

Floods hit Bihar in mid-August this year; within a month 19 districts were reeling under its impact. Bihar is India's most flood-prone state with 76 percent of its population in North Bihar plains living under the constant threat of recurring floods and the devastation in its aftermath. The latest floods were triggered by heavy rains in Nepal and in the northern districts of the state. Nearly 17 million people were affected in over 8000 villages. The state government machinery, along with National Disaster Relief Force (NDRF) and State Disaster Relief Force (SDRF) swung into action to deploy boats and evacuate people, and provide food and shelter.

Oxfam India through its Humanitarian Hub, stepped in to respond in two districts – Katihar and Sitamarhi. Parts of other states like Assam, Uttar Pradesh, Manipur, Gujarat, West Bengal, and Odisha were affected by floods as well. Over the years, Oxfam India¹ has established itself as a key player in rapid emergency response and humanitarian² core competencies like Water, Sanitation and Hygiene (WASH)³ and Emergency Food Security and Vulnerable Livelihoods (EFSVL). As part of the emergency flood response Oxfam India along with other NGOs is providing shelter and hygiene kits, and chlorine tablets. The tablets ensure that available drinking water is disinfected and made fit for drinking; this helps reduce the chances of incidence of water-borne diseases which is common after floods.

While post-floods response is important, it is even more important to set up systems to make communities resilient and emergency-ready. Oxfam India's Disaster Risk Reduction (DRR) programme, aims at making communities resilient to disasters and lessening the vulnerability of people from potential shocks by reducing risks to lives and livelihoods. This includes supporting resilient livelihoods and disaster-proof agricultural practices and technologies, building suitable infrastructures, and ensuring access to safe drinking water. Thus, DRR is one of the positive links between disaster and development.

In Bihar, Oxfam India has been working in three flood-prone districts Muzaffarpur, Sitamarhi, and Samastipur since 2012. Though it isn't working in Katihar, it is responding as it is one of the worst affected districts in the state. Oxfam India has been working in Muzaffarpur with Integrated Development Foundation (IDF) in 15 villages of 3 blocks; in Samastipur with Nav Jagriti in 15 villages in one block; in Sitamarhi with Adithi in 15 villages in one block⁵. In the 45 villages in these districts, village-level DRR committees have been formed and trained in emergency response, institution building, search and rescue, first-aid, health, schemes and livelihood. Through the different committees, attempt is being made to mainstream DRR into village-level planning and plan for emergency situations like floods. These village-level committees and trainings have proved useful, especially in Sitamarhi and Muzaffarpur. No deaths or incidence of diarrhoea were reported from any of the villages that Oxfam India works in (See: How Village-Level DRR Committees Fared).

FORMING DRR COMMITTEES

Oxfam India, along with its partner NGOs, first identified blocks and villages for the DRR project. The blocks, identified, were prone to flooding; the main livelihood for 80 percent of the population in these blocks is farming, animal husbandry and allied activities, which received severe setback due to floods in the past.

Three blocks were identified in IDF's project area in Muzaffarpur: Gaighat, Katra and Minapur. One block was identified in Nav Jagriti's project area in Samastipur: Khanpur. Fifteen villages were identified in the two districts. These villages were remote, low-lying, and flood-prone with very poor connectivity. Moreover, these villages lacked any mitigation or adaptation strategy.

Informal meetings were held with villagers to understand their requirements and expectations. Village-level DRR committees (VLC) were formed. These committees comprised Dalits, Muslims and the differently-abled. Participation of women was ensured. "Migration is high in these villages. Only women and older men are left behind. So they were the ones who formed a large part of these committees. Young boys and girls going to schools and colleges were involved as well," says Gaurav Ranjan of IDF.

In the IDF villages, these committees are called Lok Sahyog Samiti; in Nav Jagriti villages these are called Gram Sahyog Samiti. A president, secretary and a treasurer are selected for each committee. Oxfam India has formed 30 village-level committees with the two partners.



