of crisis situations. The Division is headed by the Director, Emergency Medical Services and Relief. For the purpose of the crisis situations, he reports/receives instructions directly from the technical chief (Director General of Health Services) and Administrative Head of the Ministry (Secretary Health & FV). The Secretary, Health & F.W has empowered Director, EMR to represent the ministry of health and family welfare in different Crisis Management Groups at the national level.

The Director, Emergency Medical Services & Relief (EMR) coordinates with the other health sector partners like director of Health Services of the state governments, state division under the central government, vaccine producing institutes, central government hospitals and national institute of communicable diseases and director, malaria unit. The objective of the coordination is to review crisis situations from time to time and meet the needs, which State Governments cannot meet. For this purpose, continuous dialogue & communication are maintained with them.

A Health Sector Emergency Preparedness and Response Programme is in place since 1980 which was revised from time to time. Last revision was done in the year 1996. The emergency health sector focal points of national, state and district levels are the integral part of the crisis management groups at the respective levels. In the central Ministry Health and Family Welfare, the Emergency Medical Relief Division is the responsible technical unit.

A detailed guideline separately for flood, drought, cyclone and earthquake has been prepared and circulated in the month of March and April to all the drought-prone States & during May and June to the flood and cyclone-prone States. The Telephone numbers & other relevant information of the concerned officers at the State level are updated.

State level:

Usually a joint director or a deputy director of the state health services under director health services is responsible for crisis management, coordination, monitoring & implementation of the emergency activities in the state as laid down in the state health sector contingency plan. The detail information about key personnel involved in disaster management at State, District and Central level is available with him.

District/PHC level:

At district level, the chief medical officer/Civil Surgeon is responsible to implement & coordinate health sector activities. He has details of information about officer involved in disaster management at PHCS, District and State level.

In case of manpower deployment during emergencies, the initial re-deployment of medical team is done by the chief medical officer of the affected districts from non-affected districts.

under his jurisdiction. Subsequently, the state governments mobilises the additional manpower from other non-affected districts state directors of health services. In case further supplementation is required, the director (EMR) on behalf of the central government responsible to do the same from central government institutions.

Non-governmental organizations:

There are a number of NGOs involved by the state governments with objective to enhance disaster management capabilities in the field. Most of them are small and work locally. However, Indian Red Cross Society and Ramakrishna Mission are the two organizations which take very active part in disaster management.

Government of India initiatives:

With an intention to gradually change the existing practice of disaster management in response to preparedness, the Government of India initially allocated US 50,000 for EHA activities at the beginning of 2002-03 biennium under the regular country budget - such budgetary provision existed during the last biennium. With the successful implementation of EHA program activities by mid 2002, the Government of India subsequently enhanced the said allocation from US 50,000 to US \$ 250,000.

Areas of WHO technical support in the Indian efforts of improving emergency/disaster management in the country:

Keeping in view of the WHO mandate on Emergency & Humanitarian Action in the health sector, the WHO representative office can assist the Indian efforts in the following areas;

- Strengthening of Health Sector capacity and capabilities in the 4 states (additional states are Himachal Pradesh, Uttaranchal, Andhra Pradesh and Madhya Pradesh). It is a continuation of activities since 2002-03 during which four states namely Gujarat, Orissa, Mizoram and Sikkim were supported.
- Assisting states of Mizoram, Sikkim, Gujarat and Orissa in completing Health sector orientation/
Training activities towards newly developed health sector contingency plans prepared during 2002-03.
- NGO,s networking.
- Introduction of Public Health and Emergency Management in Asia and Pacific (PHEMAP) course in the states – two courses per year (total – 4 courses)
- Continuation of institutionalisation process in Rajiv Gandhi Medical University Karnataka, Bangalore and All India Institute of Hygiene and Public Health Kolkata.
- Establishment of EHA focal point in the WHO representative Office to provide technical support at the state and national levels.

Institutionalization of Health Sector Disaster Management in India:

Experience shows that despite a good administrative set up a well formulated disaster management plan, disaster mitigation measures may not find the required direction and

desired results in the field. Memories of disasters usually fade away after the acute phase events.

