

# PARTNERS FOR RESILIENCE

## Narrative Report - India

2013



## List of Abbreviations

ASA	Agency for Social Action	MDSS	Muzaffar Diocesan Social Service Centre
ASK	Association for Stimulating Knowhow	MIS	Management Information System
AIDMI	All India Disaster Mitigation Institute	MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
BIAG	Bihar Inter Agency Group	MoEF	Ministry of Environment and Forests
BSDMA	Bihar State Disaster Management Authority	NABARD	National Bank for Agriculture and Rural Development
CBO	Community based Organisation	NDMA	National Disaster Management Authority
CCA	Climate Change Adaptation	NetCoast	Network of Conservationist
CDA	Chilika Development Authority	NGO	Non Government Organisation
CENDERET	Centre for Development Research and Training	NJSS	Netaji Jubak Sangh
CMDRR	Community Managed Disaster Risk Reduction	OLIC	Odisha Lift Irrigation Corporation
CSO	Civil Society Organisation	ORS	Oral Rehydration Solution/Salts
DDMA	District Disaster Management Agency	OSDMA	Odisha State Disaster Management Authority
DDMP	District Disaster Management Plan	PfR	Partners for Resilience
DMC	Disaster Management Committee	PRA	Participatory Risk Assessment
DRDA	District Rural Development Agency	PRI	Panchayati Raj Institution
DRR	Disaster Risk Reduction	PWG	Programme Working Group
DSW	Department of Social Welfare	RCCC	Red Cross/ Red Crescent Climate Centre
EMR	Ecosystem Management and Restoration	SDMA	State Disaster Management Plan
GSP	Gopabandhu Sewa Parishad	SHG	Self Help Group
IAY	Indira Awas Yojan	SL	Sustainable livelihoods
ICZMP	Integrated Coastal Zone Management Project	SOP	Standard Operating Procedure
IDRC	International Development Research Centre	TSC	Total sanitation Campaign
IRRI	International Rice Research Institute	UNISDR	United Nations International Strategy for Disaster Reduction
KVK	Krishi Vigyan Kendra	VLDRC	Village level Disaster Resilience Committee
LSVK	Lok Shakti Vikash Kendra	WISA	Wetlands International South Asia

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# 1 Basic Information

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## 2. Executive summary

PfR – India aims at reducing the impacts of natural hazards on the lives and livelihoods of communities living in Gandak-Kosi floodplains, Bihar and Mahanadi Delta, Odisha through interventions based on ecosystem restoration, disaster risk reduction and climate change adaptation approaches. Its implementation was initiated in 2011 by a partnership of 21 NGOs led by Wetlands International – South Asia, Cordaid and Red Cross-Climate Centre. Field implementation of the project in Mahanadi Delta, Odisha is led by NetCoast partners, whereas Caritas leads implementation in Gandak – Kosi floodplains, Bihar. The project is organized along three strategic directions of the project, namely, livelihood security and poverty reduction, civil society strengthening and advocacy and policy dialogue. ASK supports capacity building and internal monitoring and review.

For PfR – India, 2013 was the third year of project implementation. Risk reduction plans developed based on Participatory Risk Assessment (conducted in 2012) form the basis of interventions in 184 villages of Mahanadi Delta and Gandak- Kosi Floodplains reaching out to 32,636 beneficiaries. In 2012, PfR India partners worked on putting in place institutional mechanisms for implementing risk reduction plans, strengthening early warning systems and enhancing disaster preparedness. During 2013, the focus was on improving community livelihoods and natural resource base, while continually engaging with VLDRCs and DMCs in the project villages to improve their ability to anticipate, respond and adapt to risks. To ensure community ownership, PfR partners enabled integration of risk reduction plans in village development plans for 34 Gram Panchayats, whereas efforts are being put in place for the rest.

During the year, PfR partners with support of technical institutions promoted sustainable agriculture technologies in 149 villages reaching out to 3,522 farmers for adoption of flood tolerant seed varieties, water-saving irrigation techniques, and grain banks. In 43 villages of Mahanadi Delta, PfR partners facilitated rejuvenation of water user associations which work for equitable sharing of water through community management of irrigation infrastructure. Community institutions, with support of PfR partner network, created plantations in 69 villages to control river bank erosion and create buffers along coastline by planting 0.14 million saplings. To secure functioning of water and sanitation infrastructure during floods, project enabled raising plinths of 710 toilets (in 69 villages), 304 community hand-pumps (in 87 villages). In 25 villages, ponds were restored to increase local availability of water, and in 12 villages, pisciculture introduced with technical support of expert agencies. Early warning systems were revisited in all villages. The partners also assisted establishment of 612 family level and 22 village level grain banks, 927 family level fodder banks as a part of disaster preparedness measures. For 52 villages of Delta wherein no early warning system or equipment existed, VLDRCs were provided early warning equipment along with training. In Bihar, PfR partners facilitated establishment of 84 self-help groups which have initiated 142 micro-enterprise and intergroup credit-saving operations. Collaborating with 12 government institutions / departments and 4 knowledge centres, PfR partners conducted 197 village level training workshops (3178 participants) on sustainable agro-practices, disaster preparedness and response, pisciculture, and microenterprise management to support the aforementioned interventions. Funds amounting to Rs 269 million were leveraged through the ongoing developmental projects to support implementation of risk reduction plans.

To strengthen PfR network, 15 workshops were organized (79 participants) on monitoring and reporting, sustainability assessment and community managed DRR. Partners working in Gandak-Kosi floodplains, Bihar were also trained on use of eco-criteria and climate minimum standards. These trainings have helped improve overall performance assessment and reporting within the project, as well as enhanced ability of the partners to apply integrated approaches in field interventions.

WISA and Cordaid continued to work on national level policy and advocacy issues aimed at increasing emphasis on DRR and ecosystem management and restoration as a part of resilience building. Recognizing the disconnect between water management and ecosystem management, WISA organized a national consultation meeting on water and biodiversity on May 22, the International Day of Biological Diversity. The need to account for the role of ecosystems (for example through their ability to buffer extreme events and support adaptation to climate change) as a natural infrastructure in water management planning and decision making emerged as one of the major conclusions of the workshop. WISA is liaising with the MoEF to ensure that the recommendation is included in the guidelines for the national programme on wetland conservation. Within Mahanadi Delta, WISA is working with ICZMP and OSWMA to bring the two major reservoirs controlling hydraulics of the delta, namely Hirakud Dam (on Mahanadi River) and Rengali Dam (on Brahmani River) into the ambit of integrated management, specifically addressing the water needs of

downstream ecosystems and disaster risk reduction for communities. Within Gandak-Kosi floodplains, the draft management plan for Kaabar Taal has been finalized, recommending a pathway for rejuvenating the wetlands as a means of enhancing water and food security of communities and reducing risk of floods and droughts in the long run.

Cordaid continued its engagement with Sphere- India and NDMA to make the District Disaster Management Plan comprehensive. Cordaid supported NDMA in drafting and refining policies on 'Role of communities in Disaster', 'Role of NGOs in Disaster' and 'Minimum Standards in Relief'. Cordaid also facilitated a discussion on 'Role of NGOs and Army in Disasters' as a panellist in UNISDR International Conference in Geneva, Switzerland. CARITAS worked with Government of Bihar on development of Model District Disaster Management Plan (DDMP) of West Champaran. Notably, the Government of Bihar has recognized PfR-India as an innovative project for further replication and upscaling.

The year was also marked by a series of disasters. In June 2013, catastrophic cloudburst triggered floods and landslides in Uttarakhand in which more than 5,000 lives were lost alongwith unprecedented damage to livelihoods, asset and overall economy. In August 2013, flood in Ganges affected nearly 30 villages in Bhagalpur and Munger districts of Bihar. On October 12, cyclone Phailin hit the Odisha coastline. Each of these events had a bearing on PfR implementation. The Gangetic floods and cyclone Phailin occurred within the project implementing areas. 71 PfR villages were directly hit. PfR India partners worked with the village level institutions and the government agencies assisting in preparedness measures, and post disaster relief and rehabilitation measures. During the Uttarakhand floods, termed as Himalayan Tsunami given the scale of disaster, CARITAS and Cordaid were engaged in relief and rehabilitation operations. A deeper analysis of causes and consequences for the three events underline the need for integrated approaches for managing and reducing disaster risk. The role of disaster preparedness stood out in the aftermath of Phailin and Ganga floods.

In contribution to the linking and learning agenda, PfR-India has partnered with the UNDP-IIT, Kanpur knowledge network on flood and waterlogging. This will provide an opportunity for the project to share integrated approaches for managing water related risks. A Knowledge Management Team has been developed within CARITAS to provide research inputs related to landscape processes in DRR planning. A two phase study to capture the process steps of participatory risk assessment and integration of DRR/EMR/CCA in PfR programme implementation has been initiated. A detailed assessment on the effectiveness of PfR interventions, role of landscape elements, efficiency of various early warning information sharing mechanisms has also been initiated in the Phailin cyclone affected villages of Mahanadi Delta. The outcomes of all these assessments will be available during 2014.

The three tier internal coordination mechanism with **Programme Management Committee** (overall responsible for project delivery ,coherence of different approaches, and alignment with alliance objectives); **Project Coordinator** (at WISA - responsible for day to day project management, communication between partners, compilation of national reports, ensuring compliance to monitoring and evaluation frameworks, coordination of the learning agenda, capacity building) and **PfR Task Force** (to coordinate field implementation of the projects) continued to function during the year. Cordaid, after prolonged discussion with partners and evaluation of local situation, decided to terminate the project contract of CENDRET. NetCoast inducted APOWA, an organization with experience in community managed mangrove restoration to support activities in coastal villages of the Mahanadi Delta.

