



**Sphere India**

National Coalition of Humanitarian Agencies in India



# TRANSFORMING LIVES THROUGH RESILIENCE

**A Compendium of Good  
Practices  
in Disaster Risk  
Reduction**



# FOREWORD

India is among the world's most disaster-prone countries with 27 of its 29 states and seven union territories exposed to recurrent natural hazards such as cyclones, earthquakes, landslides, floods and droughts. These hazards strain not only the country's economy, but the wellbeing and happiness of its people. Climate change, potentially having an exacerbating effect to hydro-meteorological hazards, may also further compromise already achieved development gains, availability of safe water and agricultural output. Thus considerations for synergized sectoral disaster and climate risk reduction efforts are increasingly necessary to protect productive industries, the population and their wellbeing. The compendium of Good Practices in Disaster Risk Reduction aims to highlight the practices followed by agencies across India in bringing DRR through better preparedness and response activities by engaging the local stakeholders at grassroots level.

## SUMMARY

The document “DRR Adaptation and Resilience” is a testament to the key lessons, challenges, and stories from across the country in response to disaster risk reduction for better preparedness and response during emergencies. The compendium will serve as a repository to the collective experience of agencies working in the development sector, allowing cross-learning to improve, implement and respond to various emergencies across the country.

## ACKNOWLEDGEMENTS

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However, we would like to acknowledge, with deep gratitude, the guidance, cooperation and support extended from ACTED, Maharashtra PECOnet, ActionAid India, ELFA International, The Resilient Foundation, CASA India, Christian Blind Mission (CBM), Parmarth Samaj Sevi Sansthan, Doctors For You, UNNATI, Humanity and Inclusion, Caritas India, Indo-Global Social Service Society (IGSSS), SEEDS India, North-East Affected Area Development Society (NEADS), Pragya, World Vision India, Professional Institute for Development and Socio Environmental Management (PRISM), CROPC and HCL for collecting and documenting their works at grassroots level and providing valuable inputs on the formation of this document.

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## CASE STUDY

# 01

## A SPECIAL NEED FOR PREPAREDNESS

**Adarsh**, Deepika, Komal, and Shashank are four bright youngsters studying at the National Association for the Blind (NAB) in Delhi, India. Being visually impaired emergencies and disasters can be challenging: their mobility may be limited, they may not be able to access the technology or infrastructure they rely on, and emergency workers may not be able to adequately communicate with them. Therefore, these four students, like many at the NAB, are determined to ensure better preparedness so both they and their peers have more independence and control in emergencies.

Together, ACTED and the NAB launched the School Safety Training Programme to build the disaster readiness and resilience of visually impaired children and youth. The programme provided 244 children and youth, including Adarsh, Deepika, Komal, and Shashank, with the unique opportunity to work with the National Disaster Management Authority (NDMA). Using a teaching methodology tailored to the needs of the visually impaired, ACTED brought these children and youth into the disaster management process. The interactive trainings outlined the steps to take in specific emergencies to better foster self-sufficiency. This not only strengthened the preparedness of those most vulnerable, including younger children and those with multiple disabilities, but also empowered students to be leaders in their schools.

Adarsh, Deepika, Komal, and Shashank now feel an even stronger sense of security and confidence having been trained in disaster preparedness and response. As peer educators, they will now pass on their learnings to other children and youth in their schools. This cascaded training model allows for the rapid and deeper dissemination of learnings. Moreover, the programme is adaptable to other unique needs and can be sustainably replicated in other contexts.







## CASE STUDY

02

**Rebuilding Livelihoods Through Direct Cash  
Transfer In Times Of Crisis**

**Mrs. Subarna Pradhan**, a 53 years woman from Penala village in Kandhamal district of Odisha lost all hope when her husband lost life due to long sickness during COVID-19 pandemic. This incident doubled her struggle to manage the daily needs of her family. She possessed a very small patch of land and working as daily wage labour, but due to lock down and shut down, she did not get any work. Her small savings were not enough to give her and her 12 years son even two square meals.

During a survey of most vulnerable families done by Antaranga and ActionAid India, she has been identified as one of the neediest and vulnerable women to be provided with direct cash transfer support to rebuild her livelihood. With this support of Rs. 2000/, she has bought raw materials from the vendor to make ropes. Generally, these ropes paga, sika etc. are being used by local villagers in farming, household, for livestock and for many other purposes. She had learnt this skill from her husband, as he was master of this local skill. Subarna has started the small business of rope-making for the survival of her family. Though initially for two months she did not get a good amount in return, but later she started receiving good earnings.

Due to continued efforts, now she is earning around Rs. 1200/ to 1500/ per week. She was able to earn Rs 22,000 to Rs 24,000 through this work in the span of 5 months. Other women of this villages have also followed her path and started the same work. With this small livelihood support, her life has been completely transformed. Now along with managing her small business, she is also volunteering in vaccine drive by spreading awareness among women through the awareness programme (mobile van) organized by ActionAid and Antaranga in her village.



## CASE STUDY

03

**Reduction Of Climate Change Impacts On  
Smallholder Agriculture And Ecosystems  
Through Meteorological Data Sharing**

**Himachal** Pradesh is prone to multiple natural and man-made disasters. Owing to its hilly terrain and fragile ecological systems, it is highly vulnerable to the impacts of climate change and climatic variability. There is strong evidence of an increase in the observed frequency and intensity of weather and climate-related hazards. There is a significant increase in air temperature by about 1.6°C with, winter warming at a faster pace. Further, at different altitudinal zones in Himachal Pradesh, the rate of increase in maximum temperature is found to be higher at higher altitudes compared to lower altitudes.

