# 42 Bihar Floods Of 2004 In India: Insights

## BACKGROUND

Bihar is situated in the eastern part of India with Nepal to its north and the states of Orissa, West Bengal, Uttar Pradesh and Madhya Pradesh flanking its sides (Latitude 21 58' 10" to 27 31' 15" North and Longitude 82 19' 50" to 88 17' 40" East) The state is endowed with enviable mineral resources base. The area of the state is 94,163 00 Sq Km. and the population according to 2001 provisional census is 82.87 million. Historically, Bihar had only four divisions Patna, Tirhut, Bhagalpur, and Chhotanagpur. This arrangement continued until very recently, when many new divisions were created and the old districts were carved up into new ones

Bihar has always been affected by flood due to its unique geography and topography. It is landlocked from all sides and there is a network of rivers in Bihar and most of the rivers are snow-fed, as they originate from the Himalayas, therefore, they are perennial sources of water. During monsoon, between July and September, most of the rivers are in spate and the situation worsens, when there is a heavy rainfall in the catchments areas, predominantly located in the Indo-Nepal border region Northern region of Bihar State was under severe floods in July, 2004. Out of 37 districts in Bihar, 19 districts are flood affected, and the worst hit were Darbhanga, Sitamarhi, Samastipur, Madhubani and Khagaria. Many districts (e.g., Saharsa, Matihari, Araria, Muzaffarpur) were extensively affected by these floods. According to the official estimates submitted to the team by the government of Bihar, nearly 172 blocks, 2,325 panchayats (village governments) and 7,090 villages are inundated. During many aerial surveys, most of the areas inundated had become completely detached from the capital, with roads, railway lines, electricity, telephone lines etc all cut off.

## OBJECTIVES

The main goal of the operation was to provide immediate relief to those seriously affected by the calamity. The objective was to have as wide a reach as possible while distributing relief. In India, the responsibility of providing relief in the wake of natural calamities including floods primarily rests with the concerned state governments. The Government of India supplements the efforts of the state governments where necessary by providing logistic and financial support For this purpose, the state governments are allocated resources from a Calamity Relief Fund (CRF), which is contributed to by the Government of India and the state governments in the ratio of 3:1. Additional assistance is also provided to the states in the event of an especially severe calamity from the National Calamity Contingency Fund (NCCF)

## ACTIVITIES

The relief distribution by air started on 10th July, 2004 and it continued for nearly on month ending on 8th August 2004. The distribution of relief items by road continued for a longer time, after the roads were cleared.

During the flood relief operation that lasted for 29 days, the items were selected and packed and no set criterion was followed. Each relief packet contained 2 Kg powder half Kg Salt, 2 Candles and 1 Match box or 2 Kg chaffed rice, half kg jaggery, 2 Candles and 1 Match box. During the operations, 10 helicopters were pressed into action out of which 2 helicopters crashed. 100 cadets from NCC (National Cadet Corps) were involved per day in the packaging of relief material.

## ACHIEVEMENTS

The following table sums up the details of the relief that was distributed during the 29 days of operation:

| No. | Relief Materials Distributed | Figures |
|---|---|---|
| 1 | Readymade food | 34224.67 quintals |
| 2 | No. of polythene sheets | 61~135 |
| 3 | No. of match boxes | 4~8510 |
| 4 | No. of candles | 519634 |
| 5 | Quantity of kerosene oil | 345634(in liters) |
| 6 | Cash doled out | Rs. 259.538 Mln |
| 7 | No. of boats deployed | 8065 |

## LESSONS

The Government machinery had swung into action and food packets are air dropped by helicopters every morning. But the truth of the matter is that relief was not reaching the families affected by these floods fast enough. The government needed to strengthen its ability to create strategic plans to provide food relief The state response focused on relief distribution It was quite evident during the entire operation that though flood is a recurring hazard but still preparedness level were far from adequate. Also the visit to the villages by the authors confirmed the fact that the people affected find the concept of preparedness totally farce They are not ready to accept the fact that having teams of trained villagers will help them.They say that since floods can not be prevented, they accept them as their fate and are quiet efficient in handling rescue and relief on their own.Their major grievance though was the disparity and delay in the distribution of flood relief.

## FUTURE

The officials involved with the relief work should have sufficient knowledge about various aspects of relief distribution. The experienced and trained personnel would be more useful and effective in carrying out various activities related with relief operations and there is urgent need to develop a cadre of trained people for a much-organized response in future.

