



2023

Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program



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Reliance Foundation

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Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program

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This report is based on an impact evaluation study of Reliance Foundation's Disaster Management Program carried out by the Centre for Environment and Regional Development (CERD). Efforts have been made to cite and refer to primary and secondary data and literature in developing this report. This report, full or in parts, can be referred to and cited for any academic and non-commercial purpose only with appropriate citation of the original source under advance information.

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FOREWORD

Decentralized and all-inclusive disaster management is essential for SDG and SFDRR realization in India. In recent years, disaster management has gone through a paradigm shift from 'response and relief' centric approach to 'prevention-preparedness and mitigation' centric approach. Risk mapping, locally led DRR actions, efficient response and relief and capacity building of the communities and other stakeholders at local level are a few essential components of the current approach.

I am happy to take a stock of exemplary initiatives by the Reliance Foundation in disaster management arena under CSR in India. Reliance Foundation has developed excellent lessons and examples from its interventions in a wide range of disaster events by supporting local administration, other stakeholders, and communities. It has prioritized the improvement of rural livelihoods from natural disasters as its primary focus of interventions. I am also happy to learn that Reliance Foundation is keen to expand its horizons in Disaster Management in untouched areas particularly in Disaster Risk Reduction, Capacity Building and Technical Cooperation with government organisations and local administration to enhance preparedness.

The present report 'Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program' would be a useful document for the corporate sector including CSR, policy makers, academicians, and civil society to understand the lateral dimension of disaster management. This document will also be useful as a case study in various training and educational programs focused on developing capacities in the areas of disaster management. I extend my best wishes to the Reliance Foundation team.

A handwritten signature in black ink, appearing to read 'Anil K Gupta'.

(Anil K Gupta)

ACKNOWLEDGEMENT

The study titled “Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program” has been prepared by the Centre for Environment and Regional Development (CERD) team including Dr. Chetna Joshi, Ms. Sonali Chauhan and Dr. Yangdup Lama. Sincere thanks to the entire team for documenting this study report.

The report has also been thoroughly reviewed by Prof. Anil K. Gupta, Head, ECDRM Division, National Institute of Disaster Management (NIDM) and Ms. Richa Srivastava, Research Consultant, NIDM. On behalf of the entire team, the contributions of the reviewers are also acknowledged for reviewing the document thoroughly and providing valuable inputs and suggestions. All the necessary corrections from the reviewers have been incorporated.

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Abbreviations

- ANM: Auxiliary Nursing Midwifery
- ASHA: Accredited Social Health Activist
- ASTER: Advanced Space board Thermal Emission and Reflection Radiometer
- CAPF: Central Armed Police Forces
- CBDRM: Community Based Disaster Risk Management
- CBO: Community-Based Organisation
- CCS: Cabinet Committee on Security
- CFRC: Community Facilitation and Resource Centre
- DDMA: District Disaster Management Authorities
- DRR: Disaster Risk Reduction
- e-Nam: e-National Agriculture Market
- FPO: Farmer Producer Organizations
- GIS: Geographic Information System
- GIZ: German Agency for International Cooperation
- HRVCA: Hazard Risk and Vulnerability Analysis
- IAG: Inter-Agency Group
- IITM: Indian Institute of Tropical Meteorology
- IMD: India Meteorological Department
- INCOIS: Indian National Centre for Ocean Information Services
- KOW: Knowledge on Wheels
- KVK: Krishi Vikas Kendra
- MGNREGA: Mahatma Gandhi National. Rural Employment Guarantee
- NbS: Nature Based Solution
- NCC: National Cadet Corps
- NCMC: National Crisis Management Committee
- NCMRWF: National Centre for Medium Range Weather Forecasting
- NDMA: National Disaster Management Authority
- NDRF: National Disaster Response Force
- NGO: Non-Governmental Organization
- NIDM: National Institute of Disaster Management
- NPDRR: National Program on Disaster Risk Reduction
- NSS: National Service Scheme
- RF: Reliance Foundation
- SDMA: State Disaster Management Authorities
- SEC: State Executive Committee
- SEOC: State Emergency Operation Center
- SFDRR: Sendai Framework for Disaster Risk Reduction
- SME: Small and Medium Scale Enterprises
- UNDRR: United Nations Office for Disaster Risk Reduction
- VDBC: District Vector Borne Disease Control
- VMS: Voice Mail System