BIHAR'S FLOOD SITUATION REPORT (SEPTEMBER 9, 2017)⁴

PEOPLE AFFECTED: 17 MILLION

DISTRICTS AFFECTED: 19

BLOCKS AFFECTED: 187

PANCHAYATS AFFECTED: 2371

VILLAGES AFFECTED: 8394

OXFAM INDIA RESPONSE: KATI HAR AND SITAMARHI

WORST AFFECTED DISTRICTS: EAST CHAMPARAN, DARBHANGA, KISHANGANJ, ARARIA, PURNEA, AND KATI HAR

TIMELINE: OXFAM INDIA'S DRR PROGRAMME IN BIHAR

2012

- Villages identified
- Village-level DRR committee formed; Women, Dalit, Muslim and Differently-abled included

2012 & 2013

- Trained village-level DRR committees in institution building, search and rescue, first-aid, schemes and livelihood

2014

- Conducted vulnerability assessment in villages
- Findings of these assessments included in village Community Contingency Plans (CCP) or Village Disaster Management Plan (VDMP)
- Formed livelihood, health and emergency response groups

2015

- Mobilised resources for implementation of CCP and VDMP

2016

- DRR committee members present VDMP framework to Disaster Management Department, Government of Bihar

EMERGENCY RESPONSE

The Lok Sahyog and Gram Sahyog Samitis were first trained on early warning, search and rescue, and first aid. These trainings were applicable for floods and earthquakes. This was important because though these are flood-prone villages, the government provided no such training. "They would be there after the disaster, but these trainings were important to save our lives. We haven't had major floods since 2007-2008 but now we are well-prepared," Urmila Devi of Basantpur village in Samastipur's Khanpur block had said in March, earlier this year.

Young girls and boys were trained to give first aid; women are well-trained to tend to broken bones and snakebites. The committee trained villagers to keep flood response kits handy. These kits contain dry ration, important papers and contact numbers, and first-aid kit. These kits ensure that families evacuate immediately with basic necessary items without losing time.

Oxfam India along with IDF set up an information centre-Lok Sahyog Sthal-in Katra block. This centre is manned by a volunteer well-trained in search and rescue; this is also the first port of call for the community to access information on government schemes. This centre is stocked with forms related to government schemes and IEC (information, education, communication) material on early warning systems. It is equipped with rope ladders, locally made lifebuoys (made by stringing plastic bottles together), and first-aid kits. The contact details of doctors, and officials of District Disaster Management Authority and State Disaster Management Authority have been put on display to enable accessibility.

VULNERABILITY ASSESSMENT

During meetings, the villagers expressed concerns regarding safe drinking water, health, and the need for electricity and roads. The DRR committees, trained by Oxfam India and the partner NGOs, conducted a resource mapping and vulnerability assessment for the villages. This was done through Participatory Vulnerability Capacity Assessment (PVCA).

Issues related to electricity, health, water and sanitation, and mobility i.e. lack of proper roads were the key findings of the vulnerability assessment. "We knew that with these facilities, we will be better placed to deal with disaster and problems that arise in the aftermath," said Jai Narayan, a DRR committee member. After the vulnerability assessment, groups were formed. They were divided into health, livelihood/agriculture, early warning, and emergency response groups. The villagers could choose to be a part of any group. These groups comprised of up to 40 members.

The findings in the vulnerability assessment were categorized as disaster and development needs. For instance, while the government has budget for 'development' demands like electricity and roads, they do not have a separate budget for 'disaster risk reduction'. So it becomes important to route these demands through different departments in order to get funds allocated for the same and the work done.

"If development needs are met, it will be useful during and after floods or any other emergency. For instance, there is a demand for safe drinking water. This can be ensured through raised hand pumps. So though this is being seen as a DRR requirement, we push it as a development agenda and approach the Public Health Engineering Department (PHED) for resources and implementation," explains Vijay Kumar Bablu of Nav Jagriti.