An internal mid-term performance evaluation of the project was conducted during 4 – 10 May 2013 by CTNL. Development of participatory assessment tool, formulation of risk reduction plans, built capacity within PfR network and ability to leverage resources from ongoing developmental projects of the government were identified as major achievements till date. Increased focus on early warning systems, investments in knowledgebase and partnerships, and development of case studies were areas recommended for strengthening. Necessary changes in Action plan for 2014 have been made to address the mid-term evaluation findings.



### 3. Intra-organizational developments

#### 3.1 Developments within individual organizations

Wetlands International – South Asia (WISA) has internalised the mandate of PfR programme into the regional strategy under the revised Wetlands International Strategic Intent 2011-2020. WISA will work towards increasing community resilience to natural hazards through better environmental management in 3 significant wetland systems. Similarly, Caritas has decided to mainstream DRR policy into organisational mandate of the 6 partner organisations (5 local NGO partners and 1 Caritas) working in PfR. Caritas has formed a Knowledge Management Team to capture field learning as well as provide research support for programme implementation. Caritas- India has also decided to integrated ecosystem management and restoration in each CMDRR project.

Government of India issues directives to CENDRET to apply for special permission to be able to receive funds from Cordaid. Despite significant efforts put in at various levels, permission could be not secured. After a prolonged review, Cordaid decided to close the PfR India contract of CENDERET. This is likely to affect results in 16 villages of Mahanadi Delta. However, this will not affect the overall performance indicator set by PfR in terms of beneficiaries, as the current numbers are well in excess of the targets. NetCoast team inducted APOWA, an agency specialized in community led mangrove restoration to support initiatives in coastal villages of Mahanadi Delta. The organisational structure and coordination amongst NetCoast partners was revisited and fine-tuned for effective and efficient implementation of risk reduction plans.

#### 3.2 Changes in external environment

Year 2013 was marked by a series of disasters. In June 2013, catastrophic cloudburst triggered floods and landslides in Uttarakhand in which more than 5,000 lives were lost alongwith unprecedented damage to livelihoods, asset and overall economy. In August 2013, flood in Ganges affected nearly 30 villages in Bhagalpur and Munger districts of Bihar. On October 12, cyclone Phailin hit the Odisha coastline.

Each of these events had a bearing on PfR implementation. The Gangetic floods and cyclone Phailin occurred within the project implementing areas. Phailin hit 41 PfR villages. Mangrove plantations and village ponds restored under the project in 14 coastal villages of Mahanadi delta were affected to various degrees. PfR India partners worked with the village level institutions and the government agencies assisting in preparedness measures, and post disaster relief and rehabilitation measures. The annual project workplan had to be adjusted to include response actions. During the Uttarakhand floods, termed as Himalayan Tsunami given the scale of disaster, CARITAS and Cordaid were engaged in relief and rehabilitation operations.

A deeper analysis of causes and consequences for the three events underline the need for integrated approaches for managing and reducing disaster risk. The role of disaster preparedness stood out in the aftermath of Phailin and Ganga floods. Case studies have been included in this to present an account of the PfR partners response and lessons learnt.

#### Cyclone Phailin

The Mahanadi delta coastline was hit by cyclone Phailin on 12 October 2013. Phailin made a landfall near Gopalpur in Ganjam district of Odisha with a wind speed of more than 200 km/hr. During the two days of heavy rainfall and wind, 12 million people in 17,968 villages of Odisha and Andhra Pradesh were affected with massive loss to assets.

Cyclonic depressions along Odisha coastline have been a near regular phenomenon. However, super cyclones have history of inflicting massive damages. The super cyclone 'Kalinga' of 1999 claimed 10,000 lives. Phailin is the second such cyclone to hit the coastline in last 14 years.

Phailin had a strikingly low number of deaths. By the end of second day, only 22 deaths were reported. A high level of preparedness was evident. Cyclone alerts were issued to the coastal communities by 9 October 2013. The Indian Meteorological Department provided accurate information regarding the pathway and landfall of Phailin. This was backed up by efficient media communication which helped convert the early warning into early action. Government of

Odisha made an historic evacuation of 0.9 million people within 36 hours to 247 cyclone shelters and thousands of schools buildings.

The coping and adaptation strategies implemented in PfR were put to a real time test during the event. Phailin impacted 41 PfR villages. Village Level Disaster Resilience Committee (VLDRC) formed under the project played a proactive role to ensure early evacuation with Odisha Disaster Rapid Action Force and District Administration. Mock drills were rehearsed by the Task Force members of VLDRC. The cyclone shelters were stocked with food and medicine. Sanitation and hygiene were taken utmost care to avoid any epidemic after Phailin. In Krushnaprasad block of Puri district, the field facilitator with local volunteers had taken special attention to relocate pregnant ladies to hospitals. PfR field coordinators and facilitators even facilitated evacuation beyond the boundaries of PfR villages. The family survival kit prepared as a measure for individual survivability helped community for 3 days after Phailin, when no relief could reach them either from government or other agencies. The VLDRC members also helped the nearby non-PfR villages with food stocks.



**Ruins of coastal settlement in Chilika after Phailin**

Heavy rains followed the cyclone. This was predicted by the Indian Meteorological Department. Floods in six major rivers- Budhabalanga, Bansadhara, Baitarini, Brahmani, Kani and Rushikulya inundated six of the 17 cyclone affected districts in Odisha. Relief from government was short lived and community were cut off for two days. PfR partners proactively participated in rescue and relief operation by providing relief materials and conducting health camps in cyclone and flood affected areas. Collective efforts of government, civil society and media could avoid loss of life but loss to asset is immense.

Cordaid provided additional funds for emergency response to the NetCoast partners. The partners reached out to 2565 households in 56 villages, providing polythene sheets, food, clothes and medicines as emergency assistance. Seed support to revive agriculture loss, replacement of damaged implements of fisher in Krushnaprasad, low cost houses for urban slum dwellers in Pentakotta of Puri, pond renovation work, repairing of roads in Gokharakuda and seed money to SHGs for undertaking small micro-enterprises were also supported under the grant.

Post relief and rehabilitation, PfR team is working on an assessment of the event on aspects related to effectiveness of project interventions, role of coastal ecosystems in buffering cyclone and floods, efficiency and sufficiency of information systems, forms of preparedness used and role of community institutions, with specific focus on those with risk management mandates.



**Pre Phailin**

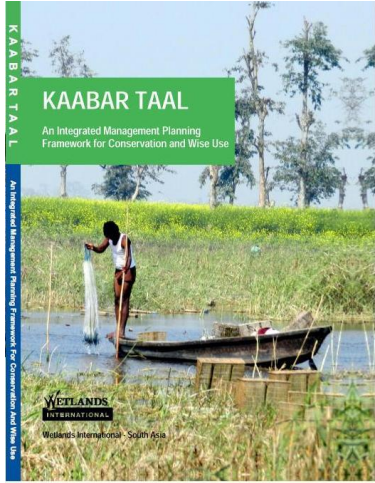


**Post Phailin**

**Phailin opened a new mouth of Chilika at Sanapatna**



## 4 Functioning of country team

<p>Internal Coordination</p>	<p>The three tier arrangement for internal coordination continued to function during the third year of PfR programme in India. The Task Force was able to support the programme by effective information flow between Programme Management Committee and field level NGOs. Annual workplans and implementation budgets were jointly developed with partners. Cross learning from field experience took place amongst partners from Mahanadi delta and Gandak- Kosi floodplains on sustainable agricultural practices.</p> <p>ASK has undertaken 7 field visits to project sites during the period to support capacity building programmes, internal monitoring and evaluation and prepare tools for strengthening field level monitoring and staff progress assessment of NGOs. Following an internal review of project implementation in Mahanadi Delta, interventions for improving functioning of the NetCoast network were identified and implemented. A similar assessment for programme implementation in Bihar was also undertaken during September.</p> <p>The results of internal evaluation emphasised on strengthening village level institutions and establishing linkage with government schemes. Based on the outcomes of evaluation the workplan for PfR implementation during 2014 and 2015 was revised.</p>
<p>Collective operation with stakeholders</p> 	<p>At local level, project team closely works with PRI members, Pani Panchayats, Self Help Groups (SHGs), Farmers club and Disaster Management Committees (DMCs) and Village Level Disaster Resilient Committees (VLDRCs) for implementation of risk reduction plans.</p> <p>At district levels, PfR is working with officials of agricultural, water resources, public health engineering and rural development departments to support implementation of risk reduction plans through convergence. The PfR team in Bihar is engaged actively in drafting District Disaster Management Plan (DDMP) of West Champaran as a member of Bihar Inter Agency Group (BIAG) and Standard Operating Procedures (SOP) for drought management.</p> <p>PfR is working with the state government of Bihar to support integrated management of wetlands as a part of overall disaster risk reduction and climate change adaptation. The draft Management Plan of Kaabar Taal was prepared by WISA as a strategy to reduce disaster risk by restoring ecological services through wetland management.</p> <p>Within Odisha, PfR partners are working with State Integrated Coastal Zone Management Project (ICZMP) to restore coastal vegetation as a means to buffer impacts of extreme events and livelihood diversification of coastal community. The project is also working with State wetland Management Authority to bring two major reservoirs, Hirakud and Rengali within the ambit of integrated management, especially addressing the needs of disaster risk reduction and downstream ecosystem restoration.</p> <p>PfR continued engagement with National Disaster Management Authority (NDMA) to support formulation of integrated DDMPs and Ministry of Environment and Forest (MoEF) to strengthen focus on conservation and sustainable management of wetlands to sustain biodiversity and ecosystem services which <i>inter alia</i> assist in disaster risk reduction and climate change adaptation.</p>