An automatic weather recording station has been set up by the CASA at Diyar in Kullu Block of district Kullu, Himachal Pradesh. This centre was established on October 22, 2020 under the Climate Farmers School Program. Under this weather center, 700 farmer families of about 20 villages have been connected, they are being made aware about climate sensitive farming and are being motivated for it. After setting up of weather station, farmers are getting information about humidity and temperature along with weather information of the said area from time to time. This is helping the farmers to know about the crops to be planted in the area resulting in better crop Management Practices.

The weather recording station is being operated by Chetna Samiti Kullu in association with CASA, Local Van Samridhi, Jan Samridhi Community Users Group, while Agriculture Department and Krishi Vigyan Kendra, Bajaura are providing technical support to it.

Automatically after every one-hour data is recorded in the weather recording station. After every 15 days, the above data is being shared to the farmers associated with it through online and other means. Apart from this, guidance is also being taken from time to time by sharing the above data with Agriculture Department & KVK.





## CASE STUDY

# 04

**Community Led Preparedness And Timely Alerts  
For Minimizing The Loss**



**During** the last three years West Bengal has experienced three severe cyclones, and the last two were devastating in every sense, not only because of their nature but also impacted community with dual disasters; pandemic and this natural disaster. During Cyclone Amphan in 2020, awareness among the community regarding the cyclone and safeguarding measures was not enough. Due to lack of preparedness and resilience, intensity of damage was very high with damage of houses, loss of personal belongings, livestock deaths and livelihood loss.

For enhancing the resilience among these communities, Sundarban Social Development Centre (SSDC) along with CBM has launched capacity building and awareness generation programmes among local people of Sundarbans. These activities for improving the preparedness were organised with the support from Gram Panchayats. A series of awareness generation programmes were organised in the post Amphan period and the Humanitarian response measures were made inclusive for people with disabilities as well. It was observed communities itself tried hard to get prepared and minimize the loss during upcoming cyclones.

As a precautionary measure and part of preparedness, communities were cutting and pruning big trees around their houses, repairing their houses, vulnerable families are going to the nearest cyclone centres etc. Moreover, community people were found preserving their important documents, dry foods, medicines etc. before the disaster strikes. People of low-lying areas have relocated to the safer places along with their families and livestock. Because of the alertness of the community as well as the precautions they had taken before the cyclone, the damage was far less compared to cyclone Amphan. If the river embankment would have remained safe, the empowered community would not have faced that much challenges to keep resilience against the cyclone YAAS.





## CASE STUDY

05

**TRUST, LEARNING, AND 5 MILLION  
VACCINATIONS**

**It** was the middle of June in 2020 and the new strain of COVID-19 had been rampaging its way across cities. Cities had begun experiencing the disease's onslaught. Lockdowns had not worked in the absence of adequate testing, isolating the affected and tracking their contacts. There were not enough oxygen-equipped hospital beds, ventilators, doctors and nurses to cope with the situation — if a worst-case scenario became reality and so many turned up for treatment.

In this situation Doctors For You established COVID-19 Care Centres in Delhi, Mumbai, Bangalore, Patna and North-East states. With availability of vaccine, the organization immediately started catering people with vaccine support. They have also collaborated with the Government for establishing vaccination centre in Bengaluru district of Karnataka through ACT India, soon after they got support from HCL foundation and Give India and later joined hands by donors like MSDF, Boeing, Accenture, HDFC Ergo, CII foundation, Amazon, IAHV, British Asian Trust, Portea, ADRA, Walmart and United way.

Government has provided them the vaccine and they provided technical support in various PHCs, CHCs and also through mobile team. They had around 60 teams working in the month of April when the second COVID wave hit, which helped them to gain trust of people as the vaccinated population were showing less severity. Around mid-June DFY geared up in supporting the vaccination drive with the government and by August end they had 280 teams on the field in 14 states.

DFY donated 20000 sputnik – V doses in one of the Gurgaon centres and made this vaccine available free of cost for the public on 10th July. They have also participated in awareness campaigns and vaccinating the homebound, destitute and elderly especially in Manipur, Kerala, Karnataka, Maharashtra and Uttar Pradesh. As of 5th October 2021, Doctors For You has successfully delivered 5 million doses of Vaccine.





## CASE STUDY

06

**A COMPREHENSIVE APPROACH TO IMPROVE  
SCHOOL SAFETY**

**Children** spend a considerable amount of their time in school as well as the time spent in going to and coming back from school. They are exposed to risks of abuse, violence, disasters, health concerns and other forms of risks to their safety that arise from the location of the school, standards of service provision in the schools and facilities available in the school. For children to learn their potential and develop holistically, it would be as important for the school to provide a safe and protected learning environment to make children feel comfortable in school, ensure they are happy and enable them to learn without fear and anxiety.

While the COVID-19 pandemic threw education out of gear across the world, the ensuing period was the most challenging for authorities, teachers, parents and children alike. This also gave an opportunity to relook at School Safety. ELFA International in collaboration with the Directorate of Samagra Shiksha Jammu and Kashmir and with support from UNICEF India, launched a Comprehensive School Safety Programme with a view to bring about systemic changes and raise community awareness on school safety.

