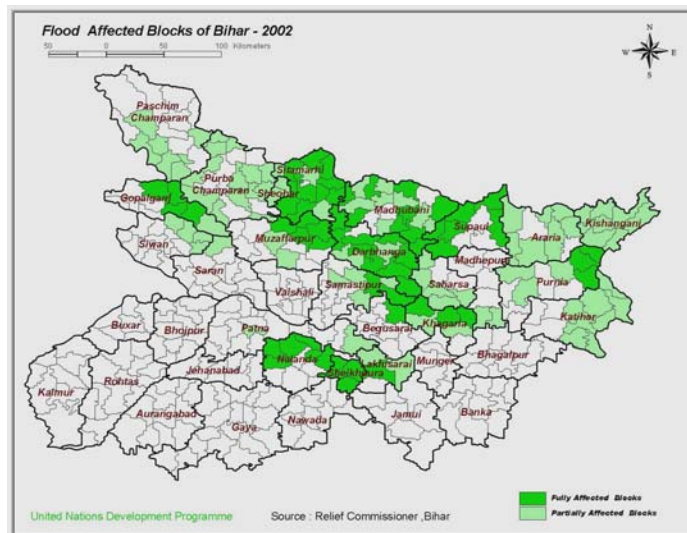


NATURE OF THE DISASTER: FLOOD

Currently the flood situation is improving and the relief and rehabilitation process is continuing in the affected districts. Approximately 16.5 million people have been displaced by flood this year in Bihar, where 394,900 houses have collapsed rising the death toll to 419. The map below shows the flood-affected blocks in Bihar.

AREA AFFECTED:

- Number of Districts : **24** (Sitamarhi, Nalanda, Muzaffarpur, Darbhanga, Patna, Katihar, E.Champaran, W. Champaran, Sheohar, Gopalganj, Smastipur, Madhubani, Saharsa Supaul, Shekhpura, Siwan, Araria, Kishanganj, Purnea, Madhepura and Khagaria, Begusarai, Saran, Lakheesarai)
- Numbers of Blocks Affected: **203**
- No of Panchayats **2,252**
- Numbers of Villages affected: **8,197**
- Numbers of marooned Villages: **357**
- Life loss: **419** [Govt. sources]
- Cattle Loss: **1,377**
- Population affected: **15.7 million**
- Houses damaged: **394,900** estimated value is Rs.**4,502.4** million
- Total Area affected: **1.85** million hectares



DISTRICT DETAILS :

No of Districts	No of Blocks affected
Sitamarhi	17
Nalanda	9
Darbhanga	18
Seohar	4
Saharsa	6
Muzaffarpur	8
East Champaran	19
West Chamaparan	7
Saran	6
Siwan	5
Gopalganj	7
Samastipur	9
Madhubani	19
Supaul	8
Madhepura	3
Patna	4
Katihar	10
Khagaria	6
Begusarai	4
Shekhpura	6
Lakhisarai	4
Purnea	8
Araria	9
Kissanganj	7

IMPACT: (DAMAGE BY SECTOR)

Lifeline and critical facilities: Estimated Value of damage to public properties – Rs. 2,980.5 million

Agriculture:

- Cropped area affected: .8 million hectares
- Estimated value of crop loss: Rs. 3,963.7 million
- Standing crops in 0.2 million hectares worth 1,730 million. have been affected so far.

Road And Communication:

National Highway 57 has a long breach, National Highway 104 has breaches at 19 places and National Highway 77 has breaches at 40 places. The road communication to Sitamarhi, which was completely cut off, has been restored and the repair work is still continuing. Heavy loss had occurred in road network especially in north Bihar due to the recent floods affecting the relief work. Road, power and communication infrastructure had become dysfunctional in Madhubani, Darbhanga and Sitamarhi districts but now in some places the road communication has been restored.



