

# LESSONS LEARNT

Strengthening the Resilience of Vulnerable Communities in Flood Prone Areas of Karnali/Ghaghra and Kosi River Basins in Nepal and India



Project Implemented by  
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## Background

The Disaster Risk Reduction (DRR) framework has evolved over the years, resulting in a paradigm shift from a relief-centric approach towards focusing on mitigation, preparedness for response and building back better and building resilience. The ultimate desired goal of a Disaster Risk Reduction framework is that the community is not only prepared to face a disaster event, but is also able to cope with and recover from them at the local levels with minimal support from outside agencies. This is among the priorities of the Sendai Framework on DRR (SFDRR) which addresses the importance of understanding the risks, strengthening disaster governance, investing in disaster risk reduction for resilience and enhancing disaster preparedness for effective response and to build back better. The two

partners of Malteser International in Nepal - Rural Self-reliant Development Centre (RSDC) and in India – Sahbhagi Sikshan Kendra (SSK) worked in the cross-border river basins to build community resilience against flood risks. The Nepal side of the program covered three flood prone VDCs (Gaupalikas) of Bardiya district the Karnali River Basin and 5 VDCs in Koshi River Basin Sunsari District. In the India side, the program covered vulnerable areas of the Ghagra river basin in Bahraich and Barabanki district in Uttar Pradesh and 3 most vulnerable Gram Panchayat of Mihishi block of Saharsa District in Bihar in Koshi river basin. Karnali/Ghagra are part of one river known in different names in Nepal and India and Koshi river basin is common in both the countries.

Both the organizations in India and Nepal initially worked on enhancing community preparedness for better response and subsequently worked on strengthening of community WASH facilities and livelihoods in flood prone areas in Karnali/Ghagra and Koshi River Basin.

# 1. Strengthening Flood Resilience of Communities in Vulnerable Areas of Bahraich and Barabanki district in Uttar Pradesh

Both districts of Bahraich and Barabanki in Uttar Pradesh experiences extensive flooding because of its presence around the Ghaghra River. The river originates in the southern slopes of the Himalayas in Tibet, in the glaciers of Mapchachungo and flows as the Karnali River in western Nepal. It enters India through Bardiya District, where it crosses the border into Bahraich District and is called Ghaghra River. Bahraich faces devastating inundation every year. To control the flooding, government of India has built embankments in both sides of the river. However, many villages continue to inhabitants between the river and the embankment exposing themselves to the regular flooding. In most of the cases, the local villagers move to the embankment and take shelter till the water recedes. Despite the acute flood risks, the villagers continue to live in the most vulnerable condition as the agriculture land is very fertile and provides good yield even in

the summer months. It also needs to be mentioned here that, every flooding incidence cause colossal damage to the housing, loss of human beings and cattle. As there is no early warning, it was very difficult for timely evacuate and rescue operations. Before the project, the villagers even did not have any manual boat to ferry the people and cattle at the time of the flooding. As the flood water comes from high altitude mountainous region in Nepal, the current of the water is so high that any untrained person cannot navigate the boat.

In 2007-08, SSK intervened in relief provisioning. At the time, four consecutive floods took place, leading to immense damage and losses to lives, agricultural produce, property, resulting in the alienation of people from their own land. Following the floods, in 2009-11, SSK in collaboration with Maltesar International, started a







“ When the community understands the value of resilience building, they realise that support for relief has very little significance. They try to strengthen the resilience building process by acquiring skills, new equipment and infrastructure in the initial phase.”



focused intervention in the area. SSK mainly worked on developing early warning system through voice broadcasting from the office of the district Collector and linking it to the last mile by preparing a group of volunteers to transmit the message and taking action for evacuation. Gram Panchayat representatives are trained and provided with both motorized and manual boats for evacuation and rescue. This early warning system was mainstreamed by involving the district administration to send messages on early warning to a pre-selected group of mobile numbers. For the last mile connectivity and response action, the Gram Panchayats are involved in dissemination of early warning and made the owner of the boats. This is a significant contribution in strengthening disaster governance to respond to the risks in most effective and manner that is community centric. The Gram Panchayats feel empowered when the district administration send request to make the boats available for search and rescue operations in other areas. The Gram Panchayats also have a group of trained people to operate the boats when the flooding is in high current.