In the first phase in 2020, the programme saw a pilot programme across 4 districts and prepared a larger action plan for implementation across the Union Territory. In 2021, the programme was scaled up to all districts with special focus on COVID, Health, WASH, Climate Change, and Violence against Children. The reason why this programme is 'comprehensive' is that it offers a package of interventions to ensure the complete safety of children in schools and outside. It has a strong advocacy component and involves children as key stakeholders.

The programme has developed a school safety manual for schools, along with mechanisms for audit checks and participatory activities by children to stay safe. Since its inception, the programme has trained 25,000 students, 5000 teachers, 500 government officials and 100,000 community members on areas related to School Safety including COVID appropriate behaviours (CAB).







## CASE STUDY

# 07

**WORKING TOGETHER IN THE FIELD FOR  
EFFECTIVE HUMANITARIAN RESPONSE**

**Data** sharing during emergencies is a critical need but very challenging. This was particularly felt with respect to food and ration distribution during the lockdown. Lack of co-ordination led to many locations getting food multiple times while others got left out. RISE Infinity Foundation (RIF) supported by UNICEF, Maharashtra used a Public-good technology platform to map the distribution of food. The tool was used by RIF and the Maha PECOnet partners convened by UNICEF, Maharashtra from September 2020 to February 2021 to track, monitor and streamline ration distribution by in a cost effective way with minimal overheads while increasing transparency and accountability to donors. The dashboard displayed location, beneficiary profile, type and number of items distributed by any entity along with associated images for authenticity. This ensured efficient and effective use of resources by avoiding duplication and identifying under-served areas.

The platform also reported macro-level data, while offering micro-data entry as optional which encouraged more NGOs and donors to share information while keeping beneficiary data private. This also improved distribution decision making, identify under-served areas, needs assessment, resource matching, repeat distribution and encouraged collaboration among various entities.

The target population were vulnerable communities who either could not afford to buy food or did not have access to nutrition rich diets. These included rural and tribal communities, people with disabilities, daily-wage-workers, transgender, senior citizen, women and children. Some of them had special nutrition needs such as proteins, others have cultural habits to be considered such as rice instead of wheat. Understanding the real health needs beyond cooked food and ration kits also helped to achieve better nutritional outcomes. Together, Maha PECOnet platform reached to 2,116 villages and 49 cities and districts with COVID-19 and Flood Relief.





## CASE STUDY

08

**LOCAL WOMEN IN BUNDELKHAND SOLVING  
WATER WOES**

**Hundreds** of women are fighting a water crisis in northern India especially in the so-called dry land Bundelkhand. Finally, few courageous women (later named Jal Sahelies) have come out and taken charge into their hands. Since its inception, Jal Sahelis have played a pivotal role in ensuring water availability in over 100 villages through small acts of repairing hand pumps, fixing wells and creating work plans for safeguarding water resources. Behind the origin of this women-led community-based organisation lies the story of severe drought, drastically impacted livelihoods and an instance of domestic violence that forced women to take responsibility for water resource management in their villages.

250 women from Angrotha village have taken great pain to cut a 107-meter hill and constructed canal and dam in 18 months to resolve water crisis. The aim was to create a way for water to reach a pond inside the village. This village has been facing a water shortage for long time. They were unable to farm and manage livestock, hence they dig a waterway through hill to flow water into the village pond.

The concept of Water Cadre (Jal Mitra) through Jal Saheli (Women Water Warrior) and Pani Panchayat (Water Panchayat) work in Bundelkhand region. By provided them range of training programme for their capacity building Jal Saheli are silently weaving the water magic to change the scenario by conserving water ponds, helping build network of check dams, and undertaking rainwater harvesting to recharge wells, reviving traditional water bodies and overall village level water management. These Jal Sahelis also force the authorities to install water pumps wherever needed.

NCERT officially includes the story of these Jal Sahelis and water conservation initiatives undertaken in Bundelkhand in its syllabus.





# CASE STUDY

09

EQUIP. EMPOWER. ENGAGE. YOUTH. DRR.



**The** catastrophic impact of disasters is not natural. Disasters are triggered by human acts and decisions. Every disaster is unique, revealing actions by individuals and governments that lead to catastrophe. In the context of risk management, disaster governance and risk reduction requires that the general public are sufficiently informed of the natural hazard risks they are exposed to and able to take necessary actions.

The Disaster Governance and Risk Reduction Fellowship program by Sphere India – HCL Foundation partnership was conceived to minimize the loss due to disasters by constantly assessing and improving India's disaster preparedness and response. The Fellowship is supported by HCL Foundation, the CSR arm of HCL Technologies, and implemented by Sphere India. With a holistic approach, the Fellowship helped in building and improving a robust mechanism at the grassroots-level, while also making valuable inputs at the policy-making level. During times of disaster, the fellowship supported relief efforts in Telangana, Tamil Nadu, Maharashtra, Bihar, Gujarat and Jharkhand by facilitating a taskforce of individuals trained in humanitarian coordination.

The fellowship provided DRR Fellows an enriching opportunity to gain field and policy experience in disaster management. The fellows indulged in thematic areas of advocacy, communication and public policy, while also focusing on programmatic aspects of sector and stakeholder coordination, capacity building and the various supporting activities. The interaction with the variety of stakeholders involved in disaster management, including government agencies, international civil society organizations, district officials, field workers and affected population provided the DRR Fellows insight on the aspects of disaster management in India.