UNV doctors assisting with medical help



Health Facilities: There are increase in the number of diarrhea, kala azar and many cases of snakebites in the flood-affected districts. Health infrastructures have been damaged. Some of the PHCs require live saving drugs like ORS, Anti snake venom, Anti rabies, Drugs for fever, cough and cold. as reported by District Magistrates. Now around **560** health centers and **281** veterinary centers are operating. **At least 18 people have died due to Kala azar disease in East Champaran district of north Bihar. Waterlogged houses and cattle-sheds are likely to emerge as a breeding ground for the kala-azar vector and sand fly'. Currently 2 UNV doctors are providing health assistance to Sitamarhi/ Darbhanga District**

Pucca houses damaged

Shelter:

Flood had its severe impact on the habitat and shelter sector. A total of houses **394,900** have been damaged. More damage is expected once the floodwater recedes from the water logged and submerged places. Most Pucca houses have been washed away near the line of breaches. There is very little flood proofing in the existing structures.



PROJECTED EVOLUTION/SECONDARY THREATS:

- Sanitation will be a major problem for these areas as most of the people are residing on the roads and embankments. Temporary toilets are required to keep the environment clean, which will help in controlling the spread of epidemic.
- Ready to eat food is more suitable for these areas as availability of fuel will be a problem.
- As rainfall trend shows that there will be heavy rainfall in the month of August and September and the situation may continue till October.
- ORS packets are not adequate for the affected areas. Most of the doctors are busy in health camps and may need more doctors with medicines after receding of the water. There is a need of bleaching powders, lime and halogen tablets immediately for the 24 districts.
- Health problem will be a major threat to these areas. Immunization is totally stopped after 2nd July 2002 due to communication disruption and people are on the road.
- Fodder will be a major problem for these areas after few days, and there is chance of epidemic among the animals due to stagnation of water.

Threat of epidemic as water recedes



- There will be no Crop in all affected areas before October. Here most of the people are marginal farmer or agricultural labour, they may not get any opportunity for their livelihood. Migration cannot be ruled out.
- Food is required for the affected population for next three months, as government has already declared that each family will get one-quintal wheat and 250/- per month, the existing stock is inadequate.
- Fuel will be a major problem in terms of availability when wheat is distributed.
- Drinking water is a major problem those who are residing on the road and embankments.
- Most families are having cattle's and there is no separate space for the cattle's, vaccination and fodder. Govt. support is not adequate.
- Apprehension of eye flu and diarrhea in the affected areas cannot be ruled.

NATIONAL RESPONSE:

- 3 Army helicopters and military boats had been engaged for Relief and Rescue. **29,397** food packets have been airdropped and **154,744** packets by military boats and **1,918.15** quintals of other materials have been air dropped in Seohar, Darbhanga, Madhubani since 24. 07.2002
- Govt. has provided polythene for 40,000 families
- Facing a grim flood situation in 24 of 38 districts, Bihar has requested the federal government to release Rs. 2 billion from the Natural Calamity Relief Fund to speed up relief and rescue work.
- With the flood water receding in many places spraying of DDT is underway and more is required in view of Kala azar cases being reported.
- Centre has announced to provide 25,000tonnes of food grains free of cost to the state for distribution among the flood affected people
- State govt. asked for Rs 6,000 millions at once from the Centre.
- The Central Team has already visited Bihar [22nd to 25th of this month] for damage assessment.
- CRF has released Rs.600 millions to Bihar and an amount of Rs .2 millions, to each district for medical health has been allotted as part of Central Relief Fund.
- Bihar is facing an acute shortage of SAG [Sodium antimony Gluconate] regarded as the first line Kala Azar drug in India has asked the federal government for immediate supply of 25,000 vials of SAG.

Army in Relief



ADMINISTRATIVE MEASURES:

- Action has been taken to assess the drug position of each district to identify any health problem. Temporary shelters are being mobilized for the evacuees.
- The relief and rehabilitation department have already allocated Rs. 160 millions for relief work. Government flood control camps have been activated/ Police outposts have also been activated. Relief stocks available at Panchayat & block head quarters. People's representatives are busy in distribution of relief materials. Relief Camps: **764** functioning.
- Bihar, Chief Minister have directed the district collectors to assess the damage and Indira Awas Yojana houses to be constructed for BPL house holds. The dependents of each people killed will be paid **Rs. 50,000** as compensation.