The community is very well equipped to deal



with the flood risks. One poor widow woman sharing her experience stated that earlier when the flood used to come, we climb on the roof of the house waiting for some one will come and rescue. In the nights, at times, the snakes used to crawl over the body and we remain still, till the creature moves away. Today, there is early warning and there is enough infrastructure and trained personnel for timely evacuation.

Besides the early warning, SSK made demonstration of high raised hand pumps to ensuring safe drinking water even during the flooding. This piloting exercise caught the attention of the Public Health and Engineering Department, responsible for installation of hand pumps and in the flood prone areas raised hand pumps are installed. This is another example of mainstreaming DRR. SSK also developed raised platform using the public fund (MGNREGA) so that

everyone does not have to go to the embankment as a place for rescue but some can take shelter in the raised platforms. Because of the support provided by the District Collector of Bahraich to SSK in the DRR initiative, a prestigious Times Impact award was conferred to the district.

The other major focus was on WASH at the time of flooding. SSK build awareness on water sanitation management at the time of flooding. It minimized the fecal contamination of the water including ground water. The cases of diarrhea have also significantly controlled.

All these interventions became so popular that it became part of the Community Based Disaster Management/ Disaster Risk Reduction. The experience and model of intervention was presented at the National Disaster Management Authority, the apex institution on DRR in India. The Bahraich and Barabanki example of SSK is now a model of intervention to build community resilience.

### **Lessons learnt**

1. When the community understands the value of resilience building, they realise that support for relief has very

little significance. They try to strengthen the resilience building process by acquiring skills, new equipment and infrastructure in the initial phase, inclusion of Gram Panchayat (Panchayati Raj Institutions) and the district administration, not only provided legitimacy to the intervention but helped in main streaming the initiative. Now the community members take many new actions besides early warning and evacuation. The members of the community conduct Post Disaster Needs Assessment like physical verification of damage and loss of property supervise the relief distribution so that there is no discrimination and duplication. The government has full faith on the capacity and intentions of the community members and the Gram Panchayat.

2. The equipment and kit for effective response was never owned and in possession of SSK. From the very beginning, it was made clear that all the equipment and kit are the property of the Gram Panchayat and they will manage and maintain it. The GP representatives and the community leaders were involved in the procurement process. Initially, the local people did not believe this action, however, at the end, this transfer of ownership and responsibility to the community was the foundation for building sustainability and strengthening disaster governance at the community level. The boats proved as life saver from the flood because it is the only available safe transportation in the time of flood. The boats were used to transport not only people but also to transport small animals, luggage and fodder to safe places

which contributes to the revenue for maintenance.

3. Sanitation is a prevalent problem which intensifies during disasters like floods and hence it is important to empower the community through awareness programmes and sensitize them in order to develop and adopt better hygienic practices. Efforts were made in this project for this, through the WASH intervention where awareness efforts such as individual consultation, training of social mobilizers, nukkadnatak, posters and banners among other activities were used to create awareness and to build the capacity of the people affected by flood. The WASH campaign proved to be quite useful as it community is now aware about the dangers of unhygienic practices and near about 60% of them have started following improved hygienic practices.
4. Installation of hand pumps with raised platform and proper drainage was a good flood resilient strategy to avoid water contamination during floods. Along with that, social equality was

tried to be achieved by the selection of the location of hand pumps in such an area so that it is accessible to the most vulnerable as well. The initiative by including the community, especially with women representatives, in the process of decision making of the 'Hand Pump Nigrani Samiti', was a catalyst towards work and the promotion of women empowerment simultaneously. The same is the case with model toilets which were made on a raised plinth so that it doesn't get inundated with flood water.