## CASE STUDY

# 10

**MRITYUNJAY DOOTS TO CONQUER DEATHS  
OCCURRING DUE TO ROAD ACCIDENTS**

**Around** the world, road traffic injuries cause 1.25 million deaths and up to 50 million injuries each year. These injuries can lead to a lifelong disability including brain and spinal cord injury. Road traffic injuries are the leading cause of death among young people aged 15-29. In India itself, about eighty thousand people are killed in road crashes every year which is 13 % of the total fatality all over the world. Whenever an accident takes place, the most crucial period that comes into play is the 'golden hour'. It is the most precious hour in which the injured has to be administered medical treatment. Currently, it takes anywhere around 90 minutes to two hours to rush an injured to a medical care centre. Also, locals who mostly act as first responders do not know what are the basic first aid and medical steps that need to be followed to save an injured person. To tackle this issue Maharashtra Highway Police has launched a state-wide initiative named Mrityunjay Doot with the technical support from The Resilient Foundation across all national and State highways in the state. As part of this initiative, the police have mobilized local villagers, motel staffs, petrol pump staffs, doctors and hospitals to make optimum use of the golden hour in case of an accident. This initiative was launched with an aim to bring down fatal accidents on the highways. Police have targeted to bring down the fatal accidents by 10% and onboarded the organization to train 5000 Doots and 3000 Police personal on basic life support, which has been started across 63 Tap Points.





## CASE STUDY

# 11

### **RISK INFORMED GRAM PANCHAYAT DEVELOPMENT PLANS FOR RISK REDUCTION AND ENHANCING RESILIENCE**

**Gram** Panchayat Development Plan is an essential tool for enhancing rural development and addressing the vulnerabilities of the poor and marginalized sections. It is also an opportunity to mainstream Integrated Resource Management to enhance water security for Disaster Risk Reduction. The participatory approach adopted by UNNATI enables community members to voice their opinions and include their ideas within the GPDP, while also considering relevant risks pertaining to commonly occurring disasters. It allowed community to feel ownership and accountability for their own development and incorporate DRR into development planning at the grassroot level.

This process was started with initial meetings with the PRI members, followed by a transect walk around the villages. Data collection was done using PRA methods. Hazard vulnerability capacity assessment (HVCA) and ecosystem services shared value assessment (ESSVA) tools were also used, along with social and resource mapping. Timelines were produced with the community to understand historical and seasonal trends, past disasters, their frequency and intensity, land use patterns, rainfall patterns, cropping patterns, etc. This included major events in history and associated changes that the community remembers. Several FGDs were carried out with pastoralists, farmers, daily wage laborers, artisans, women, and service providers with mapping Government programmes and services. All of these contributed to the risk assessment, through which gaps and major issues and concerns with regard to the services, infrastructure and livelihoods were identified.





A second round of consultations took place and action points were determined for each issue or concern including their traditional methods and innovations. Action points had been prepared in accordance with the GPDP guidelines 2018 by the Ministry of Panchayati Raj, the SECC data for the vulnerable and deprived groups and Mission Antodaya, addressing concerns of the global frameworks like the SFDRR, SDGs and COP21 under the UNFCCC. These target Gram Panchayats have developed a 5-7 years Risk Informed Development Plans, as well as a yearly plans with regard to the priorities of the Panchayat.

During pandemic these GPs have prepared and executed 'Panchayat level Covid response plan' in accordance with GoG's initiative of "Maru Gaam Corona Mukh Gaam", aiming to reduce the spread of the disease in the GP, reducing the secondary and tertiary impacts of COVID-19 on the economy, livelihood, health, education, and development in the GP through preventive care, contact tracing of Covid cases and social security of vulnerable population. Currently these GPs are running vaccination drive among the community.





## CASE STUDY

12

**STRENGTHENING INCLUSIVE HUMANITARIAN  
ACTIONS**

**Mr.** Santosh, forty-five years, manages his family consisting of his wife Mrs. Brinde and son Sujit who is in 10th grade. They live on a swampy island in the Indian Sundarbans, a vast low-lying area across India and Bangladesh. He had polio at the age of seven and has been unable to walk since then. He uses a tricycle to move around and go to work.

In the middle of the pandemic, on 20th May 2020, a severe Cyclone “Amphan” hit their island, causing extensive damage to houses, trees and physical infrastructure. He was among those severely affected by this cyclone. The roof of his house was blown away; the food his family had stored was lost; the falling roof damaged his tricycle. He and his family continued to stay in their damaged house because designated safe shelters were not accessible, pathways to these shelters were blocked due to the fallen trees, and the family was afraid that they would get the COVID-19 infection.

Mr. Santosh and his family received immediate support from the local volunteers consisting food packs and temporary shelter. The Inclusive Rapid Emergency Humanitarian Assistance to Communities (IREACH) project team identified him as a beneficiary and provided Unconditional Cash Transfer (UCT). The team used information and simple tools provided through online sessions conducted by Handicap International (Humanity& Inclusion) (HI), a technical partner on disability inclusion for the project.

He has used the cash grant to replenish the food supply for his family and to repair his tricycle. The flexibility of the cash provided allowed him to repair his mobility device and ensured that he remained independent in his movement. He has also benefitted from barrier-free WASH structures made by the IREACH project. HI provided online training on barrier-free designs on WASH, followed by coaching via phone to the WASH coordinator and sharing pictures of the structures before and after modification.