Alignment of activities and shared vision	PfR India team shared a common implementation strategy for intervention in project areas. The team has developed common indicators against logframe to access progress of activities. The annual workplans, reporting formats and monitoring assessments are jointly planned and executed by the Task Force members.
Availability of strategy and implementation plan	A common implementation strategy has been developed for the two sites which includes improving natural capital, diversify livelihood options and enhance community preparedness to disaster.
Internalization of DRR, CCA and EMR approaches	<p>WISA has integrated PfR programme into its regional strategy as a collective target on wetlands and disaster risk reduction. The CMDRR programme of Cordaid has factored in the environment conservation aspects for better delivery of disaster risk reduction in their programmes.</p> <p>The Climate Change minimum standard tool was demonstrated in West and East Champaran, Bihar during December 2013 and gaps in implementing an integrated approach have been identified. A similar process will be done in Mahanadi Delta during February 2014.</p> <p>Mainstreaming DRR, CCA and EMR approaches within organisational mandate of Caritas and partners and NetCoast is under process and is an area of focus in the 2014 action Plan of PfR-India.</p>
Support senior management to PfR implementation	The programme is well supported by senior management of implementing organizations. WISA Governing Body takes keen interest in progress of project implementation, and conducts a bi-monthly review as well as undertakes periodic field visits. Similarly, Cordaid has allocated additional resources towards cluster planning and inclusion of ecosystem and climate change dimensions in risk reduction planning. Senior management response to support emergency as well as strategic investment in PfR project sites is increasingly positive.
Changes in external environment impacting alliances ability to implement PfR programme	Funding restrictions imposed by Government of India on certain NGOs and funding agencies have impacted functioning.

## 5. Progress on programme implementation

### 5.1 Activities under three strategic directions

This section of annual report contains an overview of activities and achievements under the three strategic directions of the PfR, namely: a) community direct intervention (poverty alleviation), b) strengthening civil society and c) policy and advocacy are discussed in this section.

#### 5.1.1 Direct intervention

PfR-India envisages building disaster resilient communities in 184 villages of Mahanadi Delta and Gandak Kosi floodplains through interventions based on ecosystem restoration, disaster risk reduction and climate change adaptation approaches. At village levels, risk reduction plans translate the resilience approaches to specific interventions and outcomes. These plans were developed for all the project villages during 2011-12 through application of Participatory Risk Assessment (PRA) tool. The tool uses a broader diagnostic approach for risk assessment – particularly focusing on risk context as a means of understanding the systemic and non-systemic risks that impact community resilience. The risk reduction plans that have emerged from assessments have interventions classified under three major strategic objectives: a) improved management of natural capital; b) diversified livelihood options and c) increased disaster preparedness. Building capacity and strengthening institutions have been identified as cross cutting actions.

The risk reduction plans developed under the project co-exists with the conventional village developmental plans which are supported by a range of schemes that address different aspects of rural livelihoods. Several of developmental programmes bear complementarity with the risk reduction plans, however, on their own do not automatically and comprehensively contribute to risk reduction and resilience building. PfR implementation therefore, to a large extent, leverages funds from the ongoing developmental schemes, and plays a catalytic role in ensuring convergence within various activities with a focus on risk reduction. In addition, the PfR partners focus on creation of an enabling environment for resilience building through addressing capacity building needs, creating linkages with technology institutions and monitoring implementation of risk reduction plans.

An overview of implementation and achievement in the project area is presented below.

**Gandak- Kosi floodplains:** During 2013, implementation of risk reduction plans continued in 84 villages reaching out to 11,914 beneficiaries. Of the 26 Gram Panchayats in project area, 24 have formally integrated the risk reduction plans with the village development plans, and are proactively seeking implementation of the identified activities by leveraging funds and technical resources from available schemes of state and central government agencies (Rs. 14.299 million being the sum leveraged during the year).

The 397 taskforces formed under the ambit of Disaster Management Committees (DMC) in 84 villages continued to function as focal points for disaster preparedness. 10,565 households have family survival kits (dry food and medicine) in place for 10 days in the event of floods. 612 individual grain banks and 927 fodder banks have also been established through the follow up support of the DMC members. To secure community assets from floods, 710 toilets with raised plinths were constructed in 69 villages (leveraging financial support from Total Sanitation Campaign of Ministry of Rural Development, Government of India); 758 houses with raised plinths in 82 villages (leveraging funding from Indira Awas Yojana of Ministry of Rural Development, Government of India), and raised levels of 295 hand pumps in 78 villages (leveraging funds from the central government scheme – Mahadalit Ayog, and Public Health Engineering Department). The impact of institution building efforts was evident in community response to 2013 floods in Bhagalpur and Munger districts (Refer Box: Preparedness reduces impact of floods in Bihar)

Extended waterlogging due to impeded hydrological connectivity is one of the major hazards for agriculture in the project villages. This leads to reduced agricultural productivity and concomitant reduction in household incomes. With technical support of Krishi Vigyan Kendra (KVK) and Rajendra Agricultural University, Pusa, PfR partners demonstrated farming technology using crop varieties which can withstand extended waterlogging (Swarna Sub I) in 79 villages involving 1065 farmers. Post demonstration, 902 farmers have continued using the technology on their own. PfR partners also enabled formation of 180 farmers clubs in these villages (with 1578 farmers as members) linking them with Agriculture Technology Management Agency (ATMA) (an agriculture technology extension agency of the



**Cleaning of outlet channels in Kishan Nagar, Munger**



**Cultivation of stress tolerant variety in Chanpatia, West Champaran**

state government) and National Bank for Agriculture and Rural Development (NABARD). This will enable the clubs to access various development assistance, technological support and credit for farm and off-farm activities.

During the year, 13 village ponds were also renovated to increase water availability. Funding for renovation was secured through MNREGA and Gram Sabha funds. The renovated ponds are also used for fishing and limited irrigation. In 8 villages, rejuvenation of drainage channels was carried out to reduce waterlogging in agricultural fields and ensure water availability for irrigation.

A key factor inducing livelihood vulnerability is limited local employment opportunities. PfR partners assisted 3218 families from the lowest income strata (2029 families during the current reporting period) to enrol in the National Employment Guarantee Programme (MNREGA) which secures 100 days of local employment to working members of the household. An amount of Rs 17, 53,177 was also mobilized under the scheme for implementation of activities identified under risk reduction plans (key being embankment repair, construction of approach roads and plantation to control soil erosion from river banks). In 49 villages, plantations at 318 units (63,600 plants) were created to control soil erosions in vulnerable areas identified under the risk reduction plans. 372 Ban Sewaks (2 Ban Sewaks for each unit) were appointed under the employment guarantee programme of MNREGA for watch and ward.

PfR partners also assisted in formation of 84 self- help groups to address the credit needs of the communities. All of these groups have been trained in book keeping and management of revolving funds. Of these, 61 groups have been formally linked with nationalized banks by opening banking accounts facilitating access to credit for petty business requirements. At close of 2013, 142 micro-enterprise units (petty shops, agriculture and allied activities, tailoring) were initiated by the self-help groups with credit assistance from the banks, creating an average monthly income of Rs. 658 per participating member. The groups have also been able to create a corpus of Rs 6,80,379 for meeting household credit needs. 457 households from 36 villages (15 villages in Ganga cluster and 21 villages in Gandak cluster) have adopted cattle rearing as an additional income source.

## **Preparedness helps reduce impacts of floods in Bihar**

North Bihar is drained by seven major tributaries of Ganges which inundate over 70% of the geographical area of the state during monsoon. With the monsoon inundation come in fertile silt and nutrients for the agricultural fields and fish in the rivers and ponds, and thereby floods constitute an important part of lives and livelihoods of the people living in north Bihar. While the moderate flood pulses can be enriching, large floods can be very devastating. Reducing floods has been an important developmental agenda for the government of North Bihar. Unfortunately, the major emphasis has been on construction of embankments for channelizing rivers. The effectiveness of embankments as a solution for floods is questionable particularly on account of increasing waterlogging as a result of which, the once flood dependent communities, are now flood vulnerable. During the last 30 years, the region has been ravaged by five major high magnitude floods in 1978, 1987, 1998, 2004 and 2007. Relief and rehabilitation are a heavy burden on state exchequer.

The PfR partners working in the districts of Bhagalpur and Munger located on the banks of River Ganges have adopted an alternate approach to building resilience to floods by focusing on preparedness instead of only post disaster relief and rehabilitation. In consultation with the Village Panchayats, Village Level Disaster Management Committees have been constituted as the focal institution for preparedness measures. Task Force Groups (TFG) on early warning, search and rescue, water and sanitation and first aid are entrusted to conduct specialized functions both pre and post disaster. In the event of rains, the early warning TFG gets in touch with the operators of upstream Balmiki Barrage to seek information on the quantum of water released based on which a probable time period for high flows reaching the village is worked out. This then initiates a chain of events as per the Standard Operating Procedure for disaster response including mock drills, operationalization of evacuation plans, and ensuring that adequate food, field and medicines are stored beforehand.

An assessment of the event of August 2013 floods in the project areas of Bhagalpur and Munger as against the floods of 2008 indicate that such interventions are proving to be effective. As against 2008, significant reduction in number of deaths and damages to assets was observed. Access to water, sanitation and hygiene during floods has also increased.