5. The intervention on livelihood focused skills is a long-term intervention to build back better. The youth who had attained a certain level of education were given skill building training on themes like basic computer skills and mobile



repairing to assist them in generating a source of income. Women were given training on gardening, agro-forestry, and kitchen and finally vocational training was given to the unskilled people migrating to urban areas in basic plumbing and carpentry work, masonry work etc. This had a positive effect on the youth as there are many who have opened their mobile repairing shop either in the village or in a nearby town and they are earning good amount on a daily basis. In DRR often such interventions are neglected.

6. There has been work intensively for linking DRR and governance together which is reflected in the following points:
  - Formation of Hamlet Development Committees (HDC) in order to decentralise the process of disaster preparedness and village development along with the Gram Panchayat framework is a strong example of strengthening local disaster governance. Each of the

HDC committee had 12-15 members which were democratically elected by the residents of these hamlets for positions such as cashier, chairperson, secretary among others.

- Capacity building of the HDC and GP members micro level planning and DRR action built the local capacity and reduced external dependence. The HDC and the GP was also given the responsibility to monitor and maintain the boats as well as the WASH infrastructure that were provided. Monitoring and evaluation through the village level committees was a good way to ensure accountability and sustainability to a great extent.
  - As a part of sustainability effort a Panchayat Level, a Disaster Risk Reduction Community has been formed for oversight of all the activities. All the above processes made the DRR interventions community managed and community owned.
7. Incorporating cash-for-work activities helped to demonstrate how the PRIs can make use of government schemes like MGNREGA to improve people's disaster resilience next to providing income opportunities. Linking DRR activities with government schemes, such as, MGNREGA helped in implementing the activities more efficiently with less resources as well as creating a model for the government to replicate. As a result of this intervention for shelter and hand pumps, 6010 labour days were generated with an income of Rs. 634,915 raised.



8. Involvement of the community in stakeholder analysis was very useful. The people knew where the barriers in claiming their rights were. Rapport with the identified stakeholders was established and their engagement in implementation and planning process was ensured. This helped in terms of effective implementation of activities and ensuring long term sustenance through linkages.
9. Simple technology and association of community members as the integral part of the whole system strengthened the early warning system and helped the community to be prepared in a better and more systematic manner.



## 2. Strengthening the Resilience of Vulnerable Communities in 3-Gram Panchayats (GPs) of Mahishi block in Saharsa district, Bihar (India)

The project intervention area covers 3-Gram Panchayats comprising 12 revenue villages and 17 hamlets in Mahishi block of Saharsa district in Bihar. The area is located in between two major rivers, the Kosi and river Kamla Balan, and another river Bagmati join the Kosi on its western bank. All three panchayats lie adjacent to the western embankment on the Kosi River. This embankment ends at the Ghongepur GP. The whole region is flood prone and remains inundated most of the year as there is no drainage. The



government of Bihar prepared a roadmap for DRR 2015-30, however, it has no plan for drainage of the flood water caused due to flooding of Kosi River. The flood in 2008 was one of the severe natural disasters in Nepal and India. Heavy rainfall coupled with a dam breach in the upper region of the Kosi River (Sunsari district), affected 45,000 people in Nepal and approximately 2.7 million people in the north of Bihar. Upstream discharge from Nepal through Birpur barrage into the Kosi in Bihar leads to floods in districts like Supaul, Saharsa every year which results in heavy inundation followed by long periods of water logging. Because of inundation, the villagers are not able to cultivate their farm land and invest in the improvement in the habitation and housing. Many a times, part of the village gets washed away leaving some households land less. The situation of poverty is highly visible.





The overall objective of the project was to improve the resilience of the communities through better livelihood and WASH conditions and enhanced response capacities. SSK carried out interventions towards (i) livelihood enhancement training, (ii) ensuring safe drinking water, (iii) ensuring sanitation facilities, (iv) provisioning functional and immediate rescue and relief at village/ community level at the time of floods, (v) promoting and strengthening menstrual health management (MHM), (vi) WASH Campaign and (vii) Cross-border Learning & Sharing.

The project was initiated with an aim to engage the flood affected communities with knowledge and skills to create better adaptation to flood risks by creating WASH infrastructures- construction and installation of deep bore hand pumps with raised platform and flood proof community latrines including menstruation hygiene management. The livelihood based training needs of the youth and other community members were assessed and skills training on tailoring, beautician, mobile repairing, domestic wiring, sales and marketing and hand pump repairing were imparted to help them access to livelihood opportunities.