PROVIDING SAFE WATER

During floods, drinking water and sanitation facilities are damaged, contaminating them, and putting the community at risk of water-borne diseases. The ground water in these parts have high iron and fluoride content, and high pH levels. Oxfam India along with the partner NGOs built a few raised hand pump models in the villages. These were constructed to avoid submergence and contamination. These cylindrical raised hand pumps by design are able to withstand the onslaught of floods.

In the last couple of years, 21 raised hand pumps have been built by both Oxfam and its partners. The hand pumps cost Rs 50,000. The community collects money for the maintenance of these hand pumps; it costs about Rs 5000- 6000. Women, especially, have been trained in the maintenance and upkeep of the hand pumps.

Encouraged by the utility and benefits of these raised hand pumps, 15 villages approached the PHED to get raised hand pumps for their villages. Villages which already have raised hand pumps now plan to make it disabled-friendly; constructing ramps for these hand pumps is next on the agenda.

RAISED TOILETS FOR BETTER HEALTH

Under the erstwhile Total Sanitation Campaign and the present Swachh Bharat Abhiyaan, stress is laid on the construction of toilets and making villages' open-defecation free. Though toilets are being built but like hand pumps they are not raised. The government, under the Swachh Bharat Abhiyaan

HOW VILLAGE-LEVEL DRR COMMITTEES FARED⁶:



PATROL TEAMS FORMED; OVER 80 PEOPLE INCLUDING PREGNANT WOMEN, OLD AND DISABLED EVACUATED



6 LOCATIONS RED-FLAGGED; DROWNING INCIDENCE AVERTED



COLLABORATED WITH JEEVIKA AND PANCHAYATI RAJ INSTITUTIONS TO SET COMMUNITY KITCHENS



RAISED HAND PUMPS CONSTRUCTED DURING THE YEAR ENSURED SAFE DRINKING WATER FOR 200 HOUSEHOLDS



RAISED COMMUNITY TOILETS BENEFITTED 55 HOUSEHOLDS



25 TEMPORARY BAMBOO TOILETS SET UP; 115 HOUSEHOLDS BENEFITTED



ORGANISED HEALTH CHECKS ALONG WITH PRIMARY HEALTH CENTRES (PHCS)



35 PERSONS RECEIVED FIRST AID



350 HAND PUMPS CHLORINATED BY THE HEALTH COMMITTEES IN THE VILLAGE



800 HOUSEHOLDS HAD PREPARED FAMILY SURVIVAL KIT (FSK) INCLUDING CHURA, RICE, SATTU, CANDLE, MATCH BOX, ROPE, IMPORTANT DOCUMENTS, AND JEWELLERY

scheme, gives Rs 12,000 after the toilet is constructed. However, the caveat is that payments will be made only after all the houses in a ward have constructed toilets. “While this makes the availability and access to funds a matter of concern, the funds provided by the government is not enough to construct a raised toilet. The toilets made by Oxfam India cost Rs 20,000. These should be replicated. Raised toilets, like raised hand pumps, will not get submerged during floods or when the water level rises,” explains Vijay.

Oxfam India, along with its partner NGOs, constructed raised toilet models as pilot in some of these villages. Apart from constructing toilets, the committees trained the community on using them. During meetings, stress was laid on personal hygiene, and cleanliness of toilets and the village. This work is led by the health group, formed under the DRR committee, and it deals with all issues related to water and sanitation. ASHA and anganwadi workers are integral to this group. While Oxfam India and its partners have made 12 model toilets, the community took the initiative to build 15 similar toilets. Of the 15, the community have been reimbursed by the PHED for three in Basantpur; reimbursements for the rest are awaited.