## CASE STUDY

# 13

**WOMEN COMBATING RISK AND THEIR ROAD TO RESILIENCE**

**Women** are perceived as the most vulnerable group in a disaster situation owing to the societal norms and cultural conditioning prevalent in the Indian context. Economic factors accentuate the vulnerability of women by limiting access to resources which facilitate an early recovery from the impending shocks and stress. Lack of decision-making power also reinforces the impact of disaster on women thereby isolating them from disaster planning and preparedness activities. Disasters further add to the women's domestic workload, which is unaccounted most of the time, further adding to their household drudgery, magnifying mental and emotional stress and trauma.

In recent years, Caritas India has brought gender considerations in its early recovery and risk reduction programs by incorporating means to address the underlying causes of vulnerability and efforts to bring gender parity in disaster risk reduction and climate change adaptation.

Fostering the participation of women in village planning exercise and their partnership with the local governance institutions to present village risk reduction plans and advocate for women's issue has been an empowering process for the womenfolk and bridged the gap in addressing the differential needs of the women in times of disaster.

Women generally have a better understanding of the resources available in the community and the household, and their inherent family instincts enables them to identify the needs of the different sections of the population, thereby outlining a broader, inclusive and effective disaster planning. Caritas India has actively involved women in mapping exercises in the village, facilitating them in analysing their vulnerability and identifying sustainable mechanisms.

In the state of Bihar, women from Brahmachari village under Lagma Panchayat have approached the MLA with request to construct a bridge over the Kuwa river which would ease their communication to the neighbouring villages. During the monsoon season they have to trudge past the marshy lands across the river to reach their fields. During the risk mapping they marked this area as a risk prone.



## CASE STUDY

14

**TRANSFORMING HUMANITARIAN ACTIONS WITH  
AND FOR YOUTH**



**If** we want effective humanitarian actions, we must embrace the full participation and priorities of young people. If we want a stable and sustainable future, we can no longer afford to leave young people behind. Youth can play a range of roles in youth preparedness programs and play a crucial role in recovery efforts. They may assist communities in mapping their risk and protective factors or may hold leadership positions within programs. Some additional roles include: sharing the message, acting as change makers and bringing creativity.

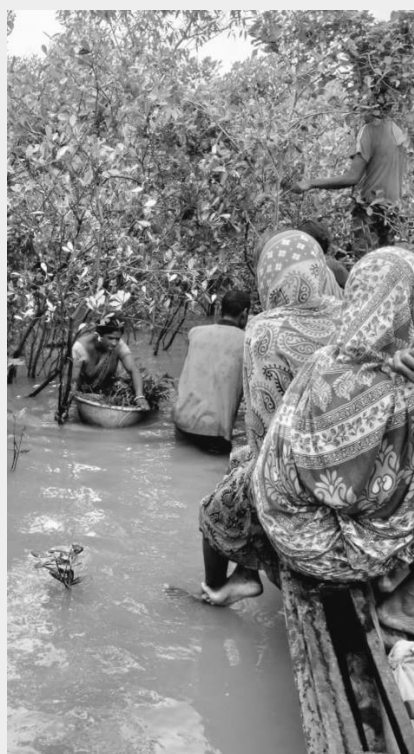
The UDRR pilot was initiated with the twenty proactive youth in the Basti in Odisha since last year by Indo Global Social Service Society. A strong task force team was organized for addressing the risks due to onset of any disaster including pandemic. Handholding was given to them in identifying and managing the risks through participatory Hazard, Vulnerability and Capacity Assessment tools, evacuation map, mitigation plan, humanitarian response framework, dissemination of early warnings, engagements with departments and other stakeholders in emergency etc.

54 Basti families were served with emergency relief, Basti sanitization and other cleanliness drives, awareness on pandemic preparedness, safe isolation and hospitalization as per the requirement, vaccination drives, helpline updates etc in the lockdown by the task force team members.

The UDRR initiative helped Basti community developing understanding to cope with the emergency organizing task force team members in an innovative way. This is being upscaled in other neighbouring Bastis and cities in close coordination with local duty bearers and departments.

“We managed the extreme pandemic situation safely with the outstanding response from our youth task force team members”, happily expressed by the Basti community Baramunda Bhoi Sahi basti, municipal ward 49, Bhubaneswar supported by Urban Disaster Risk Reduction (UDRR) initiatives, IGSSS.





## CASE STUDY

15

**LOCAL WOMEN MITIGATING DISASTER RISKS BY  
PROTECTING MANGROVES IN SUNDARBANS**

**The** Indian Sundarbans is the world heritage and one of the largest mangrove forests of the world. A dynamic delta, with erosion and sedimentation, raising of riverbed, degeneration of mangroves, change in monsoonal trend, breach of embankments, coastal flooding, salinisation of lands, decreasing crop productivity, human migration and displacement, together make Sundarbans a global hot spot. Over the past three decades, the ecologically fragile Sundarbans region has lost 24.55 per cent of mangroves (136.77 square km) due to erosion. Most of the erosion is permanent. On top of that, recurring disasters and climate change impact also pose a serious challenge for adaptation.

Local women have taken up the responsibility of saving their rapidly eroding coastline. Ms. Rintu Das is member of Banashree Mangrove Surakhsha Committee SHG who has been planting the mangroves from many years as an alternate source of her livelihood is leading the process. An early morning boat ride crossing Gobari river to reach mangrove forest for them to collect saplings & seeds for their mission. SHG women stand in knee deep water to create freshwater nurseries of saplings which they plant initially. It takes nearly 45 days for those saplings to become strong enough to get replanted nearby riverbed or coastal line for another 15-20 days after which they are gradually splashed with saline water for their survival in coastal region. Once the saplings seem to be growing fine and strong, they are transplanted on to the banks to build the green embankments and it generally takes 3- 4 years for a plant to become a mangrove tree.