PfR implementation in Bihar is now working with the government agencies to explore natural solutions for managing floods by restoring wetlands. A beginning in this direction has been made with development of a management plan for restoration of Kaabar Taal in Begusarai District.

		2008	2013
1	Area inundated (ha.)	270	252
2	Affected population	5271	7115
3	Number of people with special infirmities identified as a part of disaster preparedness measures	0	347
4	Number of families with access to safe drinking water during floods	170	1123
5	Number of families with access to adequate sanitation during floods	643	340
6	Number of families having dry ration during floods	443	1245
7	Lives lost	110	22
8	Instances of waterborne disease	62	4
9	Livestock lost	87	2
10	Houses fully damaged	590	71
11	Houses partly damaged	236	43
12	Instances of lost documentation (Ration card/ Bank books/ voter cards/ land documents)	697	0
13	Families lost their crop completely	685	355
14	Instances of lost trade tools	173	24

#### **An account of TFG functioning from Bhagalpur**

For the residents of village *Kaji Koriatola*, the memories of monsoon floods of 2008 will continue to linger for a long time. The floods that year decimated the entire village, devoured 20 lives and numerous cattle, and life came to a standstill as all means of employment were damaged or lost. Nearly one third of the 340 families finally decided to migrate as there was nothing left in the village to live upon.

Bhagalpur Social Service Society (BSSS), a partner of Caritas India, chose to work in *Kaji Koriatola* under PfR as the danger of floods loomed large every year and communities vulnerable. Working with village Panchayat, BSSS conducted risk assessment and facilitated development of a response plan. The role of effective preparedness in risk reduction was conveyed through a series of trainings and workshops. The Panchayat constituted a DRR committee and task forces to lead implementation of preparedness measures.



The incessant rains since August 15, 2013 had everyone in the village worried. The DRR committee went round the village advising that the communities be braced for a possible flood. Information on the rising levels in Ganga was received, and the task force members knocked all doors to check that Family Survival Kits (FSK) were in place.

At about 8.30 pm on August 18, Amarendra Kumar Mandal and Puspesh Kumar Sangam, President and Secretary respectively of the DRR Committee went around for a final assessment of preparedness with the task force members. It occurred that a visit to the embankment would be pertinent as a breach would be devastating. During inspection, the members noted that a part of embankment had been dug by the rodents and was about to collapse any moment. Noting the emergency, President immediately called for a meeting of the Task Force. The members met for only 15 minutes (9.15 pm to 9.30 pm) and decided that considering the emergency, the embankment would need to be reinforced immediately and that the task would need to be done by the members themselves. The repair work started at 10.00 pm with gunny bags filled with mud transported and stacked at the breach point. However, it was soon realized that the 150 bags available in the village were insufficient and nearly 100 more would be required.

Sangam called the adjoining Nagratoli, a village of banana growers who had suffered huge losses during June floods. It was too late in the night to request for support from Block headquarters. Twenty persons from Nagratoli rushed to the spot within half an hour with 200 more gunny bags and joined the 50 persons already working for stabilizing the embankment. By 12.15 am in the morning of August 19, the weak segments of embankment were reinforced. The villagers waited for an hour to make sure that the reinforcement was sufficient.

Sangam recalls the eventful night often to cherish the ability to respond to a crisis. Had they not visited the river embankment, the entire village would have been engulfed with floodwaters and history would have repeated itself. He now desires that neighbouring villages also create such committees and enable joint action for preparing against flood risk. In his words "*Hamare siksha ko dusri gaon ki logon ne bhi abhi sikhne ke koshis me hain*" (Our positive learnings from PfR are now tried to be replicated by others from neighboring villages also.).

**Case study based on contribution by Anjan Bag, CARITAS-India**

**Mahanadi Delta:** Implementation of risk reduction plans continued in 100 villages of Mahanadi delta. The Village Level Disaster Resilient Committees (VLDRCs) formed as the nodal institution responsible for implementation of disaster risk reduction plans continued to function in the current period. Of the 28 Gram Panchayats covering the project villages, 10 have included the risk reduction plans within the village development plans, while efforts are underway for the rest during the current year. During the year, work on disaster preparedness in the project villages was continued. Trainings on sustainable agriculture and pisciculture were followed by demonstration pilots. Plantations were created as per risk reduction plans. NetCoast partners facilitated operationalization of water user associations. Implementation of various activities was supported through Rs. 254.9 million leveraged from ongoing developmental schemes of the state and central government. (Annex I).

Agriculture, the mainstay of livelihoods in the Mahanadi Delta is routinely affected by droughts, floods and salinity in coastal areas. Sustainable agriculture forms one of the main intervention areas for PfR partners in the Delta. In 2012, NetCoast partners in collaboration with KVK, Odisha facilitated training on sustainable agro-practices in 63 villages. In 2013, the trainings were followed with setting up of demonstration pilots, and providing of seeds of Swarna sub 1, a flood resistant rice seed variety. At close of the year, 2457 farmers from 40 villages were noted to have continued use of bio-fertilisers and crop rotation, and 990 ha in 32 villages cultivated with the Swarna sub 1 seed variety adopting System of Rice Intensification (SRI). Further, in 15 villages, PfR partners facilitated establishment of seed banks to ensure cropping in the forthcoming seasons. PfR partners, in collaboration with Agriculture Department, facilitated training of SHG members (responsible for maintenance of grain banks) on seed treatment and maintenance of seed and grain banks.

Gradual dysfunction of Water User Associations (Pani Panchayats) in the project villages was identified as a major constraint on agriculture based livelihoods. NetCoast begun the process of reviving the associations in 2012 by re-establishing an interface with the Department of Water Resources officials and revisiting the roles and responsibilities assigned as per the Odisha Pani Panchayat Act, 2002. Maintenance of irrigation infrastructure was carried out by the user associations using funds leveraged from the state government. NetCoast partners also facilitated community orientation of Pani Panchayat functioning, including revenue sharing for maintenance of irrigation infrastructure. Of the

56 WUA with which NetCoast worked with, 43 have continued to function on their own in the current year benefitting 627 ha of agricultural land. The partners are working with the remaining 13 associations to ensure their revival.

Plantation to control river bank erosion was carried out in 12 villages. A total of 30,697 saplings of economically important species were planted on river embankments. For 8 coastal villages, NetCoast partners placed a funds request for mangrove plantation to the World Bank assisted Integrated Coastal Zone Management Project in 2012, which has since been approved. The partnership mobilized community level organizations for physical implementation of the project activities including site identification, nursery preparation, plantation, and watch and ward. Funds for 24 ha plantation was provided to the village community organizations based on a tripartite agreement between the said organization, NetCoast partner and ICZMP. During 2013, 5 ha of mangrove plantation were created in 5 villages (12,000 saplings of mangrove and mangrove associate species) of Ganjam District. NetCoast continues to provide monitoring support in the project villages to ensure that the agreed workplan is adhered to and the plantation is maintained. Based on the performance, ICZMP has assured support to PfR for extending mangrove plantation in other coastal districts as well.

During the year, pilots aimed at water harvesting, improving efficiency of water use and improving hydrological connectivity were undertaken in 11 villages of the Delta. In 2 villages of Nayagarh District, NetCoast partners facilitated renovation of 2 water harvesting structures which has enabled doubled cropping and increased overall water availability. The partnership also facilitated renovation of 10 village ponds in 6 villages for water harvesting. In Kanas and Mahakalpada, desiltation of 3.8 km canals by the communities through support of NetCoast partners has significantly reduced waterlogging benefitting 260 families and 216 ha of agricultural land. As a demonstration effect, 11 prawn farmers of Kanas village who routinely block channels for freshwater prawn aquaculture have agreed to realign embankments to ensure adequate flow of water and reduce waterlogging.

Pisciculture has been identified as an option for livelihood diversification in the risk reduction plans. With technical support of KVK and Block level officials of State Fisheries Department, NetCoast partners initiated pisciculture based pilots in 16 ponds in 12 villages (including 10 ponds of 6 villages wherein renovation was undertaken). PfR worked to form SHG groups for the purpose and facilitated training on maintenance of water quality, species selection, stocking density and feeding schedule. However, all of these villages were impacted by Phailin. In technical consultation with Block Fisheries Department, the ponds have been restocked with advanced fingerlings in November. The 22 SHGs which lead the pilots are being continually monitored and provided handholding to ensure that the agreed plans are adhered to desired production is achieved.

Continuing the work on increasing disaster preparedness, NetCoast maintained continuous interface with VLDRCs and ensured that mock drills were rehearsed in all the villages. Equipment (drum and bugle) were provided on a pilot basis to VLDRCs in 12 villages to be used for early warning. In 52 villages, the committees have put in place their own early warning mechanisms (use of temple drums, electric poles) which beyond floods and cyclones also address local hazards as elephant attacks (in delta head villages). The 178 task force members trained in rescue and first aid (in 2012, NetCoast facilitated training and certification of these members through St. John's Ambulance, New Delhi an agency specialized in search, rescue and first aid training) conducted 81 trainings within the respective villages.



**Fingerlings of Indian Major Carps transported for stocking in ponds of village Malisahi of Kanas block in Puri district**

NetCoast partners worked with the trained task force members to organize these meetings. Funds have been leveraged from TSC and IAY for construction of 621 toilets and 254 houses with raised plinths. In each of 9 model villages, plinth of one village hand-pump was raised to ensure that water sources remain functional in the event of floods and waterlogging.