Village levels CBOs are promoted like Gram Vikas Samiti (GVS) and women Self-Help Groups (SHGs) to carry out DRR activities in a sustained basis. Village and habitation level Disaster Preparedness and Management Committee (DPMCs) were formed and training was provided with material and equipment like wooden boats and life saving equipment for relief and rescue and first-aid. The DPMGs also carried out vulnerability analysis and micro level planning to take up activities that can mitigate and reduce disaster risks. Construction of protection wall by using funds from public programs to reduction cutoff of land during flood is one such activity.

To address the immediate needs of the vulnerable communities various relief measures in the form of medical health check-up



camps, free distribution of medicines, distribution of water containers, smart chullah (cooking stove) and mosquito nets were provided to improve the material base to effectively cope with the flood risks.

### Lessons learnt

1. SSK made the local people understand the magnitude of the risks and enabled them to realise that inundation cannot be addressed without large scale government intervention in improving the drainage system. In this context, they should raise the issue of risk reduction caused because of flooding in all the forums so that the community voice is heard at the policy making level. As the magnitude of the hazard cannot be reduced in immediate near future, SSK aimed to build the coping mechanism of the community so that the vulnerability is reduced to certain extent. To protect the hamlets from being washed away in the flooding, SSK trained the panchayat and local people to use the public resources under MGNREGA and Gram Panchayat Development Plan (GPDP) to make



protection wall. It also trained the village leaders to demand effective implementation of public schemes under child care, food security, social assistance program like pensions and others. These schemes provide material support for which villagers are entitled. This is again a way of converging the disaster concerns in to the development programs. When the intensity of the hazards cannot be reduced in a reasonable time and people are most vulnerable, it is perhaps the best strategy to build the capacity for adaptation. SSK choose most of the interventions to build the adaptation of the community to live with the risks without increasing the vulnerability.

2. Livelihood enhancement training is a major intervention to build the resilience of the community in the direction of



adaptation. Since poverty and floods combined together increases the vulnerability of the poor, strengthening alternate livelihoods has improved the resilience of the target population. It may be mentioned here that the project target group is economically poor, there is high illiteracy, school dropouts and poor occupational skill which contribute to the vulnerability. Considering the socio-cultural and economic condition of the community, profiles of each trainee was prepared based on their preferences and choices. This was an effective process to prepare the candidates for the skill training. Trainings were organized on the basis of the interest of the candidates which make the acceptance and participation very high. Along with the skill training, SSK also focused on improving the basic literacy and numeracy of the girls who are school dropouts. These youth who had lost all hopes are now involved in various occupations like sales and marketing, domestic electric wiring, mobile & hand pump repairing, sewing and stitching clothes and Since

beautician. Sewing and stitching clothes by adolescent girls and women have received more acceptances for effective livelihood enhancement. This is a strategy drawn from the Ghaghra river basin project in Uttar Pradesh and perhaps holds correct as DRR interventions to promote adaptability and reduce vulnerability.



Since the people are poor and the recurrent floods, increases the vulnerability, alternate livelihood opportunity helps in building the adaptation and resilience to deal with the disaster.

Of the total 518 youths trained in various skills, 328 youths have been earning from alternative source of income:

- 48 youths trained in sales & marketing, domestic wiring, mobile & hand pump repairing earning INR 900 to 6000 per month.
  - 280 (85%) adolescent girls trained in tailoring earning INR 800 to 2000 per month.
  - 224 young girls & women have purchased sewing machines after the training.
  - Yearly income of more than 690 farmers trained in resilient farming increased by 20- 30%.
3. Availability of safe drinking water is another major issue leading to water borne diseases. In the 3-gram panchayats (GPs) 46 deep bore (120 feet depth) hand pumps with elevated platforms were constructed. In order to maintain water clean for drinking,