STRENGTHENING LIVELIHOODS

A livelihood group or a *Kisaan Samiti* was formed under all the village-level committees. Waterlogging remains a big problem in most of the villages; the low-lying areas are either uncultivable or crops in these area are prone to damage due to flooding. Oxfam India, along with the NGO partners, first organised meetings and trainings of communities’ with Krishi Vigyan Kendra (KVK) officials in 2014, to understand and get trained on sustainable farming in waterlogged areas. These meetings—the communities’ first interactions with the agriculture officers—turned out to be fruitful. The KVKs provided the farmers with a flood-resistant variety of paddy, the Swarna-Sub 1.

The trainings helped farmers learn new techniques of farming. For instance, the use of agro-nets was introduced to save standing crops from unpredictable weather. The farmers were trained in vermicomposting, weed management, pest management, crop cycles, SRI/SWI (system of rice intensification/ system of wheat intensification), and vegetable cultivation.

“There was lack of knowledge. Earlier, a few of them who did try to grow vegetables gave it up due to poor productivity. These trainings proved useful,” says Gaurav.

Earlier, for farmers in these villages vegetable cultivation was not a priority. Through trainings, farmers, especially the women, started growing vegetables. Earlier vegetables meant only potatoes, now they have started growing cauliflower, peas, spinach and other green vegetables. “This takes care of our families’ nutritional requirements. We do not buy vegetables from the market. In fact, we sell surplus vegetables,” said Archana Kumari of Bandhpura village. Sale of vegetables has augmented their income; farmers earn profits of at least Rs 2000 every month.

“Now, they have taken to vegetable farming in a big way. Shifting from monoculture, and subsequently moving away from dependence on just one crop, has been a huge improvement. They are also exploring and



Flood-proof raised toilet model made by Oxfam India and Nav Jagriti at Basantpur Village.

experimenting with new crops,” adds Gaurav. Ram Sharma, president of the VLC at Bandhpura in Muzaffarpur’s Katra block, successfully experimented with mushroom cultivation after a brief exposure visit to Dr Rajendra Prasad Agriculture University, Pusa (Samastipur). Farmers are also keen to experiment with high valued crops. In 2016, they were trained to cultivate high-valued crops like til (sesame). In the past couple of years, regular interactions with KVK officials have ensured that farmers can directly approach the officials.

Vermicomposting and organic farming is encouraged. Small models of vermicomposting pits are made for the community. “Initially, two pits were constructed in our village. Each cost Rs 3000. This was a huge success and we did not have to spend on fertilisers any longer. Apart from the two pits, composting boxes were given to households. Though these were very effective, they were often destroyed by mongoose (nevla),” says Archana. The village-level committee at Bandhpura got almost 25-30 vermicomposting pits sanctioned and constructed by the government.

CREATING DEMAND AND MOBILISING RESOURCES

The community was also trained to mobilise resources. “While we installed a few model vermicomposting pits, raised hand pumps and toilets, it was important that the demand came from within the community. Once the demands came, channels to mobilise resources were identified. This was crucial to include DRR component in village-level development plans,” says Gaurav.

Oxfam India and the partner NGOs guided the VLCs initially. But soon the community was able to put forth their demands, raise resources, and ensure implementation of projects. This was key to mainstreaming DRR and making it sustainable. The group identifies their demands, takes it to the ward members who then discusses it with the Sarpanch and Mukhiya at the panchayat level. Priorities are set and that is then passed by the panchayat. For instance, if there is a demand for a community hall and toilets in the village, then the panchayat more often than not will prioritise the construction of toilets. The application is then sent to the Block Development Officer (BDO).

“If the BDO did not act upon it, we approached the MLA and MP. For instance, we got the main road in the village constructed after some running around. We finally got the MP to get the work done,” says Ram Sharma. This concrete road, the only one leading out of the village, was made at a cost of Rs 1.76 crore. This road, the villagers believe, will neither get washed away in the rains nor submerged during floods. This has ensured that ambulance can come in and patients do not have to be ferried on cots or boats.