They are also protecting mangroves by barricading the beds with bamboo poles & net fencing from grazing goats and cows; take turns to patrol the sites; watering them from the closest pond manually which requires quite an effort and overturn soil around the saplings every fortnight for percolation of water to its roots. With this initiative with SEEDS India these heedful group of women are proving to be the silent warriors in Sundarbans.





## CASE STUDY

16

**BUILDING RESILIENCE TO HAZARDS IN WATER,  
SANITATION AND HYGIENE (WASH) SYSTEMS**

**A** major concern during inundation is the lack of access to clean drinking water, safe sanitation and proper hygiene practices that results in unavoidable morbidity and sufferings for communities living at the chronic flood affected areas in Assam

North-East Affected Area Development Society (NEADS) is promoting flood-resistant WASH intervention with focus on both public health engineering and public health promotion in Assam. These include support of raised handpumps with elevated platform, establishing raised latrine with handwash & solar light facilities, hygiene promotional awareness targeting women & children, community awareness on public health promotion, health awareness & education, input support of family water treatment unit, school based WASH & public health campaign, WASH risk mapping and safety planning with children and community, WASH tool kit support to community institution and handpump chlorination drive etc.

Raised handpump with elevated platform is a proven resilient technique to improve water security in water induced crisis like floods. Flood-resilient toilet could make sanitation safe and secure for the many regularly affected by the deluge. It can also significantly reduce the exposure and vulnerability of including women & children to the impact of flooding on WASH and help them to recover quicker. Public health promotion through awareness generation events among the flood affected communities are very vital. In disaster risk management, public health programmes build capacities and resilience of individuals and communities at risks to reduce the impact, cope with and to recover from the effects of adversity.

Now affected communities have critical knowledge, experience and capacities with regards to building resilience, and have developed innovative approaches to reducing the everyday risks they face. Awareness and information are turned into a powerful tool for at the targeted communities as they have vested interest in acting early to mitigate disasters and crises.





## CASE STUDY

# 17

## COMMUNITY BASED DISASTER RESPONSE TEAMS (DRTs) FOR PREPAREDNESS, RELIEF AND RECOVERY



**The** Disaster Management System (DMS) – Himalaya project implemented by Pragya aims to enhance disaster preparedness and response at the grassroots level, involving and benefitting the most vulnerable men, women and children in the remote Himalayan region, as well as the local governments in target districts. This project is currently being implemented in 12 districts in Uttarakhand, Himachal Pradesh, Ladakh, Assam and Meghalaya.

Organization has facilitated the skill development and training of Disaster Response Teams (DRTs) comprising of local youth on disaster preparedness, early response communications and post disaster relief and response measures, enabling them to timely alert their communities and coordinate with the authorities for effective disaster management at the local level in several states in the Himalayas and its foothills.

In Lakhimpur district, which faced one of the worst floods during the 2021 monsoon season, several DRTs had been trained and were addressing 200 villages. In Aug 2021, multiple severe weather alerts, forecasting heavy rainfall, thunderstorm and lightning weather conditions were recorded by this Disaster Management team and relayed to the DRTs. The DRTs confirmed the bad weather conditions at the ground level and communicated with field office team.

The DRTs, equipped with the necessary training, took pre-disaster preparatory measures and alerted the community members for possible emergencies. As the severity of rainfall kept on increasing, the DRTs helped the villagers to evacuate to safe areas from the flood zones with their families and necessary items. Organization's sustained efforts to empower, train and build capacities of the DRTs to adapt and mitigate these risks played an important role in protecting the communities. The DRTs were instrumental in evacuating them to safe shelters as well as coordinating with the authorities for relief measures.





## CASE STUDY

# 18

**IMPROVING SURVIVAL AND WELL-BEING  
THROUGH STRENGTHENING THE HEALTH  
CARE SYSTEMS IN TIMES OF CRISIS**

**In** April-2021, India faced one of the biggest health and humanitarian crises in the form of the second wave of COVID-19. Severe shortages of hospital beds and oxygen led to hundreds of people dying without being able to receive the necessary treatment. The second wave also spread to smaller cities and the rural hinterland of India, crippling the weak health systems and infrastructure in villages.

World Vision India responded immediately to the crisis by strengthening the health care systems by providing oxygen concentrators, thermometer, pulse oximeters, PPE kits, cots/beds and other essential medical supplies and ensuring the well-being of children and families through psycho-social support. Presently, they are also actively promoting vaccination for their staff and the people in the communities they serve, in collaboration with the Government. Organization is also looking to enhance capacity of hospitals in rural areas by setting up temporary structures / tents to help screen and treat the increasing number of COVID-19 patients.

Organization has been training the members of the child protection units in our programme areas to remain vigilant regarding issues of child protection and identify children who have lost one or both parents due to COVID-19. In collaboration with Sphere India to provide psychosocial support and medical counselling to over 5000 people, mostly children. The programme has begun with the training of over 1300 community volunteers, in Bihar and Jharkhand. Through children's group meetings online, over 7000 children have been taught COVID-19 appropriate behaviour and their safety is being monitored.

They are also working closely with the Government to increase vaccination across their communities by organising vaccination drives along with them.

This year's prestigious India Today Group- Healthgiri Award 2021 has been conferred to World Vision India for the contribution to fighting the pandemic under the Category BEST CHILD CARE/SUPPORT as an organization that has helped children impacted by the pandemic. Honourable Prime Minister of India has congratulated to all the Winners.