Despite risk transfer being identified as a risk reduction strategy by all villages, limited headway could be made till date on promoting use of insurance. In the delta, NetCoast partners identified an existing scheme of Department of Fisheries, which provides group insurance with the premium totally subsidized by the government. Working closely with the Fisheries Department and ICZMP, PfR partners developed list of eligible fisheries, and communicated the same to the department. The partners are further following up with the government agency to ensure that the fishers ultimately have coverage under insurance scheme.

### 5.1.2 Civil society capacity building

**Strengthening PfR Partner network:** Capacity building for the PfR partner network focused on improving reporting, review of project implementation and developing sustainability assessment framework for direct interventions in project villages. These were through 3 workshops organized in Delhi as well as field implementation sites, involving functionaries from all NGO partners. Project midterm evaluation was conducted by CTNL representatives as well as India project management team.

PfR Sustainability workshop was conducted during June 2013 to develop indicators for sustainability of PfR programme at three levels i.e. sustainability of community institutions, financial sustainability and organisation (network partner) sustainability. Capacity building needs were identified at each level and separate training modules have been prepared by ASK for community institutions and network partners to achieve and sustain PfR vision beyond 2015. PfR partners have used these indicators to revise the workplan for 2014 and 2015. PfR partners in Bihar have worked out a perspective five year convergence plan for Disaster Management Committees with target and time lines to sustain PfR vision. Further, mainstreaming of integrated approaches of DRR/EMR/CCA in organisational mandate of PfR partners is under process. Sustainability indicators are presented at Annex II

For NetCoast partners, 6 workshops were conducted during year on issues related to financial management and reporting, project monitoring and field implementation coordination. Capacity building inputs for field implementing team in Gandak-Kosi floodplains focused on project monitoring and reporting systems. In addition, 6 workshops were also conducted for revisiting CMDRR and application of ecosystem and climate minimum standards in field. It is envisaged to apply climate and ecosystem criteria in Mahanadi in 2014. A list of capacity building workshops for the network is at Annex III.

To strengthen the local NGO network a Convergence Planning Workshop was organised in collaboration with Integrated Coastal Zone Management Project (ICZMP). The platform was shared by government officials from Department of Fishery and Animal Husbandry and Odisha State Disaster Management Authority (OSDMA). A plan of action for seeking convergence with various ongoing government schemes was worked out and is being implemented. The workshop was followed up by an exclusive interaction of project personnel with Chief Functionary of OSDMA. The list of PfR intervention villages in Mahanadi delta was shared with OSDMA officials and modalities of engaging were



**Seed treatment camp for seed bank in Kanas block of**

**Puri**

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**Seed bank on stress tolerant variety constructed in Kanas**



worked out. The information was extremely handy during Phailin and helped field coordinators to facilitate an early evacuation. NetCoast partners also facilitated enrollment of eligible fishers under insurance scheme of Department of Fishery.

**Strengthening CSO network:** Capacity building of community institutions in the current period was primarily livelihood strengthening and diversification and disaster preparedness. These programmes were part of the process steps to strengthen implementation of activities and facilitate linkage with knowledge and technical institutions.

A total of 844 members of the 90 Disaster Management Committees (DMC) formed in Gandak-Kosi floodplains were oriented on their roles and responsibilities for effectively implementing the risk reduction plans. Based on status analysis, a training module was developed by ASK to support implementation of risk reduction plans, developing facilitation skills of members and sustaining risk reduction measures in villages. A similar package has also been developed for the VLDRCs in Mahanadi delta region based on the results of internal monitoring and evaluation conducted by ASK.

The women self help groups formed both in Mahanadi delta and Gandak –Kosi floodplains were oriented on the concept of SHGs, roles and responsibilities, internal coordination, record keeping, leadership and group management. In addition to this, 403 SHG members in Sitamarhi district within Gandak-Kosi floodplains were trained on microenterprise development and inter-loaning. Training on sustainable pisciculture was imparted to 104 community members in Kanas, Astaranga and Nimapara blocks of Puri in Mahanadi Delta.

In Bihar, 2 members from each from task force were trained in calculating the anticipated time for floodwaters reaching village from upstream barrage. To increase preparedness in the event of a hazard, 81 community level trainings were conducted with Task Force members of VLDRC. For promoting sustainable agriculture in Gandak- Kosi floodplains, 22 trainings were conducted by KVK for 917 farmers. 287 SHG members were trained on livestock management. A total of 60 farmers from West Champaran, East Champaran and Begusarai visited Agriculture University and KVK for hands on training and demonstration on cultivation of flood resistant high yielding paddy varieties. Farmers from East Champaran, West Champaran, Munger and Bhagalpur participated in exposure-visits and 4 progressive farmers from Begusarai visited Odisha for on-farm training on traditional and organic farming practices.



Participants of PfR sustainability workshop



VLDRC leader explaining risk assessment findings during PfR mid-term review at village Sasan, Kendrapada district

To facilitate better integration of risk reduction plans into Gram Panchayat plan, 132 PRI members were trained on role of Panchayat in disaster risk reduction. The project team in Bihar also celebrated Flood Safety Week during 1-7 June 2013 in collaboration with District Disaster Management Cell. A list of capacity building workshops for strengthening CBOs is presented at Annex IV.

## Risk reduction and institution building

Factoring in disaster risk is not by convention in developmental planning for villages of Mahanadi Delta. Risk reduction is a relatively newer concept for village planning in the region which PfR partners are working for infusion in village institutions. Given the specialized approach, PfR partners have formed Village Level Disaster Risk Reduction Committees, a voluntary collective of villagers to lead design and implementation of risk reduction plans.

As direct intervention under PfR in several villages near two years, encouraging evidences of VLDRCs taking process control and leading resource mobilization for implementing risk reduction plans can be seen. One such example is of Keutajanga Village in Astranga Block.

Formed in 2012, the VLDRC is headed by Prafulla Kumar Bhola with a team of 10 volunteers. The risk assessment process clarified that the village faced multiple hazards. Keutajanga is surrounded by rivers on three sides which frequently swell and inundate large parts of village during monsoon, the earthen embankments are insufficient protection against even a moderate floods. The sea coast is gradually eroding and frequency of cyclones increasing over the years. The fact that there no shelter and fair-weather roads exist in village reduces their ability to respond in case a sever cyclone hit the village. None of these interventions, particularly cyclone shelter figured in the village development plan.

PfR partner working in Astranga, Lok Shakti Vikas Kendra, suggested that the VLDRC get in touch with the Block Development Officer with the risk reduction blue print and particularly emphasize on the need for constructing a cyclone shelter. Bhola and his team were quick to follow up, and made several visits to the block office. During the course of discussion, they learnt that there was indeed a plan to construct cyclone shelters in specific clusters of coast, but Keutajanga did not figure in the plans. The VLDRC put in a request and offered all support for construction. They subsequently contacted the District Collector, who also heads of District Disaster Management Cell, informing him of the urgency of the matter. Finally, in consultation with OSDMA, administrative order sanctioning construction of a cyclone shelter in Astranga was issued in December 2012. When the Block Development Officer and Revenue Inspector visited the village to identify site, VLDRC directed them to the village common land. Parts of the proposed construction site fell in private lands of some villagers, who willingly offered to donate these lands. Construction finally began in January 2013, and the first floor of the two storeyed structure completed by December 2013.

When Phalin struck, the cyclone shelter was not ready. The VLDRC however could mobilize the villagers for an early evacuation to a school-cum-cyclone shelter 4 kilometres away from the village. The entire village moved out by October 10, 2013, two days before Phailin made a landfall. VLDRC effectively managed the evacuation process, even ensuring adequate preparedness in terms of food and water while at the centre.

Phailin completely destroyed betel vines of Keutajanga, which were the main income source of its 40 households. VLDRC stepped into manage the relief and rehabilitation funds. Unlike their neighbours, community members of Keutajanga resolved that the funds would not be used for cash for work for labour to clean the massive debris, but would instead only buy bamboo to reconstruct beetle vine frame. Communities organized themselves in groups of 10 to clean each field and reconstruct the frames. Bouncing back from the damage was much faster.

**(Case study based on interview with Ms. Geetanjali Behera, Secretary, Lok Shakti Vikas Kendra, a NetCoast Partner)**

In Neemapara, PfR partner, Jageshwari Jubak Sangh, proposed the idea to establishing a grain bank to tide over the food shortages in the case village was struck by a disaster. VLDRCs liked the idea, and JJS offered support in the form of two 500 liter containers. The VLDRC worked out an agreement with all the households for contributing 500 gm per month per household. Grain could be borrowed from the community bank, with a commitment of repayment of an equivalent grain amount or cash. The bank started functioning from the month of June 2013.

When Phailin struck Neemapara, the grain bank was used for running the community kitchen. Even households of three neighbouring villages benefitted from the kitchen. As lives are gradually coming to normal, the bank has started functioning since December 2013. Having seen the benefit of having a grain bank during times of disaster, the VLDRC is more than convinced to carry the process forward, and into neighbouring villages as well.

**(Case Study contributed by Nakul Swain, Secretary, Jageshwori Jubak Sangh, a NetCoast Partner)**



## PfR India implementation and resilience building blocks: Some early evidences

The resilience vision of the project is translated into practice through four building blocks: namely: a) building **ability to anticipate** risks, b) **ability to respond** when disaster strikes, while maintaining basic structures and functions; c) **ability to adapt to changing risks** and to changing local situation and its livelihood options; and d) **transforming** themselves to address underlying factors and root causes of risk. Some evidences of these building blocks in operation:

**Ability to anticipate:** Task Force Members in Bhagalpur are in touch with upstream barrage operators during monsoon and have learnt the way time lag to their village can be estimated. This information is used for planning for evacuation.