EXECUTIVE SUMMARY

In the past fifty years, India has witnessed a substantial increase in climate-induced disasters and extreme weather events. According to a report by the National Institute of Disaster Management (NIDM) and the German Agency for International Cooperation (GIZ), India faced a staggering 1,058 extreme weather events between 1995 and 2020, resulting in significant loss of life, and extensive damage to property and infrastructure. A systematic and proactive approach to disaster management can significantly reduce the loss of lives and livelihood due to disasters and its damaging impact on economic growth and development. Recognizing this, the focus of disaster management has now shifted towards prevention, mitigation, and preparedness with the whole of society approach from the erstwhile response-centric approach. It is now established that effective and efficient disaster management necessitates the collaboration of governmental agencies, non-governmental organizations, the private sector, philanthropic Foundations, and the general public.

In this context, the efforts of Reliance Foundation, the philanthropic arm of Reliance Industries, have played a pivotal role. Since 2013, the disaster management vertical of Reliance Foundation has been systematically engaged in disaster preparedness and response activities, marking a decade of supporting vulnerable communities and actively participating in the management of 49 disaster events across 22 Indian states. These interventions have notably centered around floods, cyclones, earthquakes, landslides, and droughts. Additionally, the Organisation has provided disaster response during Nepal Earthquake and COVID-19. The Foundation's work extends beyond immediate response efforts, encompassing preparedness, capacity building, and awareness campaigns. Over the course of a decade, the Foundation's initiatives have spanned 293 districts in 19 states and 3 Union Territories.

The present study titled "Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program" provides a comprehensive assessment of Reliance Foundation's disaster preparedness and response efforts. Employing a mixed-method approach, the study combines desk reviews and primary surveys to gauge the impact of these interventions on rural communities, the primary beneficiaries of their efforts. The desk review explores the alignment of their interventions with national and international priorities such as the Prime Minister's Ten-Point Agenda on Disaster Risk Reduction, the United Nations Sustainable Development Goals, and the Sendai Framework for Disaster Risk Reduction.

The primary survey employs both quantitative data analysis and qualitative evaluations. This involves engaging with primary beneficiaries, collaborating with the government and non-governmental organizations, community volunteers, and the implementation team of Reliance Foundation. The impact assessment relies on five key indicators: Relevance, Reach, Inclusiveness, Multi-stakeholder Involvement, and Sustainability of the Interventions.

Disaster risk reduction, mitigation, and response constitute integral components of Reliance's broader commitment to social responsibility. As part of this commitment, disaster management has been taken up as a priority area at Reliance Foundation which aims to assist disaster-affected communities in recovering quickly and building resilience against future incidents. Their interventions encompass various socio-economic and geographic contexts, aiming not only to restore livelihoods but also to improve health, education, and sustainable development.

Dissemination of weather advisories and early warnings through various communication channels, understanding vulnerabilities and associated risks due to extreme events and capacity building of stakeholders are important areas of interventions as part of disaster preparedness. As part of response and rehabilitation measures, Reliance Foundation reached out to the victims and provided support in the form of customized and contextualized relief kits for immediate sustenance in collaboration with multiple governmental and non-governmental stakeholders, in the aftermath of severe disasters in different states of India and in neighbouring countries. Drawing on a decade of experience, Reliance Foundation's disaster management program incorporates various components such as Geospatial Data Hub, Resilient Livelihood Practices, Risk Reduction/Mitigation, Risk Communication Platforms/Applications, Response and Recovery, and Volunteer Engagement.

The core principle underlying the Foundation's interventions lies in leveraging advanced communication technologies, fostering coordination, and encouraging multi-stakeholder participation. Over the course of a decade, the Foundation's disaster management program has successfully established impactful interventions across key thematic areas within disaster management, aligning with the principles of the Sendai Framework on DRR, SDGs and national priorities.

The study underscores Reliance Foundation's potential to assume a leadership role in disaster management within the private sector. The report proposes several recommendations to further strengthen the organization's capacity, including enhancing expertise in forecasting information management, incorporating Nature-based Solutions (NbS) into risk reduction strategies, and leveraging their coordination skills to convene multi-stakeholder platforms. These measures could propel Reliance Foundation's disaster management program, ensuring a sustained positive impact on the ground.