Relief Camps



OPERATIONS / MOBILIZATION OF RESOURCES:

- **7,112** boats been deployed; three helicopters were used for air dropping. 19 Powerboat had been sent to the affected districts and some army boats had been deployed.
- Gratuitous Relief as Wheat distributed: **161,367.10** Qtls.
- Readymade food distributed: **7,446.94** Qtls
- Matchboxes: **151,458** [nos]
- Candles: **179,973** [nos]
- **Polythene Sheets** [distributed]: **3,790,49** metres.
- Kerosene. Oil distributed: **79,583** litres.

- Cash Dole: Rs.66.2 million
- Mobile healths Units are functioning at certain sites in Sitamarhi, Darbhanga and Muzaffarpur.
- State government has provided tents to around 5,000 families only and unable to mobilize more temporary shelters. They are requesting all developmental agencies to provide tents and polythene. Temporary shelter is priority need of the state.

CO-ORDINATION:

On 28.08.2002 the **4th coordination meeting** was held in the Relief Commissioner's Office, Govt. of Bihar, Patna which was attended by the Deputy Secretary & under secretary of Relief and Rehabilitation department along with representatives from UNICEF, Indian Red Cross, State Director, Care India, Jharkhand Branch & CENCORED Patna. Gradually more and more organizations are now interested to attend the meeting for supporting the government of Bihar to tackle the unprecedented flood situation. The Deputy Secretary, Relief and Rehabilitation, Govt.of Bihar chaired the meeting and shared the present situation and requirement to fulfill the basic needs of the flood affected population. He also assured to provide all possible support to agencies involved in relief and rehabilitation work. Discussions were made on agencies to work on different districts on various interventions. . CARE India suggested intervening in Khagaria and Madhubani district and necessary plan of action will be decided soon. Then Under Secretary, Relief and Rehab briefed the participants on UNDP's support in the flood-affected areas along with setting up of state/District control room. He also briefed about the efforts taken by the state govt. to tackle the flood situations. According to him people have started going back to their own village as water has receded in the villages.

On 4.09.2002 the **5th Coordination** meeting was held in the Relief Commissioner's Office, Govt. of Bihar, Patna, which was attended, by the Deputy Secretary & Under Secretary of Relief and Rehabilitation dept. along with representatives from UNICEF, Indian Red Cross, UNDP, CONCERN-Orissa, BGVS- Patna, EFICOR-Delhi, CEDev- Patna, CENCORED- Patna, Action Aid- Patna. The Deputy Secretary, Relief and Rehabilitation, Govt. of Bihar chaired the meeting and shared the present situation. The issues discussed upon:

- Relief Commissioner's office support to agencies involved in relief and rehabilitation work.
- Organizations present in the meeting were asked to share their strategy and area of intervention with relief commissioner's office and similarly consult District Magistrate for selection of Block /G.P/ Village level interventions.
- Participant to avoid duplication of efforts and suggested organizational mapping of intervention. It was also discussed that local NGOs in consultation with the district Magistrate should initiate district level coordination.
- Then Under secretary, Relief and Rehab briefed about the efforts under taken by the state govt. to tackle the flood situations and apprise all participant about the gaps in intervention.
- Considering the large scale devastation in housing sector, Deputy Secretary and Under Secretary relief and rehabilitation suggested organization to undertake construction of temporary houses with water/fire resistant technology which has been introduced by HUDCO and is suitable for flood affected areas. Capacity building of community through training programme on such technology was suggested by different organization.
- View was shared that the water has started receding and population residing on the embankment are going back to their villages. Cracks have started appearing on the silted areas due to lack of water in few areas.
- UNICEF representative proposed flood preparedness training programme at district level on vaccination and alternate housing technology.
- Standard IEC material on hygiene promotion and sanitation as flood preparedness/awareness was also suggested.