sand filtration of water (*Matka Filter*) was introduced. Instead of plastic containers, clay vessels are used to minimise the chance of water contamination. Sand Filter, with three bands present inside it, was proven to be an efficient medium to filter iron and other biological materials present in the water. This was a cost effective initiative as the earthen vessels (*Matkas*) are locally produced. The water filtration was highly accepted by the community as the women are managing it and aware about the benefit of using filtered water. SSK formed Water and Sanitation Committees (WSCs) with 6-8 members





with more than 80% representation of women at the hamlet level. The WSC members are trained to manage the water filter and also to examine the iron levels in water with the help of using local methods of dipping the guava or jamun leaves in the water. The WSC members also monitored the hand pumps so that the outside contaminated water is not accumulated causing contamination of the underground water. The inclusion of the women of the community in WSC is a step towards transferring the control over the safe drinking water in the hands of women who have been earlier are in the fringe of all decision making process.

4. Along with ensuring safe drinking water, it was essential to develop sanitation facilities so that there is no open defecation causing contamination of the soil and water. In the three GPs 29 flood resistant community latrines at the hamlet level was installed. Solar lights along with water supply were provided in the toilets. As there are separate toilets for women, the acceptance of the



facility was very high. Most importantly, WASH campaigns are periodically organized at both school and community level highlighting to reduce Open Defecation (OD) within the village. By letting the community know about the benefits of toilets, was a good initiative to motivate the community to build private toilets on their own.

5. Reduction in OD rates was also a good way in increasing hygiene within the project area. The WASH campaigns, especially made the children aware and practice on proper hand wash before eating and after defecation which is the easiest yet efficient way to combat faecal-oral and vector-borne diseases. Along with WASH, SSK also promoted Menstrual Health Management (MHM) which is a neglected area causing multiple gynaecological issues. SSK conducted

awareness and educational programs for young women on the importance of hygienic menstrual management, including the correct use and management of homemade absorbent cloths, safe disposal of used menstrual absorbents and the importance of using sanitation facilities (toilet) for reasons of hygiene and privacy. The menstrual management practices are also well accepted which was observed when a study was conducted at the end of the project. As a strategy, SSK has not projected as a supplier of facilities. For every intervention on behaviour change, it has given utmost importance to awareness and education involving local people and local methods of communication. It involved the WSC members in taking all decisions from planning to implementation and maintenance. The big take away of the interventions of SSK is the community managed mechanisms that have been put in place to develop local risk reduction and adaptation processes.





**Case:** 300 plus families of hamlets Samani Parti, Bhaghwa Punaswas, and Baluwari- 1 & 2 lives in subsistence living and they are hand to mouth. They lack basic facilities and highly vulnerable to floods. They are often ill-treated by the affluent class and development schemes meant for them are out of their reach. Remittance is the major source of income being sent by the male members working as labourer mostly in Punjab, Haryana and other cities. At home, women and adolescent girls too work as agriculture labourer to contribute to their family income. Shallow hand pumps owned by a few families were the only source of water which was not safe for drinking purpose. There was acute shortage of sanitation facilities and condition of hygiene was very poor. Not a single family own latrine and they used to defecate in open making the streets and village lanes full of faeces and filth.

After the creation of WASH facilities, open defecation has been reduced significantly and now the streets are much cleaner. The separate latrines are particularly useful for women who earlier had to travel afar and face serious risks to relieve themselves under water or on boats at the time of floods. Similarly, they are using project hand pumps for safe drinking not only during floods but throughout the year. They collect water from the project hand pumps and store in a container being provided by the project to protect the water against re-contamination.

6. Along with improving the coping mechanisms of the vulnerable flood affected community, SSK also built the community capacity on rescue, first-aid and relief management. The Disaster Preparedness and Management Committees (DPMC) organised at the hamlet level are trained and allotted specific responsibilities. The DPMCs are socially inclusive, which made the community, especially the women and the marginalized groups who were once ignored to come forward and actively take part in DRR processes.

A total of 40 wooden boats, 40 life jackets, 80 life buoy and ropes were provided to DPMC. As a result 600 flood affected vulnerable communities have been using boats for commuting during the floods.