Reliance
Foundation



INTRODUCTION

1. Introduction

Climate-induced disasters and extreme weather events have significantly increased across India in the last 50 years. According to the report 'Mapping Climatic and Biological Disasters in India' published in 2021 by the National Institute of Disaster Management (NIDM) and the German Agency for International Cooperation (GIZ), between 1995 and 2020, India faced 1,058 extreme weather events resulting in huge loss of lives with extensive damage to the property and infrastructure.

The magnitude of impact of disasters can be understood from the fact that between 2000 and 2019, 79,732 people lost their lives and 108 crore people were affected by 321 incidents of natural disasters in India as per the report "Human Cost of Disasters: An overview of the last 20 years 2000-2019" by the United Nations Office for Disaster Risk Reduction (UNDRR).

Floods are the most frequent disaster in the country, accounting to 33% of total disasters. On an average India faces 17 flood events yearly affecting approximately 34.5 crore people. Other common disasters in India include heat-waves (24%), droughts (22%), cold-waves (16%) and cyclones (5%) according to the NIDM-GIZ report.

Disasters Disrupt Developmental Gains

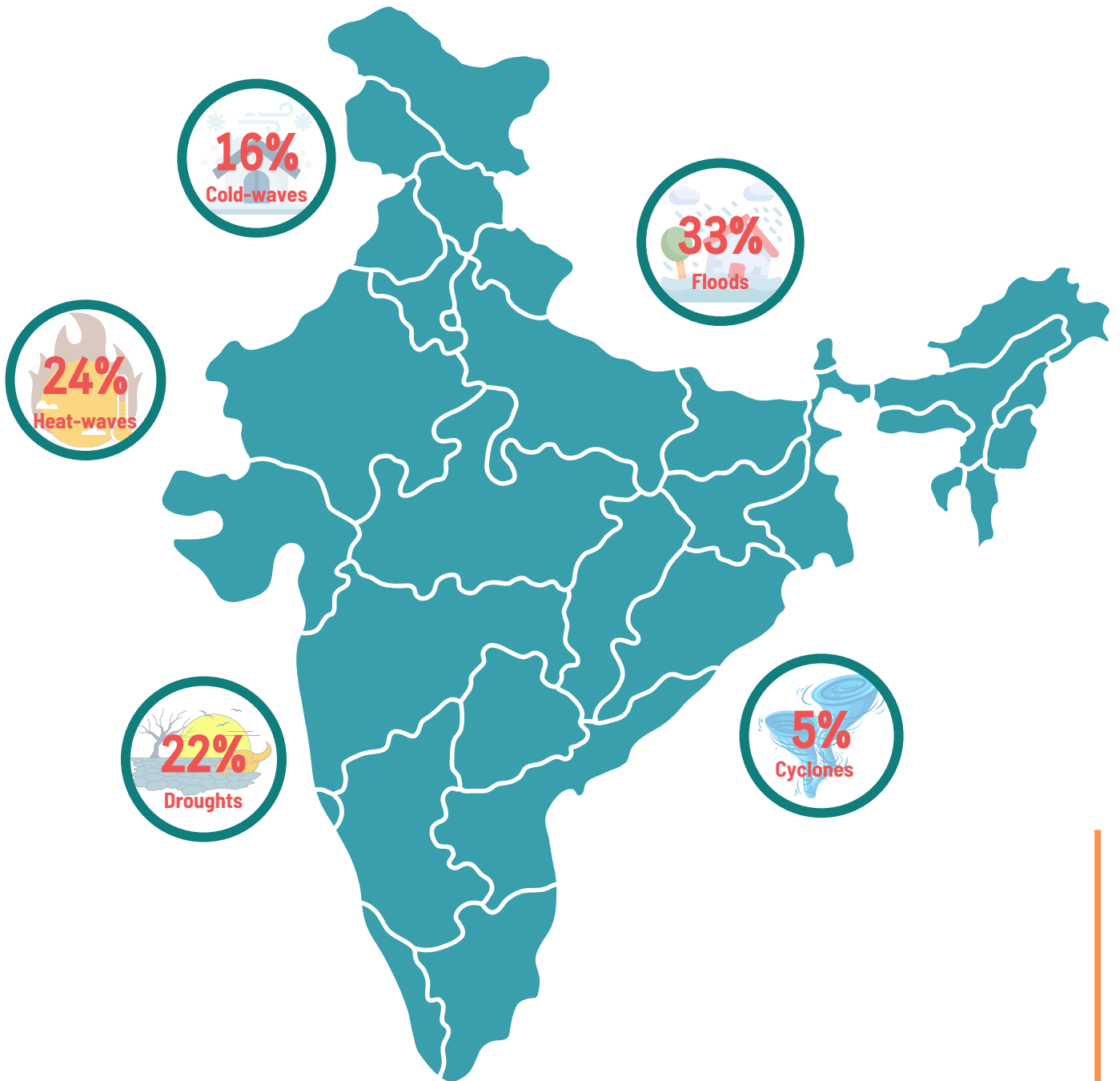
Disasters have a devastating impact on economic growth and development. Disasters damage infrastructure, critical services, and facilities such as transportation, communication & healthcare, disrupt agricultural production and supply chain affecting livelihoods. As per the estimates, in 2021 alone, India suffered a total loss of \$3.2 billion from flooding which also resulted in about 1,300 casualties and damaged crops and properties. In addition to that, the economic damage caused by five cyclonic storms in India during the same year was estimated to be \$4.4 billion.