## CASE STUDY

# 19

## WATERLOGGING MITIGATION AND SAFE WATER SUPPLY IN URBAN POCKETS

**There** has been an increasing trend of urban flood disasters in India over the last several years whereby major cities in India have been severely affected. The factors causing urban flooding are significantly different when compared to riverine flooding. Inundation related challenges are common in the low-lying areas in the Indian sub-continent, especially cities, those are located in delta or floodplain areas are the most affected ones. Unplanned urbanization, depletion of water sources, governance challenges are the major factors that cause the challenges and the situations are being aggravated under the influence of climate change in contemporary periods.

In this backdrop, an intervention was implemented in one of the low-lying areas of Basirhat Municipality by PRISM - Professional Institute for Development and Socio Environmental Management that included a number of action programs to address household and community level water induced challenges. The goal of the pilot project was to develop a replicable model that ensures Household Water Treatment and Safe Storage (HWTS) as well as water treatment facilities at the community level by providing total service coverage at community scale. It was implemented through participatory process involving related stakeholders to gain public acceptance. Women were selected as the change agents and turned stewards through knowledge and technology transfer.

A research study was undertaken to identify the root causes of the problems that are generally spawned from geomorphological, hydro-fluvial, climatic factors and processes and the situation becomes complicated when many other cumulative problem-contexts layovers the existing ones. A number of social and technological innovations were tested in the field and this paper critically examined the intervention processes and outcomes.





## CASE STUDY

# 20

**SAVING YOUNG LIVES IN COVID-19 TIMES BY  
FOLLOWING THE MUCH-NEEDED PROTOCOL  
AND GUIDELINES**



**After** the lockdown was announced, 37-year-old Parvathi came back to Chikkaballapur (Karnataka) from Mumbai with her one-year-old daughter, Pavithra. Upon arrival, Pavithra tested positive for COVID-19 and was urgently admitted to an isolation ward at the District Hospital. The screening revealed that, at just 7.4 kilos, Pavithra was also suffering from severe acute malnutrition (SAM), adding to the health complications that the medical team had to navigate. Yet, even as Parvathi was unsure of her daughter's survival, the staff at the Nutrition Rehabilitation Centre (NRC) and the doctors from the district hospital worked tirelessly to bring the child back to health.

Contributing to this herculean effort was the new management protocol for SAM Children with COVID-19 that was released by the NHM Karnataka, and the State Centre of Excellence for SAM management, with technical guidelines that were drafted by the UNICEF. The health crisis resulting from COVID-19 has halted service delivery at many NRCs due to the high-risk posed in the management of SAM children. Pre-empting the need of the hour, the NHM issued the new protocol with simultaneous orientation, conducted by administrative officers from the NHM and medical professionals from Vanivilas Hospital, Bengaluru, to motivate NRCs to adhere to these guidelines. With the policies and procedures in place, the focus was on screening children below the age of five for SAM at COVID-19 wards across Karnataka.

Keeping in mind Pavithra's unique needs, the standard treatment protocol for COVID-19 was accompanied by dietary support and nutrition supplements along with dedicated counselling session for her mother. The efforts of the medical team bore fruit after 17 days of intensive support and care, Pavithra not only gained weight but also tested negative for COVID-19.

Post-discharge, the NRC team was regularly tracking the progress. The medical team took up this case as a challenge and by following the much-needed protocol and guidelines, have restored Parvathi to good health and given her a fresh lease of life.



Source: CROPC (Climate Resilient Observing Systems Promotion Council), courtesy M

CASE STUDY

21

A CAMPAIGN TO REDUCE LIGHTNING DEATHS OF HUMAN BEINGS, LIVESTOCK AND WILD ANIMALS

**Lightning** off late has been on sharp rise in its intensity, frequency and fatalities. The impact has been dearly felt specially during cropping season leading to sporadic deaths of farmers across the country, more so in rural areas. The National Crime Record Bureau Report from 1967 to 2019 reveals that in last 54 years, more than a lakh people have died due to lightning and it accounts for 33% of total fatalities.

Lightning Resilient India Campaign 2019-2022 - a collective initiative was launched on 26 March 2019. Due to continuous effort, 17 states have notified lightning as state specific disaster. Its notification by MHA GoI is being pursued. Entire lightning strikes are being mapped and its compilation has resulted in designation of hotspots facilitating decision makers in prioritizing actions to address lightning. CROPC through its annual reports has come out with different seasonality so that preparedness is timely implemented before the disaster. Lightning forecast by India is incredible with medium range forecasts of 3.5 days advance warning, 24 hours forecast, Nowcast of 3-4 hours followed by Damini App. CROPC has contributed in augmenting of CAP by NDMA on 06 Sep 2021. For prompt operationalization of EW by states and below level and dissemination of EW up to last mile/man, NDMA has released guidelines which was drafted by CROPC.

This has been most rewarding part of campaign giving wide publicity to Do's and Don'ts. India being a large country, the affordable, easy to use and safe devices have been developed and publicized. Safe agriculture fields, schools, hospitals, cyclone shelters, cities have been created. There are a number of policy level initiatives undertaken like incorporation of lightning in school safety policy by NDMA and CBSE, Farmers' lightning safety policy, Mining lightning safety policy etc. The deaths recorded in 2020-2021 were 1697 thereby making lightning now less fatal than flood.