“ With the expansion in urban areas and unregulated infrastructural development, the natural hydrological patterns have also been disturbed and the frequency and intensity of flash floods have increased considerably that have affected the lives of people residing in these areas adversely. ”



7. The response process benefitted a lot from the cross-border exchange and Learning. SSK has very good linkage with Red Cross and involved the trainers in providing the community leaders on practical aspects of rescue, first aid and crowd management. The community leaders benefitted lot from the joint training programs. The annual coordination meets were quite beneficial as the sharing of experiences on group formation to take up various responsibilities in disaster response, livelihood promotion activities, and promotion of water sanitation and hygiene habits which is a critical factor in reducing secondary risks subsequent to the flood.



### 3. Strengthening of community WASH facilities and livelihoods in flood prone areas in Karnali/Ghagra and Kosi River Basin in Nepal

Rural Self-reliant Development Centre (RSDC) has been working in the Karnali and Kosi river basin in the Nepal side. These two perennial snow-fed rivers originating in the higher Himalayas along with spring and groundwater in the monsoon causes flash flood in Nepal before Karanali reaches India with a the name of Ghagra in Bahraich district and Kosi enters Sahrsa district in Bihar. In Nepal the seasonal and flash flood-prone streams originate in Chure (Siwalik) Hills, that carry large volumes of water and sediments, flows through the Tarai region of Nepal before entering India. Monsoon rains from June through September sustain the region's agricultural activity. This also the time of catastrophic floods when high-intensity rainfall (triggered by extreme weather events). Damage to agricultural field and crops is the major risks faced by the communities. With the expansion in urban



areas and unregulated infrastructural development, the natural hydrological patterns have also been disturbed and the frequency and intensity of flash floods have increased considerably that have affected the lives of people residing in these areas adversely.

With this background, this project targeted the flood prone areas in the Ghagra/Karnali and Kosi river basins in both Nepal and India. The Nepal side of the program being implemented by RSDC covered three flood prone VDCs of Bardiya district the Karnali River Basin during 2012 – 2016, while in Koshi River Basin the program covered 5 VDCs in the flood-affected areas of Sunsari District during 2016-2019. The project was aimed at catering to the vulnerable sections of the community in these flood prone areas. The focus of the project was towards strengthening WASH facilities and creating livelihood opportunities for the people through relevant skills enhancement training.



## Lessons learnt

The approach used in this project was that of Self-Reliant Development Model (*Swabalamban*) which focused on building the capacity of the affected and most vulnerable by encouraging them to become “doers” rather than “receivers” of the development efforts. The community was seen as groups of integrated households with integrated needs and the strategies were developed accordingly. RSDC played an important role in encouraging the marginalised communities to organize themselves in ways that they understand and internalize the process.

1. The people living in rural areas are generally scattered and in order to build their organized capacity it is necessary to group them in a homogeneous way which are called Income Generating Groups (IGG) and the project inputs are implemented through these groups. When these groups attain a sizeable number, they are encouraged to form Self-Reliant Saving and Credit Cooperatives (SSCC). In Karnali project 46 IGGs were organized while in Kosi 115 were organized. In Karnali, only one SSCC

could be registered due to the changing rules of cooperative registration. InKosi project, the IGGs were formed in/merged with seven cooperatives. Formation of cooperatives is a mainstreaming way of crating people's institutions not only for the economic purpose it has been formed but it becomedemand driven institution to negotiate for their rights and entitlements even during and after the disasters.

2. In case of a disaster like floods, the impact on people's access to water, sanitation and health facilities are deeply affected,



especially in the rural context. RSDC trained the members of the cooperatives to map the inundation in last several years and planed for WASH sector interventions like raised latrines and raised handpumps. As, the application of these interventions are context specific, where the coping mechanisms of the affected people are different, RSDC designed the technologies to suit the local context with improved efficiency. Since the majority of the people in the targeted location were poor, the interventions were modified and combined to suit their needs. For example, for installation of toilets only cement platforms and pan were purchased from the market while the super structure like the covering wall and roof are made by bamboo and crop residues or GI sheets as opted by the community. There is single prototype and technology prescribed to the community. The acceptance was so high that almost all houses have adopted the toilets. Similarly, the sand based water filter was appropriated to the local context. The water in the



target area was contaminated with high contents of iron and hence led to vomiting and loose motions. To deal with this, sand filters were used along with gravel and charcoal which filters at different tires of the filtration to remove iron from water. These efforts were also supplemented with awareness programmes on sanitation and hygiene for their sustenance.