Items mobilized so far are :

Agency	Polythene/ tarpaulins/ tents	PVC Roll	Family packet	Medicine	Bleaching powder (kg)	Cloths	Volunteers/ Human resources	Any other
UNICEF				15 million Halogen Tablets for Chlorination	36,000 kg [1,420 bags]			
Indian Red Cross Society	5,000 polythenes, 45 tents, 38 rubber boats	2,400 sq feets	4,000 families			2,000 children		
UNDP	3,500 families have been already given to Samastipur district 10 lifejackets have been given to DM Khagaria from UNDP			Medicine have been distributed through mobile health camps in Samastipur and Darbhanga for 20,000 population			IT facilitator, Logistic and other Human Resources for immediate assessment, 2 Doctors are supporting the district administration with medicines.	One set of Computer to State Control room with internet facility
CENCORED							Volunteers for relief distribution	
Satya Sai Seva Samiti			Food packets	ORS, Halogen		Clothes		
EFFICOR			Food for 1,000 families.					
Govt. of Orissa[Through UNDP Orissa]	1,000 community Tents							
Samadhan				Health camps at Madhuban district				
Swadhinam							Assessing the looms for revival	

PRIORITY NEEDS:

- The immediate need is dry food and baby food
- Polythene- as there are so many people taking shelter on embankments, rail tracks and roadsides.
- Drinking water is a major problem for these areas especially for those who are living on the embankment and roads.
- Sanitation is a problem for women.
- **Cattle feed and veterinary camps / vaccination Programme in various places.**
- **Temporary shelter and family kits.**
- Inadequate health care facilities are available for the evacuees and some cares to be taken for specific diseases like Kalajar ,Diarrheoa.
- All schools are closed and no educational activities for last one month

Shelter on Embankments



- Health Secretary has stated that they have stocks of medicines to cope with the floods, with the exception of anti-snake venom sera.
- The government has requested for kala azar drugs be supplied by any agency as they are facing an acute shortage of SAG [Sodium antimony Gluconate] regarded as the first line Kala Azar drug in India.
- [Clothes](#)

GAP ANALYSIS

Sector	Items Required	Provided	Balance Requirement
Housing: 335,809 house damaged – Temporary Shelter for 1,510,855 population	<ul style="list-style-type: none"> • 670,000 polythene sheets 	250, 000 polythene sheets 1000 community tents from Orissa Govt.	20,000 polythene sheets
Rescue and relief distribution	<ul style="list-style-type: none"> • Boats for relief distribution and evacuation 	6902[mechanized, country, govt. and private boats]	More rubber power boat is required for relief distribution as the water flow is increasing at Khagaria and Begusarai dist.
	<ul style="list-style-type: none"> • Life jacket for volunteers, those who are involved for rescue and relief distribution 	10 Jackets	90 life jackets
Drinking water for 15.32 million population	<ul style="list-style-type: none"> • Safe drinking water 	Not adequate	Halogen tab., mobile water purifiers, tube well at embankments
	<ul style="list-style-type: none"> • Bleaching powder 	1,00,000 Kg	8,000 bags
	<ul style="list-style-type: none"> • Tube well 	Arranged locally	20000 tube wells for camp site and the embankments, roads, railway tracks
Sanitation: 1510855 people at embankments / roads/ railway tracks	<ul style="list-style-type: none"> • Sanitation facilities 	Not adequate	Urgent need as people are living on the embankments and contaminating the areas
Food	<ul style="list-style-type: none"> • Baby food / supplementary nutrition for the children 	Not supplied	Baby food required for more than 5.4 million children for three months
Health	<ul style="list-style-type: none"> • ORS 	Available in PHCs	50,00,000 packets
	<ul style="list-style-type: none"> • Life saving drugs 	Available in PHCs and fund provided for procurement	Anti snake venom, anti rabies, ARI, Fever, skin infection, Kalajar. Diarrhea
	<ul style="list-style-type: none"> • Doctors for inaccessible areas 	Health camp at 10 areas patient checked 900.	
Clothes	<ul style="list-style-type: none"> • Clothes 	7,300 pieces	Children and Women
Education: 7,967 school buildings are damaged	<ul style="list-style-type: none"> • Study materials/ books for students • Temporary school building 		
Agriculture: 1.25 million hac. crop land affected	<ul style="list-style-type: none"> • Short duration crop seeds • Support for removal of sand 		

	<ul style="list-style-type: none"> • Support for Pre-Rabi and Rabi 		
Livestock: 920 cattle's lost Affected 24.49 Lakh	<ul style="list-style-type: none"> • Support for people who lost their cattle • Fodder for the remaining animals • Vaccination of the animals & veterinary care 		
Villages surrounded with water - 3191	<ul style="list-style-type: none"> • Cooked Food / Dry Stuffs • Health Camps • Safe drinking water 		Supply of Cooked Food / Dry Stuffs for the marooned persons with adequate Drinking water and Health camps with Medicines.