### CONTACT DETAILS

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# 43 Capacity Building Program For Long-Term Disaster Preparedness In The Aftermath Of Kutchch Earthquake Of India

## BACKGROUND

Natural phenomena like earthquake and cyclones become disaster because people at large are ignorant about the ways to construct affordable disaster resistant houses with local artisans & materials. In India the disaster rehabilitation programs from 1993 to 2000 failed to teach house owners these ways because the rehabilitation programs had many shortcomings including:

- Lack of effective information dissemination to people about the program (entitlement, obligations, time limitations etc) and appropriate disaster resistant building technologies
- Much confusion prevailed about right technology because of many experts and many myths
- The government engineers posted in the field had little or no knowledge of the disaster resistant technologies in connection with the sustainable vernacular building systems
- Masons had no knowledge of affordable disaster resistant building technologies.
- People listened to masons rather than engineers in the rehabilitation program
- There were some mason training programs but without any standardization and there was no felt need among masons for training since the training was not mandatory
- Critical materials & equipment were not available in the villages

These problems created hindrances in the disaster rehabilitation program, adversely affecting the schedule as well as the output In the aftermath of 2001 Kutchch Earthquake in Gujarat State of India a major on-site training program of 1200 government engineers was taken up by NCPDP along with a sensitization program for village level government functionaries. The feedback from the engineers and others at the end of the training program led to a demand for this Capacity Building Program which was taken up for *Gujarat State Disaster Management Authority (GSDMA)* with the World Bank funding

## OBJECTIVES

To facilitate the *effective implementation of government rehabilitation program* in the selected target villages through...

- Demonstrating affordable and sustainable disaster resistant building construction technology as well as retrofitting
- Increasing effectiveness of government engineers through intensive on-site training
- Sensitizing government personnel for increasing rehabilitation program effectiveness
- Making rehabilitation program a peoples' program through their appropriate education
- Raising awareness of people about the dangers of future disasters and ways to face them
- Taking affordable and sustainable disaster resistant technologies to peoples' doorsteps
- Building capacity of the community through placing responsibility of execution of all construction work on its shoulder.
- Building peoples' confidence to create a *felt-need* for disaster resistant technologies.
- Educating people about the roof rain-water harvesting system
- Helping evolve delivery mechanism through skill up-gradation of local masons and taking necessary equipment to each target village
- Leaving behind a *Disaster Preparedness Brigade that is concerned about preparing for future disasters and Disaster Preparedness Center*

## ACTIVITIES

- Intensive trainer's training for engineers and social scientists of National Centre for Peoples'-Action in Disaster Preparedness (NCPDP) project team
- Village Reconstruction Committee (VRC) activated by NCPDP project team in each target village
- VRC carried out under the guidance of NCPDP project team the following
- Full-scale construction of a demonstration structure following GSDMA disaster resistant building guidelines

■Repair and retrofitting of an existing public building
■Installation of Roof Rainwater Harvesting System on a public building
■NCPDP project team carried out in each target village...
■Hands-on training of Building Artisans by trained engineers in disaster resistant construction and repair & retrofitting in *multi-day, multi-stage* curriculum.
■Awareness generation by trained social scientists through
• Group meetings and village meetings (*Graam* Sabhaa),
• Interaction with school children followed by a rally,
• Poster Exhibitions and video shows
■Formulation of Disaster Brigades from all strata of village community including women through intensive dialogue and training
■Handing over of Disaster Center to Disaster Brigade through Village Meeting

## ACHIEVEMENTS

■Covering 478 Villages spread over 24,000 sq. km. area of 5 Districts of State of Gujarat
■Building 478 multi-hazard resistant structures (Disaster Centers) (total 120,000 s.f.) and retrofitting 439 existing public buildings (total 175,000 s.f.) by local artisans for future safety
■Building 478 roof rain water harvesting systems (total 2.80 000 ltrs) tackling water scarcity
■On-site training for skill up-gradation of 5690 building artisans
■Evolved 477 "*Sajjata Sena*" Disaster Brigade in each village for future disaster preparedness activities
■Trained 176 government rehabilitation program engineers assigned in each village
■Effective and positive interaction with a wide range of government agencies from GSDMA in State capital to those at District, Block and village levels.

## LESSONS

Pre-requisites for an ambitious project like this, are as follow:
■Full support and commitment of all concerned government agencies
■Timely transfer of funds to all villages from the central government source
■Mandatory training and certification for masons before taking up rehabilitation work

## FUTURE

■This path breaking project with appropriate changes should be implemented as the very *first step after a disaster to ensure rehabilitation program success in any part of the world*
■*Sajjata Senas* (Disaster Brigades) must be made part of an active disaster management network and their capacity should be enhanced regularly to reap long term benefits of program
■The certified masons should be promoted for all government and non-government projects and continuing education programs should be organized
■Disaster mitigation awareness programs must continue through various local forums