Disaster Management in India

Over the years India has developed a comprehensive disaster management policy and a legal and institutional framework at national, state, and local levels.

Disaster management mechanism focuses on prevention, preparedness, and mitigation of disasters along with post disaster response, recovery, and reconstruction. This has brought in 'hazard specific prevention and mitigation', 'enhanced understanding of vulnerabilities & risk', 'inter-agency coordination', 'structural' and 'non- structural measures' and 'capacity development' at the core of the efforts.

“ Annually Disasters IMPACT 2% of India's GDP ”



“ Hazard Atlas of India enlists 748 districts as VULNERABLE to CLIMATE HAZARDS ”

The apex government body responsible for formulating policies, plans, and guidelines for disaster management at the national level is the National Disaster Management Authority (NDMA) established under the Disaster Management Act, 2005. NDMA coordinates and monitors disaster response and recovery efforts across different sectors. Prime Minister is the chairperson of the NDMA. National Institute of Disaster Management (NIDM) is another apex institute to provide capacity building and training support to various national and state level agencies in the field of Disaster Management & Disaster Risk Reduction. Apart from the national level agencies, each Indian State and Union Territory has its own State Disaster Management Authority (SDMA) responsible for implementation of the disaster management plans and coordination with various agencies and stakeholders within their jurisdiction.

At a local or district level, District Disaster Management Authority (DDMAs) oversees disaster preparedness and response activities. DDMA works in coordination with the SDMA and local administration to implement disaster management measures.

Disaster response and relief are primary responsibility of State Disaster Response Force (SDRF) and National Disaster Response Force (NDRF). These are specialized forces trained for quick response to disaster situations. These are responsible for rescue and relief operations during disasters like earthquakes, floods and cyclones, etc. NDRF is supported by Indian Armed Forces i.e. India Army, Navy and Air Force especially during large-scale disasters or emergencies.

Apart from these key agencies, many Central and State Government Departments such as the Ministry of Home Affairs, Ministry of Health and Family Welfare, Ministry of Jal Shakti, Ministry of Environment, Forest, and Climate Change, and others, have specific roles in disaster management, depending on the type of disaster (Figure 1).

In addition to the actions by the government to manage disasters, effective disaster management requires active involvement of the non-government agencies, private sector, philanthropic Foundations, and the public at large. In this regard, Agenda 2 of the Prime Minister's 10 Point Agenda on Disaster Risk Reduction emphasises on the "involvement of SMEs, Private sector, Corporate sector in capacity building, resource development and knowledge management".