Achievements till date :

UNDP Support

- UNDP is supporting the local administration in providing temporary shelter and other essentials. UNDP is assisting the Relief Commissioner, Bihar in setting up of a strong coordinating System with the help of Coordination Specialist, Information Technology and Management Information System support. OCHA and Govt. of Norway Grant are being used for provision of temporary roofing and emergency drinking water provision for population living on roads, embankments and railway tracks. NUNV livelihood and Habitat Specialist have assessed the need and possibility of a recovery programme. 2 NUNV doctors are providing health assistance to Sitamarhi / Darbhanga Districts.
- UNICEF has mobilized 1,420 bags of bleaching powders to health dept. for onward transmission to districts. ORS packets are not adequate for the affected areas.
- IRCS, Patna is reviewing the relief operation and condition of health services in the flood-affected areas. In most of the places the Indian Red Cross is supporting government for relief distribution. So far 5000 Polythenes have already been distributed 4000 family packs, 60 boats, 150 tents and 500 packets Atta for 500 families
- USAID and Concern World Wide have shown their interest and will conduct a preliminary assessment. Swiss Red Cross team is here for assessment of the situation.
- UNDP has provided polythene for 3,500 families at Samastipur and 1,000 community tents from Govt. of Orissa have already been supplied to Bihar.
- One set of Computer with all accessories have been provided to State control room for database and information sharing.
- Sahara India Parivar has distributed 3100 polythene sheets, 3,300 sarees and dhotis to the flood affected population.



Future Plan of action:

- **UNICEF**, Bihar will provide 30,000 polythene sheets .100,000 kg bleaching powder, 500,000 halogen tablets have already been provided to health department for water chlorination.
 - **IRCS** is planning to provide 50,000 family kits to the affected areas.
 - **UNDP** is planning to support strengthening the coordination system at state and district levels. It has discussed its future plan of action for Recovery Programme wherein 30 model villages will be established for shelter and livelihood interventions. Representative from UNDP shared the strategy of the relief operation. Immediate relief operation has been planned for children food need, temporary shelter, Health and Veterinary camps and survival kits for the flood affected populace UNDP and UNICEF have committed to provide support for strengthening the State Relief Control Room. This would enhance the:
 - Communication System
 - Developing database system and vulnerability mapping for decision making
 - Regular updating of information on the website.
- UNDP discussed about its plan to upgrade control room in five most affected district of Bihar with a view to strengthen the District Disaster Information Management database. UNDP has requested IRCS for providing IT Volunteers for the above initiative. IRCS would confirm the deputation of the volunteers soon.
- **Indian Red Cross Society** will provide medicine worth Rs.15 lac in 11 districts and 10,000 family kits worth Rs. 1,500 is planned to be provided.

- **CONCERN** is planning to provide immediate basic shelter and water needs for 2,000 flood affected families, and Items to be distributed are ORS, Halogen Tabs. , Polythene sheets, Jerry Cans, Rope and Kitchen Utensil.
- **EFICOR** has selected Dhanoli block of Darbanga district for flood interventions. They have surveyed 20-25 villages and are planning to provide different kinds of support to 4,000 families.
 - Food support for at least 2 weeks will be provided.
 - As per present need assessment, people have requested for blankets instead of plastic sheets
 - Water and Sanitation Programme will be undertaken - 15 days medical camps will be organized and hygiene kits will be provided.
 - 10-hand pumps renovation in each village will be done.

CE-Dev

- Planning to take-up construction of houses using locally available indigenous housing materials like bamboo and grasses in Darbhanga District.
- Water quality monitoring will be done for water bodies and shared with govt. department for further sanitation Programme.

Action Aid, Patna:

- Will organize health camp in Kusareswar, Kiratpur blocks of Darbhanga district and would provide medicine for Kalazar.

SOURCES OF INFORMATION:

- Relief and Rehabilitation Dept., Govt of Bihar, Patna
- UNDP, Bihar
- District Magistrate, Affected Districts
- Director, IRCS, Bihar
- UNICEF, Bihar
- Concern Worldwide, Bhubaneswar Office.
- Media Reports