1	2	3
<b>Lightning Early Warning</b>	<b>Lightning Dos and Don'ts</b>	<b>Lightning Protection System</b>
Download Damini App and be always informed & alert <a href="https://play.google.com/store/apps/details?id=com.damini">https://play.google.com/store/apps/details?id=com.damini</a>	Staying safe during thunderstorms	Is my house, school, office or field Lightning safe? Please check and install Lightning protection system <a href="https://www.ndma.gov.in/ndma/cro/cro/cro">https://www.ndma.gov.in/ndma/cro/cro/cro</a>



## CASE STUDY

# 22

**ENRICHING THE OUTREACH OF HUMANITARIAN  
RESPONDERS DURING EMERGENCIES THROUGH  
USE OF DRONES**

**Drones** support prompt on-ground action, much faster than manual detection, analysis, and action and reduce the overall disaster response time by (up to) 44.46%. This helps to reduce the extent of impact by the disaster and in saving lives. Drone, in the disaster response sector, has recently emerged as a force multiplier in enhancing the outreach of humanitarian responders during pre & post disasters.

Humanitarian Aid International is at the forefront responding live to disasters and the experience from Cyclone Fani, Bihar Floods, Cyclone Amphan, Jaipur Floods, and Odisha to ongoing COVID-19 response resulted in setting up a collaborative platform Drone for Humanity (DfH) for innovative and wide-ranging usage of drones in disaster management.

DfH, conceptualised and launched in 2019, having prominent techno-humanitarian actors as members, is an attempt in that direction. It has been envisaged with four features; Post-disaster damage & loss assessment, Search & rescue support to disaster response forces (both humans and animals), Airdropping of lifesaving aid, and Digital mapping of vulnerable zones.

HCL Foundation has supported the DfH platform in the Drone-based Post Disaster Damage and Loss Assessment (PDNA) exercises done in Golaghat, Assam after the devastating floods, Bhagalpur, Bihar again after another severe flood, Sundarbans, West Bengal, soon after the Cyclone Bulbul and again after the Super Cyclone Amphan. Post COVID-19 era, multi-hazard risk handling capacity is increasingly becoming complex, Drones along with associated technologies came with multifarious applications like surveillance, public awareness, COVID-19 tracking and tracing, logistics delivery, PDNA, ambulance service etc. DfH with support from HCL Foundation has also conducted Drone-based surveillance and public announcements with associated risks in four containment zones of Bengaluru in May-2020 for COVID 19 response in partnership with AIFT Bangalore and General Aeronautics in Kandwara and Chikkabanavara.

Various projects, funded by HCL Foundation, have helped the growth of Drone for Humanity platform, which is promoting integration of technology in different phases of disaster management



# GALLERY

## A Special Need for Preparedness: Inclusive DRR





## GALLERY

### Humanitarian Cash Transfers and Financial Inclusion



### Automatic weather recording station for promoting climate sensitive agriculture and improving farmers' income



# GALLERY

**Building local capacities for ensuring sustainable process of risk mitigation**





# GALLERY

## Country eyes normalisation as COVID-19 vaccination drive accelerates





# GALLERY

## Enhancing school safety by engaging students in system strengthening





# GALLERY

## Working Together in the Field for Effective Humanitarian Response



# GALLERY

**Making community water positive with continues conservation, harvesting and proper management**





# GALLERY

## Disaster Governance and Risk Reduction for Inter-Agency Coordination and Strengthening



# GALLERY

## Rapid assistance to accident victims by trained cadre of Volunteers





## GALLERY

### Empowering villages for preparing and executing Risk Informed Development Plans



# GALLERY

## Women Combating Risk and their road to resilience



## Active participation of the most marginalised is the key to an impartial humanitarian response





## GALLERY

**Youth can play a range of roles by mapping their risks & protective factors and building local capacities**





## GALLERY

**Women Sundarbans Praharis (Guardians) are the leading troop towards environment sustainability and disaster risk mitigation**





# GALLERY

**Resilient infrastructure ensures the continuity of WASH services even during Emergencies**



# GALLERY

**A community led early warning and relief management system can drastically reduce the impact of disasters in the Himalayan region**





## GALLERY

### GO-NGO collaboration for reaching to unreached during pandemic



# GALLERY

## Lessons learnt from low-lying areas of West Bengal's Bashirhat municipality





## GALLERY

**Saving young lives in COVID-19 times by following the much-needed protocol and guidelines**



# GALLERY

More than 60% reduction in lightning deaths due to this campaign



## Lightning Resilient India Campaign

## वज्रपात सुरक्षित भारत अभियान

**1**

**Lightning Early Warning**

Download **Damini App** and be always informed & alert  
[https://play.google.com/store/apps/details?id=com.lightning.live.damini&hl=en\\_IN](https://play.google.com/store/apps/details?id=com.lightning.live.damini&hl=en_IN)

**2**

**Lightning Dos and Don'ts**

**Staying safe during thunderstorms**



**3**

**Lightning Protection System**

Is my house, school, office or field Lightning safe?  
 Please check and install Lightning protection conductor/arrester.





भारत सरकार  
पृथ्वी विज्ञान मंत्रालय  
Govt. of India  
Ministry of Earth Sciences



**दामिनी : बिजली चेतावनी**  
**DAMINI: Lightning Alert**




Source: CROPC (Climate Resilient Observing Systems Promotion Council), courtesy MMD





# GALLERY

Enriching the outreach of Humanitarian responders during emergencies due to use of Drones





# Sphere India

*National Coalition of Humanitarian Agencies in India*

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