3. Nepal is primarily an agrarian economy and this constitutes a major part of rural livelihoods. When a flood strikes, the



livelihood of the farming community is severely affected. People find it difficult to shift from the primary occupation to other cash based secondary occupation as a process of adaptation to flood risks. The youth were trained on the methods of growing horticulture (seasonal fruits and vegetables) and agro-forestry activities. For other families who did not have land for such cultivation, vocational training was conducted for them on skills like carpentry, masonry, motor rebinding and tailoring among other skills. Both SSK and RSDC expanded the livelihood options so that the community can have better coping mechanisms to deal with the flood risks.

4. Damage and destruction to shelter is one of the biggest losses in the aftermath of flood. It is often observed that the conventional shelters /houses have not followed the hazard resistant technology in the construction. Government often provide support for rebuilding of houses, however, the entire process takes few years. Till that



time, people whose houses are destroyed, damaged or washed away require some kind of interim/ temporary shelters where they can take immediate refuge. RSDC facilitate the construction of interim shelters in Bardiya with active involvement of the community. Two rescue shelters were constructed where community members could stay when they are evacuated. It is an intervention to build the community capacity to respond to the flood risks. In the project area around the Karnali River where many parts used to get submerged in the flood water, an innovative measure was noticed in terms of creating raised platforms under Pipal

and Banyan trees where people could take temporary shelter at the time of the flooding. Keeping in mind the local context of the intervention areas, innovations with the help of the people proved to be very useful. Besides high raised rescue spots, small platforms are created in the houses where they can keep their kitchen utensils and other materials without getting denuded. Tall bamboo or wooden poles are erected inside the house, where the house owners can tie some of the materials like plastic containers to prevent it from getting washed away.

5. RSDC also provided diesel pump sets to the Kosi Rural Municipality(Gaupalika) to lift and distribute water when there is no electricity after the flooding. These are all cost effective interventions, but very critical in strengthening disaster governance which will go a long way in building resilience.
6. Malteser International coordinated the cross-border activities of SSK, India and RSDC, Nepal, which included



exchange visits of community representatives, field staff and joint coordination meeting for sharing intervention strategy and their varied experiences. These provided an opportunity to learn by sharing and contextualise the innovations carried out in both the countries for better preparedness and mitigation measures for the recurrent floods in the landscape.



## 4. Conclusion

To conclude both the cross boarder projects have developed a basket of innovative and community owned and managed approach to reduce vulnerability and to cope with the flood risks. Both RSDC and SSK were conscious of not projecting themselves as a relief agency. From the inception the approach was to build the capacity of the community, particularly the women on alternate livelihood generation, management of safe drinking water and hygiene practices so that they cope with the disasters without onset of any secondary risks like water borne diseases, acute gynaecological issues, etc. Both the organisations also worked on improving the community based disaster response mechanisms like training and equipment for evacuation and rescue, high raised places for safe transit, rescue shelters etc.

Both the organisations have developed clear methodology for orienting the community to develop their own disaster response mechanisms with clear responsibility



including management of kits and equipment including boats. The organisations put themselves as facilitator and enabler and never given an impression to the community that they own the equipment and assets created from the project fund. This provided faith on the community that 'community based or owned disaster risk reduction/ disaster management is just not a hollow slogan but can be adopted and practiced. Creating a community owned and managed mechanism to deal with disasters, is perhaps the best contribution the cross boarder project have offered in creating decentralised and local disaster governance for effective response to flood risks.