In India, the health sector disaster preparedness has been institutionalized with the object to incorporate disaster plan in the health delivery system. With this intention, two institutions throughout the country have been identified. The broad functional responsibility of the institutions are:

- **A.I.I. H & P. H, Kolkata**

The All India Institute of Hygiene and Public Health (AIIPH) Kolkata has been assigned to undertake mutually agreed research, training activities as well as collection and evaluation of technical / scientific information about emergency preparedness and response in collaboration with the National and State Governments, WHO and international reference centres for Emergency Preparedness and Response. In this direction, the institute under guidance of WHO-India is discharging the following responsibilities;

1. To collect and disseminate information about national disaster situation and serve as a reference centre for information networking for strengthening disaster management endeavour;
2. To design a uniform protocol for hazard mapping, vulnerability analysis, evaluation of health sector disaster preparedness and management programs with particular emphasis to states vulnerable to natural disasters and to provide technical support for improvement of preparedness plan;
3. To formulate guidelines, manuals, training modules including standard training methodology, technical support for organizing training programs on emergency preparedness and management for government officials, NGOs, research and other fellows and WHO fellows, particularly from developing countries;
4. To develop mechanism for networking of functionaries of government agencies, NGOs and different institutions for integrated operationalization of training, research and community educational activities of disaster preparedness and management at different levels;

RGUHS, Bangalore

Under the WHO and GOI collaboration, Initiative for Emergency Medical Preparedness and Response (IEMPRESS) is under implementation by Rajiv Gandhi University Health Sciences, Karnataka (RGUHS). This project is aimed at promoting and supporting prompt and essential response to emergencies arising out of natural or man-made calamities. Immediate relevant response, rescue and relief could reduce morbidity and mortality and human suffering and economic loss. The project would be implemented in three phases starting with development of model hospital contingency plan for tertiary hospitals, training of medical and other health professionals, capacity building of hospitals/institutions to meet with management of mass casualties. The expertise so built in the first phase would be extended to district and secondary level hospitals during the second phase and to the primary health care centres in the third phase. The initiative would encourage teaching hospitals in the government as well as private sectors.

develop their own individual hospital contingency plans. A networking of hospitals will be established on zonal basis. Professional associations, NGOs and State government health services has been planned to be involved.

INTERNATIONAL Coordination (source – UNDP):

UNDMT is an inter-agency working group of UN organizations concerned with response to humanitarian emergencies and is headed by the UN Resident Coordinator. FAO, ILO, UNDP, UNFPA, UNICEF, WFP and WHO are members of the UNDMT-India. Purpose of UNDMT is to ensure prompt, effective and concerted country-level response by the UN system in the event of a Disaster. It tries to ensure co-ordination of UN assistance to the Government in respect of rehabilitation, reconstruction and disaster mitigation. The general and sectoral coordination structures are as follows;

Sectors	Focal agency	Co-operating agencies
Co-ordination	UNDP	DMT members
Health	WHO	UNICEF, UNFPA
Reproductive health	UNFPA	UNFPA, UNICEF
Water and sanitation	UNICEF	WHO
Education and child protection	UNICEF	ILO
Food and nutrition	WFP	UNICEF, WHO, FAO
Shelter and survival	UNDP	UNICEF, UNV
Livelihoods	UNDP	ILO, UNFPA, UNV, FAO
Logistics	WFP	UNDP, OCHA, UNICEF

Information Sharing on recent Disasters:—A Bi-Multi meet was organized by UN organizations to update the bilateral partner agencies on the recent disasters (Assam, Bihar Flood 2002, drought in various states)

Capacity Building of the UNDMT members:

- A hands-on training on joint assessment was organized in Bhubaneswar to enhance the damage assessment and need-gap analysis skills of the DMT members.
- Ongoing efforts to prepare Disaster Response and Preparedness

SitReps: Issue of regular Situation Reports to various partners on the damage statistics and need-gap analysis – www.un.org.in/undmt

UNDMT has also been working in tandem with Government of India's (GoI) resolve to evolve a National Disaster Management Plan to combat natural disasters. The major goal of the UN mission in India has been to advocate for reduction in vulnerability and engage with the GoI in building capacity for disaster preparedness and management, thereby reducing the incidence of and sustainable recovery and transition from complex emergencies and natural disasters.