**Ability to respond:** Prior to landfall of Phailin, Village Level Disaster Resilient Committee operating in Sanapatna village of Krushnaprasad block of Puri evacuated community members inhabiting the sand dune in Chilika. After the landfall the dune was completely inundated and a new mouth opened in the place of dune.

**Ability to adapt:** Farmers in 79 villages of Gandak- Kosi floodplains and 32 villages in Mahanadi delta have adopted stress tolerant variety of paddy which can withstand flood and extended waterlogging. In Mahanadi delta, seed banks of stress tolerant varieties have been formed at community level in 15 villages to make seed available for the next cropping season.

**Ability to transform:** Draft District Disaster Management Plan of Bettiah in West Champaran includes an integrated approach to disaster risk reduction. Integrated Management Planning of Kaabar Taal advocates wetland conservation as natural infrastructure to buffer flood.

### 5.1.3 Policy and advocacy

WISA and Cordaid continued to work on national level policy and advocacy issues aimed at increasing emphasis on DRR and ecosystem management and restoration as a part of resilience building Recognizing the disconnect between water management and ecosystem management which led to two sectors working at cross purposes, often to the detriment of ecosystems, WISA organized a national consultation meeting on water and biodiversity on May 22, the International Day of Biological Diversity. The workshop was attended by 87 participants representing 32 organizations including central government ministries and agencies (of which prominent being Ministry of Water Resources, Ministry of Urban Development, Central Water Commission, Central Ground Water Board), state government departments, research organizations, international agencies, donors and non-government organizations. The participants concluded with the need to account for the role of ecosystems (for example through their ability to buffer extreme events and support adaptation to climate change) as a natural infrastructure in water management planning and decision making.



Workshop on Standard Operating Procedure for drought management in Bihar



Consultation meeting on water and biodiversity. Union Secretary of MoEF releasing publication on the occasion.

Within Mahanadi Delta, WISA is working with ICZMP and OSWMA to bring the two major reservoirs controlling hydraulics of the delta, namely Hirakud Dam (on Mahanadi River) and Rengali Dam (on Brahmani River) under the ambit of integrated management, specifically addressing the water needs of downstream ecosystems and disaster risk reduction for communities. Within Gandak-Kosi floodplains, the draft management plan for Kaabar Taal has been finalized, recommending a pathway for rejuvenating the wetlands as a means of enhancing water and food security of communities and reducing risk of floods and droughts in the long run.

PfR Bihar team is working closely with Government of Bihar, especially with National Disaster Management Authority which has now recognized PfR partners as practitioners of Disaster Risk reduction models. The Disaster Management Authority also invited PfR Bihar team to participate in the consultation on 'Standard Operating Procedure of Drought Management' during 12 March 2013. PfR team also actively participated to draft the plan document of Model District Disaster Management Plan (DDMP) of West Champaran with District administration and All India Disaster Mitigation Institute (AIDMI). National Disaster Management Authority in April, 2013 has taken a stand on utilization of Government flagship program for DRR measures. Bihar Inter Agency Group invited all agencies working on DRR on 20th May 2013, to present their DRR approach. PfR Bihar team presented integrated approach of reducing disaster risk by ecosystem restoration and climate change adaptation. The PfR approach was appreciated by UN agencies and participant NGOs and they were open to learn from PfR team.

In Odisha, VLDRRC formed at the village level serve as community level platforms to organise, coordinate and follow up linkage with government schemes. VLDRRCs engaged with Panchayati Raj Institutions, Water Resource Department, Agriculture Department and Forest Department to leverage funds for integration of risk reduction plans in Panchayat plans and intervention of activities through convergence.

PfR team in Mahanadi delta strengthened its linkage with ICZMP and OSDMA through convergence planning. During Phailin, the team also engaged with Odisha Disaster Rapid Action Force and Inter Agency Group formed by Sphere-India for rescue and relief operations.

## 5.2. Quantitative achievements under three strategic directions

		Revised Targets	Quantitative achievements	Notes
	# of beneficiaries <sup>1</sup> reached	40,000	32,636	PfR – India reached out to 20,722 beneficiaries in Mahanadi Delta, Odisha and 11,914 beneficiaries in Gandak-Kosi floodplains, Bihar through direct livelihood interventions.
	# of female beneficiaries reached	20,000	11,099	The number of female beneficiaries was 4752 and 6347 in Gandak-Kosi floodplains and Mahanadi Delta respectively (Implementation of CENDERET in Mahanadi Delta was closed by Cordaid).
1a	# of mitigation measures implemented per community	3	2.13	The interventions have been classified as per the three strategic objective areas (improved management of natural capital, diversified livelihood options, increased disaster preparedness) and divided by number of villages wherein direct intervention has been carried out.
1b	% of community mitigation measures environmentally sustainable	100%	81.25%	For 2014, eco-criteria will be applied to assess environmental sustainability.
1c	# of community members reached with DRR/CCA/EMR activities	40,000	32,636	32,636 beneficiaries in 184 villages have been reached with direct interventions under DRR/EMR/CCA
1.1a	# of communities that conducted climate trend risk mapping	209 <sup>1</sup>	223	Climate trend risk mapping was included as part of PRA conducted in 139 target villages of Mahanadi Delta and 84 villages of Gandak-Kosi floodplains.
1.1b	# of communities that developed collective risk reduction plans based on climate trend risk mapping	209	223	Risk reduction plans for 223 villages were developed by communities (facilitated by implementing partners) based on risk assessment
1.1c	# of community members covered by risk plans	71,402 <sup>2</sup>	71,402	56,120 individuals in Mahanadi Delta and 15,282 in Gandak-Kosi floodplains covered by risk reduction plans
1.2a	# community members are trained in ecosystem-based livelihood approaches	1600	13,145	11,595 members in Mahanadi Delta region and 1,550 in Gandak-Kosi floodplains received training on ecosystem based livelihood approaches (Detail in Annex IV).
1.2b	# community members have undertaken actions to adapt their livelihoods	4800	12,629	11,492 families in Mahanadi delta region have adopted flood resistant paddy covering an area of 990 ha, pisciculture, dry fish preparation, crab fattening, coir preparation. In Gandak-Kosi floodplains, 1137 farmers initiated use of organic manure, crop rotation, multiple cropping and flood resistant varieties.
2a	# communities where partner NGOs/CBOs have facilitated access to knowledge on disaster trends, climate projections, ecosystem data	209	198	The risk assessment process has been used as a means to facilitate access and exchange of knowledge on disaster trends, climate projections and ecosystem status and trends A marginal reduction in the number of villages is expected, as the review of risk reduction plans to be taken by close of 2013 will exclude villages wherein CENDERET was leading field implementation, and include new villages in Mahanadi Delta coastline, implementation of which is being led by APOWA.
2b	# network/umbrella organisations, developed and active	1	1	NetCoast (an umbrella organization of 9 partners) developed and functional within the PfR project area in Mahanadi Delta.
2c	% partner NGOs/CBOs engage in structured dialogue with peers and government on DRR/CCA/EMR	70%	93.7%	Refer Section 3.1 for details on dialogues / processes within which PfR-India partners are engaged.

<sup>1</sup> Baseline target 8, revised but revised to 209 as advised by CTNL

<sup>2</sup> Baseline target 24,000 but revised to 71,402

		Revised Targets	Quantitative achievements	Notes
2.1a	# (Partner) NGO/CBO staff trained on DRR/CCA/EMR	75 <sup>3</sup>	79	Overall 15 trainings organized during the reporting period through which 30 partner members of NetCoast, and 47 of Caritas and 2 of APOWA received training on DRR/CCA/EMR (Details in Annex III)
2.1b	# (Partner) NGO/CBO have established cooperation with knowledge & resource organizations (e.g meteorological institutes, universities, etc)	12 <sup>4</sup>	13	<ul style="list-style-type: none"> <li>9 partners of NetCoast have played a facilitative role in bringing together KVK and community members together for community capacity building on sustainable agricultural practices</li> <li>CARITAS-India is working with BIAG in the review DDMP process</li> <li>MDSS, a partner of Caritas, is engaging with local meteorological department and water resources department for collection of data on hydrological regimes of Kabar Taal.</li> <li>WISA engaged with Integrated Coastal Zone management Project on information related to coastal processes and integrated coastal zone management in Mahanadi Delta, Odisha.</li> <li>Cordaid actively engaged with Sphere – India ( a national level interagency group on policy dialogue and knowledge sharing related to DRR) and National Disaster Management Institute (NDMI)</li> </ul>
2.2a	# Organisations (including non-PfR) involved in DRR/CCA/EMR coalitions	7	9	<ul style="list-style-type: none"> <li>Caritas – India is a core committee member of BIAG, a coalition of humanitarian organizations that coordinate interventions within the state. The agency, though informal, is recognized by NDMA as well as SDMA and is facilitated by Sphere-India.</li> <li>NetCoast through their partners contributes to District level relief and disaster mitigation forum. NetCoast is also engaged with ICZMP for shelter belt plantation in coastal villages</li> <li>At National level, Cordaid leads engagement with Sphere – India on policy issues related to DRR.</li> <li>WISA with IDRC, CDA and Charles Sturt University is implementing a climate uncertainty and livelihood resilience project in Chilika Lake</li> </ul>
2.2b	# of times DRR/CCA/EMR related topics on agenda of platforms/ networks	3	4	<ul style="list-style-type: none"> <li>Cordaid is assisting NDMA in drafting and refining policies on Role of communities in Disaster, Role of NGOs in Disaster and Minimum Standards in Relief</li> <li>Cordaid invited as panelist in UNISDR International Conference in Geneva, Switzerland and facilitated the discussion on "Role of NGOs and Army in Disaster".</li> <li>WISA organised consultation workshop on wetland management of Bihar and highlighted the role of water management in reducing disaster risk</li> </ul>
3a	# of processes started to reduce identified national and local institutional obstacles to DRR/CCA/EMR activities in the communities (in terms of communication between departments, appropriateness of laws)	1	2	<ul style="list-style-type: none"> <li>PfR –India (through Cordaid, Caritas, CENDRET and WISA) is actively involved in revision of DDMP formulation process, especially seeking inclusion of ecosystem assessments within risk mapping, and ecosystem restoration as a response strategy. Puri and West Champaran from PfR India sites have been included as model sites. Presently, Caritas is leading revision of DDMP for West Champaran District, Bihar and CENDRET and NetCoast for Puri.</li> <li>At national level, Cordaid is engaging with the Ministry of Home Affairs in revision of Disaster Management Act</li> </ul>