RSDC and SSK trained the members of the community to map the inundation in last several years and planned for WASH sector interventions like raised latrines, raised handpumps, safe disposal of sanitary cloth. These activities may seem very simple; however, it has high potential to curb secondary infection causing secondary disasters. Both the organisations have very successfully developed the coping mechanism by enabling the community to accept robust WASH practices which is a lesson for the disaster risk reduction community. Malteser International has contributed a lot in designing the program using their global experience.

The cross-border exchange and learning contributed in enhancing community capacity on a variety of interventions including designing for safe evacuation, safe interim shelter, creation of alternate livelihood options to improve resilience and vulnerability reduction of the poor communities. As both the projects are located in similar geo-physical and social context, the community learnt a lot on designing risk reduction strategies from the exchange visits and sharing. RSDC in Nepal and SSK in India

have very good linkage with Red Cross and involved the high quality trainers in providing training to the community leaders on practical aspects of rescue, first aid and crowd management. The community leaders benefitted lot from the joint training programs. SSK demonstrated the early warning reaching the last mile by engaging the district administration, local decentral governing institutions (Gram Panchayats) and the community. This is perhaps one of its kinds in mainstreaming disaster response with a clear approach of strengthening disaster governance. Both the cross boarder agencies







and the community learnt from the unique strength of the two partners. The annual coordination meets help in sharing of experiences on group formation to take up various responsibilities in disaster response, livelihood promotion activities, and promotion of water sanitation and hygiene habits which is a critical factor in reducing secondary risks subsequent to the flood.

Nepal and India are primarily an agrarian economy and this constitutes a major part of rural livelihoods. When a flood strikes, the livelihood of the farming community is severely affected. The poverty along with flood risks multiplies the vulnerability. Both SSK and RSDC provided alternate livelihood opportunities in the form of non-farm based skill training like carpentry, masonry, motor rebinding, tailoring, mobile repairing, etc and other farm based activities like horticulture (seasonal fruits and vegetables) and agro-forestry activities which cannot be adversely affected by the flood risks. These skill development activities for alternate livelihood seem developmental interventions and have no link with disaster risk reduction. However, the project experience proved that such interventions have built the resilience of the

community. Any intervention that can address poverty has direct link with reduction of vulnerability and improves the coping mechanism to deal with the disaster risks. Both SSK and RSDC expanded the livelihood options of the community so that they can have better coping mechanisms to deal with the flood risks. Both the projects are contemporary live examples of community owned and managed risk reduction practices that offers many learning to be captured in the knowledge base of Community Based DRR.

## About SSK

Sahbhagi Shikshan Kendra (SSK), a support organization and a centre for participatory learning, founded in 1990 at Lucknow with the singular purpose of promoting social change by strengthening the civil society organizations that are engaged in empowering the economically and socially marginalized and setting up democratic governance with proper perspective on gender justice in the state of Uttar Pradesh.

The mission of SSK is to build and strengthen capacities of civil society organizations in order to promote the participation of marginalized communities and women in the process of social change.

SSK's main thrust area of intervention is local self-governance both rural and urban with a perspective on gender justice and increased space for marginalized communities in the democratic functioning of institutions of local self-governance. It works directly as well as through its partner organizations in a joint collaborative manner where we learn intensively from each other.

SSK is well known for its over 55 publications on Training, Organization Development, Panchayati Raj System, Self Help Groups, T.O.T., Micro Planning, NGO Management and various other issues and aspects related to rural development and urban local self-governance. Short-duration training courses are organized on these themes for the functionaries of development organizations.

Over a period of 19 years of its existence SSK has come to be recognized as a centre of excellence in capacity building of CSOs working at the grassroots. Its spectrum of initiatives and participatory interventions reaches out to 20 Panchayat Resource Centers and 9 Urban Resource Centers spread out in 10 districts of Uttar Pradesh. SSK is forever active for the cause of networking and advocacy of concerns related to local self-governance and promotion of social entrepreneurship. SSK has established community level experimentation centers in four regions of U.P. Experimentations on interfacing local government institutions with various themes such as social audit, migration, disaster management, girl child education, forest right etc are being undertaken in those experimentation locations. The leanings from such sites are used for training and policy advocacy the state level.



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