Some *Kisaan Samitis* have started collecting money; this is kept aside to invest in farming. The Samiti members can take loan from here; those outside the Samiti can borrow money on the guarantee of a member and on a marginally higher rate of interest. Some *Kisaan Samitis* have managed to collect up to Rs 500,000. The success of some of these *Kisaan Samitis* has spurred interest in other Samitis and other villages as well.



Ram Sharma in his kitchen garden in Bandhpura village

VILLAGE-LEVEL COMMITTEES AND COMMUNITY

Through VLCs, Oxfam India and its partner NGOs have reached out to nearly 18,500 individuals in 30 villages. The community also understands the importance of these committees. “When we meet, discussions aren’t restricted to DRR mainstreaming or emergency response. We get information about different schemes, about officials and departments that are responsible for these schemes. We are now well informed and aware of the processes, and well connected with our leaders,” says Ram Sharma.

The communities’ are also taking up issues on their own. For instance, in Bandhpura village, IDF set up one raised hand pump as a model. The VLC is now negotiating with their MLA to set up two more raised hand pumps. Ward members, too, have become pro-active regarding issues and taking the lead in getting schemes implemented. In 2016, a few VLC members presented a Village Disaster Management Plan (VDMP) to the state government during a consultation in Patna. This was a big boost for the community – not only did they present the good practices in their village, they were also lauded for their efforts.

The VLCs and the preparedness of the different committees have saved lives in these floods. Raised toilets, hand pumps have ensured that there are no breakouts of water-borne diseases. Apart from that, regular training on water chlorination also proved useful during these floods. A few of the villages had raised their houses on stilts and built *machans* (a sort of scaffolding/raised platform) to store food grain, fodder, etc. Nearly 500 households built *machans* and were able to save their goods during floods.

The fact that lives and livelihoods were saved due to the emphasis laid on emergency response and DRR, reinforces the fact that governments, especially in flood-prone states should set aside budget for DRR in village development plans and train communities in disaster preparedness. In Bihar, Oxfam India through its partners and the VLC are beginning to play an active role in policy making. They are a part of the committee preparing VDMP in the three districts. It is also one of the INGOs that is part of several committees and is contributing to developing a state DRR road map (2015-30).



Village-level DRR Committee conducting a vulnerability assessment

INDICATORS	IDF	NAV JAGRITI	TOTAL
RAISED HAND PUMPS	5	16	21
RAISED TOILETS	3	9	12
KVK TRAININGS	2	2	4

NOTES

¹ Oxfam India works in six focus states- Uttar Pradesh, Bihar, Assam, Jharkhand, Chhattisgarh and Odisha

² Through its partners, it works with communities to build their capacities to deal with disasters; building village level contingency plans, evacuation routes and safe structures, and formation of task force groups.

³ Water, sanitation and good hygiene (WASH) practices, are crucial for survival in the initial stages of disaster. Water contamination at source

and during handling at the household level is a major factor which aggravates the health problems in a post disaster situation. In many cases, post disaster disease outbreaks are also due to the poor water, sanitation and Hygiene practices. The drinking water sources including the individual and the community hand pumps easily gets damaged or contaminated during floods and need emergency repair. WASH programme promotes good personal and environmental hygiene in order to protect health. An effective WASH programme relies on exchange of information between the agency and the disaster-affected population in order to identify

key hygiene problems and culturally appropriate solutions. Health promotion is vital to successful WASH intervention.

⁴ Oxfam India’s Situation Report No. 13 prepared by OIN’s Humanitarian Hub

⁵ This practice note talks about two partners IDF and Nav Jagriti

⁶ Data provided by Oxfam India (Bihar regional office) as on September 14, 2017

AUTHOR: SAVVY SOUMYA MISRA

INPUTS: CHANDAN KUMAR, DIYA DUTTA, RANU KAYASTHA BHOGAL

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Oxfam India | 4th and 5th Floor, Shriram Bharatiya Kala Kendra, 1, Copernicus Marg, New Delhi 110001

Tel: +91 (0) 11 46538000 | Web: www.oxfamindia.org

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