<sup>3</sup> Baseline target was 25 per period was revised to 75 per period

<sup>4</sup> Baseline target was 2 but revised to 12

		Revised Targets	Quantitative achievements	Notes
				(2005) seeking provision of district level disaster mitigation funds under the ambit of the said act.
3b	% of increased local government budgets in target areas on either early warning, mitigation of natural hazards and/or natural resource mgt on community level	30%	No change	The project works on the principle of seeking convergence with government investment in development and disaster risk reduction sectors, it is early to detect changes in the indicator. The amount of money leveraged from government flagship programmes is presented in Annex I
3.1a	# Governments/ institutions reached with advocacy activities by Civil Society and their networks and platforms	1	10	<u>National level</u> <ul style="list-style-type: none"> <li>• <b>Ministry of Home Affairs</b> for creation of district level disaster mitigation funds under the ambit of Disaster Management Act (2005).</li> <li>• <b>NDMA, SDMA and DDMA</b>s for enhancing effectiveness of existing DDMPs</li> <li>• <b>MoEF</b> for increased investment on water and wetland management (including better interaction between national programmes of various ministries)</li> </ul> <u>State</u> <ul style="list-style-type: none"> <li>• <b>Bihar State Department for Disaster Management</b> for revision of State Disaster Management Plan to make it more inclusive and holistic (Caritas)</li> <li>• <b>BSDMA</b> for drafting SOP (Standard Operating Procedure) for drought (Caritas)</li> <li>• <b>Odisha Lift Irrigation Corporation</b> for rejuvenating Pani Panchayats as local institutions responsible for water management (NetCoast)</li> <li>• <b>ICZMP</b> for strengthening coastal buffer to mitigate cyclone</li> <li>• <b>OSDMA</b> for strengthening disaster preparedness in schools and colleges</li> </ul>
3.1b	# of (local) government institutions actively engaged in activities (meetings/field visits/training)	1	18	During the current period 12 institutions actively engaged in activities. However, since this is a cumulative score of previous period the 6 institutions involved with CENDERET were also included. For details refer Annex V
3.1c	# of countries, where the connection between DRR, CCA and EMR has explicitly been mentioned in official government documents	1	1	More work is required for enhancing recognition of EMR approaches in DRR and CCA policies.



## 5.3 Initiatives related to learning agenda

### 5.3.1. Identification of good practices in DRR/CCA/EMR

PfR- India was invited as a partner to the Knowledge Network Center on on Floods and Water logging being developed by UNDP and IIT-Kanpur with financial support of AusAID. The centre is envisaged to be a knowledge network across academia and stakeholders on managing the impacts of floods and waterlogging through an understanding of the geomorphological and fluvial dynamics leading to alternate management approaches which are sustainable on longer term. As a knowledge partner, PfR will share its experiences of managing floods and waterlogging in Mahanadi Delta and Gandak-Kosi floodplains. The centre was launched on 22-23 November, 2013 at IIT Kanpur.

A Knowledge Management Team has been organized in CARITAS to support integration of ecosystem management and landscape processes in design and implementation of risk reduction interventions. The team is conducting a two phase study to capture the process steps of participatory risk assessment and integration of DRR/EMR/CCA in PfR programme implementation. PfR- Bihar project was also shortlisted as one of the innovative projects by Bihar Innovative Forum for replication and fund leverage. Caritas India in collaboration with UNDP and WWF has initiated a study on impacts of ongoing and upcoming development interventions in Uttarakhand, given its geophysical, ecological, cultural and socio-economic contexts.

A detailed assessment on the effectiveness of PfR interventions, role of landscape elements, efficiency of various early warning information sharing mechanisms has also been initiated in the Phalin cyclone affected villages of Mahanadi Delta. The outcomes of all these assessments will be available during 2014.

### 5.3.2. Facilitate integration of DRR/CCA/EMR approaches for implementation and adoption at community level

The risk reduction plans, developed adopting DRR, CCA and EMR approaches are the key instruments which support integration of these approaches at community level. While implementing various interventions in the project villages, PfR partners enable the VLDRCs, DMCs and communities to identify specific pathways through which DRR, CCA and EMR approaches are operationalized. Interventions related to sustainable agro-practices have made the farming communities aware of the technology options that can be practiced in extended flooding and waterlogging conditions. PfR partners are collaborating with 4 knowledge centers and 12 government departments to promote transfer of approaches that bring in ecosystem management, climate change adaptation and disaster risk reduction to various livelihood options practiced by the communities.

In Mahanadi Delta, NetCoast partners are enabling sharing of information on existing government schemes that can address various dimensions of risk reduction. Of particular significance was the opportunity to link the villages to insurance programmes, which was otherwise a constraint given the lack of awareness on values of insurance and unwillingness to pay premiums. NetCoast partners have communicated information on the said schemes to all the villages, and subsequently prepared lists of eligible households in consultation with VLDRCs. Such lists have been made available to the government departments, and the VLDRCs with support of PfR partners are liaising with concerned staff to ensure early implementation.



Display of fishery schemes and dos and don'ts during disaster in local language

### 5.3.3. Facilitate integration of DRR/CCA/EMR approaches for implementation and adoption at policy level

PfR India partners, with leadership of Cordaid and CARITAS are working with Sphere-India on integrating ecosystem management and climate change adaptation dimensions in the DDMP template. An advanced draft for West Champaran District is currently being reviewed by PfR partners to ensure that linkages with ecosystem management and climate change adaptation are made.

Building on the recommendations of the national consultation workshop on water and biodiversity, and experiences of working in the Mahanadi Delta and Gandak-Kosi floodplains, WISA is working with MoEF for inclusion of ecosystem services based approaches in the national guidelines for conservation of wetlands. An ecosystem services approach would assist in securing focus on disaster reduction and climate change dimensions of water and wetland management into planning and resource allocation processes.

Cordaid is assisting NDMA in drafting and reviewing policies related to 'Role of communities in Disaster', 'Role of NGOs in Disaster' and 'Minimum Standards in Relief'.

## Mapping spatial patterns in social vulnerability and capacity in Mahanadi Delta

With a focus on village level interventions, risk reduction plans are not automatically amenable to spatial patterns, thereby limiting opportunities for scoping landscape scale intervention opportunities. PfR India team has been working on a cluster approach to enable linking risk reduction plans for villages located in similar risk contexts and having opportunities for joint actions.

Emerging evidences from household data from Mahanadi Delta provide a statistical evidence of the influence of spatial geomorphological patterns on household vulnerability and capacity. Household data on various social, economic, environmental and institutional vulnerability and capacity aspects of 22 indicators was clustered using principal components analysis. The vulnerability indicators segregated into 4 clusters i.e. western catchment villages with drought like conditions, Mahanadi floodplains prone to flooding and water logging, Mahanadi floodplain villages that are subject to only flooding and Chilika coastline villages exposed to multiple hazards (Fig. 1). Similarly, the capacity indicators clustered into western catchment, Mahanadi floodplains, Chilika coastline and Chilika island villages. There was a significant variation in capacity indicators within a single cluster indicating adaptive capacities developed as a response to cope with existing vulnerabilities. The key factors contributing to vulnerability are membership of ethnic minority, degree of coverage of organizational membership cluster together, multiplicity of hazard and lack of use of early warning systems.

An important conclusion drawn from the analysis is the opportunity of using the correlation between geophysical and social vulnerability variables to use a landscape centric approach to risk assessment and response development.

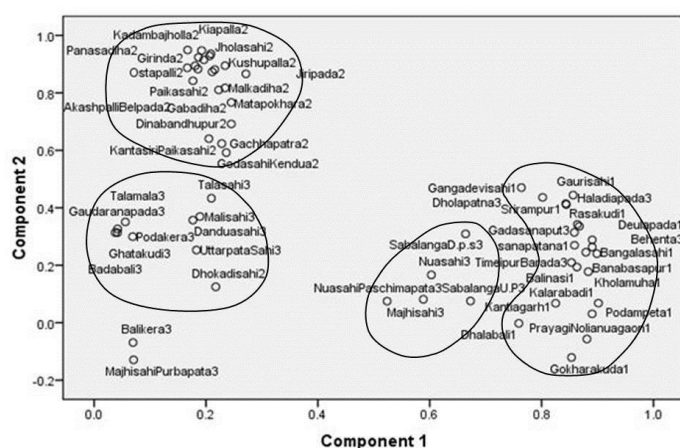


Fig. 1: Villages clustered for vulnerability indicators

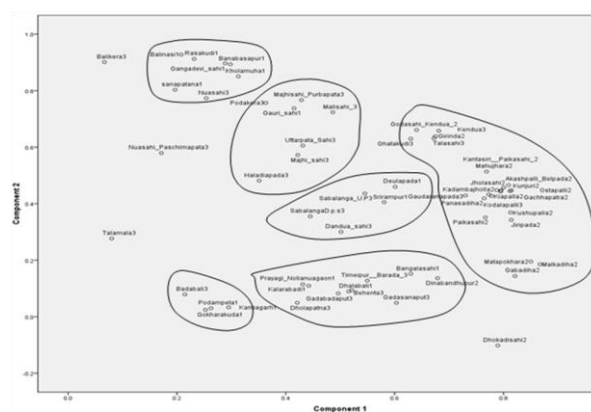


Fig. 2: Villages clustered for capacity indicators

## 6 Sustainability, quality and efficiency

Sustainability	
What are the prospects of continuation of the programme after 2014/15	<p>For continuation of programme beyond 2015, a workshop on PfR sustainability was organised during June 2013. Based on the outcomes of internal monitoring and evaluation and PfR mid-term review, implementation arrangements were reviewed and efforts were made to identify and readjust intervention to address the gaps. Indicators for sustainability of PfR programme was developed at three levels i.e. sustainability of community institutions, financial sustainability and organisation (network partner) sustainability. Capacity building needs were identified at each level and separate training modules have been prepared by ASK for community institutions and network partners to achieve and sustain PfR vision beyond 2015.</p> <p>Strengthening CBOs and linkage with government departments is the major focus during 2014-15 for sustaining PfR vision. In Bihar, CBOs are grouped in a three tier network: at Panchayat level, block level and district level for linkage with government schemes.</p>
Quality	
What initiatives have been taken to improve the target group's satisfaction?	<p>Strengthening community practices have been one of the various means for improving community satisfaction. After demonstration of livelihood diversification technology, farmers are given opportunity to select the seeds.</p> <p>Further, the internal evaluation to be undertaken by ASK during 2014 will undertake a social audit for target group satisfaction.</p>
(How) is innovation stimulated?	Innovation is stimulated by capturing the process steps during intervention and sharing field experiences and implementation challenges.
Efficiency	
How costs per beneficiary are kept low (without compromising the ability to achieve the intended results or the quality of the programme)?	Investments are optimised through convergence with ongoing government investments in developmental sectors. During the current year, Rs. 269,199,776 was generated as parallel investment within the target villages for implementation of risk reduction plans.

## Funds leveraged through convergence with government programmes

Convergence with government programmes /organisations / institutions	Purpose	Funds leveraged (Rs)
<i>NetCoast</i>		
Integrated Coastal Zone Management Project	Training of Coir to women SHG members (25 from each in 7 PfR villages) Coir board will give the start up funds	10,00,000.00
	Shelter belt for 12 coastal villages in Krushna Prasad block	24,00,000.00
	Mangrove Plantation in Ganjam	1,00,00,000.00
Water Resource Department	Strengthening left embankment of Daya river and plantation work	15,00,000.00
	Strengthening embankment in Astaranga	20,00,00,000.00
Orissa State Disaster Management Authority	Construction 2 cyclone shelter in PfR model villages (Sasan, Keutajanga and Gopinathpur)	40,000,000.00
Total		254,9 00,000.00
<i>Caritas</i>		
MNREGA	Excavation of village ponds	5,46,000.00
	Rejuvenation of water bodies	35,000.00
	Plantation to control soil erosion	5,471,734.00
	Strengthening of embankments	5,205,012.00
	Construction of approach road	1,55,000.00
Gram Panchayat	Raising of Tube wells	7,97,860.00
Total Sanitation Campaign	Raising of toilets	20,89,170.00
Total		14,299,776.00
<b>Grand Total</b>		<b>269,199,776.00</b>

## Sustainability indicators

Aspects	Sustainability Indicators
Community institutions	<ul style="list-style-type: none"> <li>No of villages where the community level institution such as VLDRC, SHGs are independently functional</li> <li>No of villages where Panchayat has integrated risk reduction measures in Panchayat Plan and implementing risk reduction measures accordingly</li> <li>No. of program components linked with government programs and implemented</li> </ul>
Financial sustainability	<ul style="list-style-type: none"> <li>No. of partner who have mobilized additional resources from government</li> <li>No. of community created DRR funds</li> </ul>
Mainstreaming of DRR in implementation agencies (Netcoast/Caritas India/CENDERET)	<ul style="list-style-type: none"> <li>No. of agencies who have chosen DRR/EMR/CCA as strategic program for their organization</li> <li>No. of organization who have organizational policy on integration of DRR/EMR/CCA at organizational level</li> <li>No. of organization who have started integrating DRR/EMR/CCA in the existing program</li> </ul>
<b>Capacity building needs</b>	
	<ul style="list-style-type: none"> <li>Strengthening of VLDRC</li> <li>Developing community monitoring systems + training</li> <li>Enterprise planning for groups/SHGs</li> <li>PRI training on disaster risk reduction</li> <li>Network Management</li> <li>Finance management</li> <li>Mainstreaming DRR/EMR/CCA</li> </ul>



**Strengthening PfR partner network**

Sl. No	Training	Purpose	Number of staff participated	Dates
1	Report writing workshop	Document results on indicators for PfR- India reporting	2 (Caritas) 3 (NetCoast) 1 (CENDERET)	28-29 January 2013
2	Mid-term Review Workshop	Assess progress of PfR implementation in India based on resilience vision	3 (NetCoast) 2 (Caritas) 1 (CENDERET) 3 (WISA) 1 (Cordaid) 2 (PWG) 1 (Visiting team- Philippines)	4-10 May 2013
3	PfR Sustainability Workshop	Share outcomes of PfR mid-term review and internal monitoring and evaluation Identify sustainability criterion with respect to project logframe and implementation strategy and develop indicators and monitoring mechanisms for sustainability criteria Revisit project implementation quality and efficiency commitments for PfR- India programme	10 (Caritas) 12 (NetCoast) 3 (CENDERET) 3 (ASK) 1 (Cordaid) 1 (WISA)	21-23 June 2013
<i>Caritas, Bihar</i>				
4	Programme review workshop	Planning for agricultural activities and status of management information system of CBOs	47	21-23 March 2013
5	Module development workshop	Module preparation for capacity building of CBOs	23	23-25 April 2013
6	Workshop on CMDRR	Partners orientation on up scaling CMDRR initiatives	42	26 April-2 May 2013
7	Partners meeting for reporting	Staff orientation on reporting format, documentation and preparation of data tracking sheet under each indicators	10	7-8 June 2013
8	Visit of NDMA and TISS to PfR area	Visit to East and West Champaran for review and updating DDMP process	-	20 June 2013
9	Workshop on best practices and climate change concept	Capture best practices and demonstration of climate change minimum standards and eco-criteria	25	11-15 December 2013
<i>NetCoast, Odisha</i>				
10	Financial Management Training	Systematic accounting and financial reporting	18	11 February 2013
11	Project monitoring	Develop monitoring indicators for assessing quality of intervention	18	8-13 April 2013
12	Project monitoring	Develop monitoring tools for each implementation strategy	14	19-21 May 2013
13	Team management and network strengthening	Revisit organisational structure and coordination mechanisms within	11	29 June 2013

		network partners		
14	Module preparation for field level monitoring	Orientation of facilitators on implementation and evaluation	11	29 July-3 August 2013
15	PfR convergence planning	Develop a concrete action plan for linkage with ICZMP, OSDMA and Fishery Department	23	16 September 2013

## Capacity building of CSOs

Sl. No.	Training	Dates	No. of trainings	No. of participants
<i>NetCoast</i>				
1.	Task Force training on rescue and first aid	5-27 January 2013	1	198 of which 178 were awarded certificates
2.	Poultry management	23 March- 2 April 2013	1	20
3.	Pisciculture	8- 16 September 2013	5	104
4.	Crab fattening	18 September 2013	1	18
5.	Use of bio-compost in vegetable cultivation	7- 13 December 2013	2	74
6.	Disaster preparedness (skill to save crops from elephants and snake bite during disaster)	3 September- 16 December 2013	32 vill.	556
<i>Caritas, Bihar</i>				
7.	Sustainable agriculture (line sowing/disaster resilient agriculture/organic farming)	12 March- 30 June 2013	30	917
8.	Training of DMC for planning implementation and participation in Gram Sabha	2 February- 20 May 2013	30	888
9.	Off- farm disaster resilient livelihoods	21 March 2013- 20 May 2013	14	403

## Local government institutions actively engaged in meetings/field visits and trainings

Government Institutions	PfR activity
<i>NetCoast</i>	
Chilika Development Authority (ICZMP)	Shelter belt plantation in coastal villages
KVK	For sustainable agricultural practices and adoption of PfR villages as KVK demonstration sites
PRI	Implementation of DRR activities through MNREGA
Agriculture Department	Available technologies for disaster resilient crops
Odisha Lift Irrigation Corporation	Registration of newly formed <i>Pani Panchayats</i>
IRRI	Pilot interventions for disaster resilient crops and bio-fertilisers
	Support in the form of seed and cropping pattern
<i>Caritas</i>	
PRI	Implementation of DRR activities through MNREGA
DSW	Construction of houses on raised platforms
DMD	Revision of DDMP, technical support and convergence
NABARD	Livelihood promotion through enterprise planning
KVK- Bihar	Capacity building on ecosystem based livelihood
Agricultural University	Sustainable agriculture technologies and procurement of seeds of high yielding varieties