Institutional Framework of Disaster Management

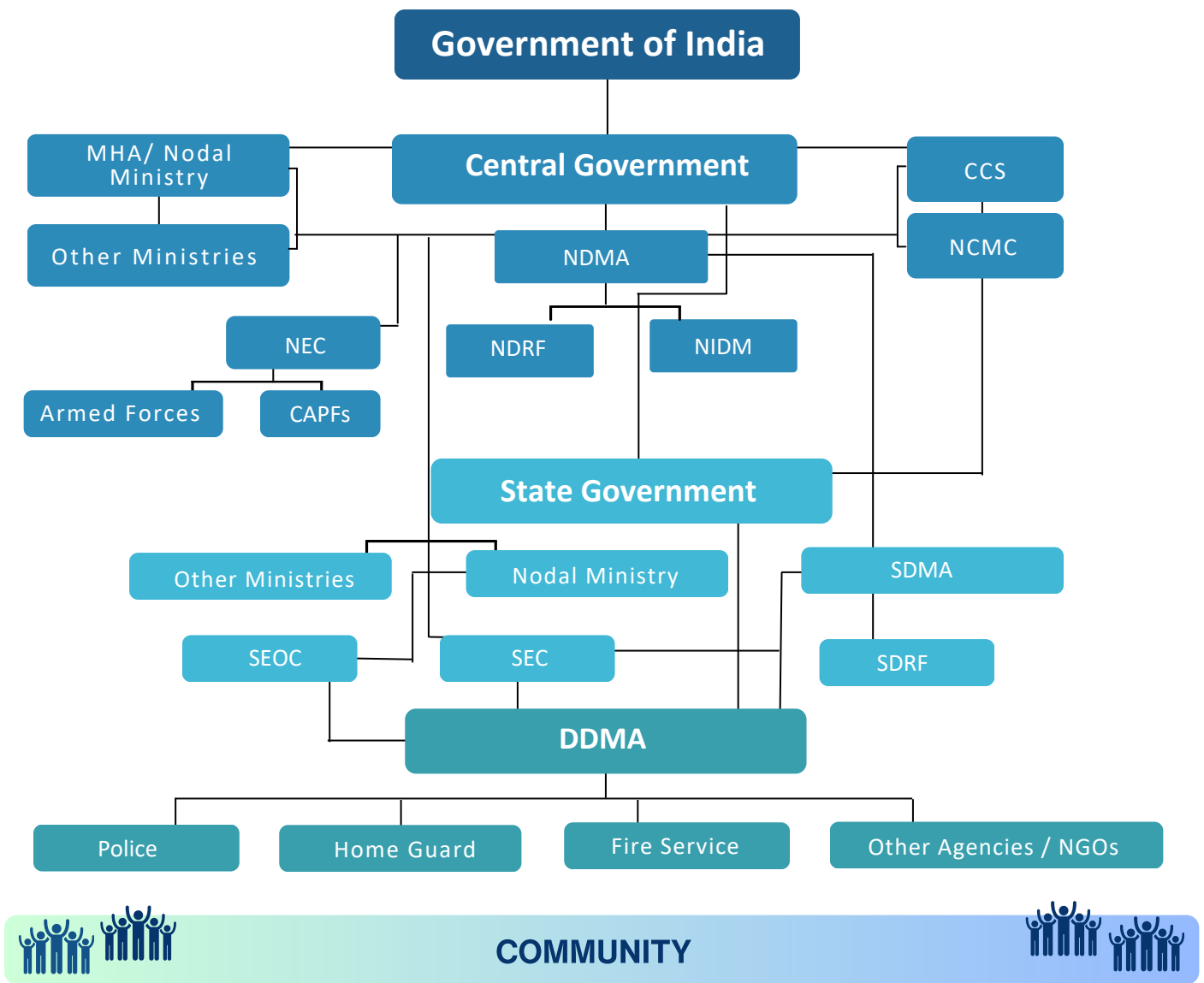


Fig. 1: Disaster Management Organogram of Government of India

Reliance Foundation and Disaster Management

Reliance Foundation is a philanthropic arm of Reliance Industries, India's biggest business conglomerate. Disaster management has emerged as one of the priority areas of intervention of the Foundation, running across 22 states of India. The Foundation focuses on safeguarding livelihood and risk reduction through protection of the assets, dissemination of early warnings, assistance in community and livestock evacuations, support in rescue operations, connecting relief locations and helping bring normalcy to those affected. Reliance Industries is uniquely positioned in the disaster management sector considering its comprehensive presence through various subsidiaries and its wider reach across India.

Purpose of the Report

The present study "Evaluating the Impact of Disaster Preparedness and Response Interventions of Reliance Foundation Disaster Management Program" provides a comprehensive and systematic assessment of the various programs under the disaster management vertical of the Foundation related to 'Disaster Preparedness and Response'. The report provides valuable insights of the interventions, identifies key learning areas and, presents a few recommendations to further enhance the Foundation's efficacy and contributions in the wider field of disaster management. The evaluation adopts a mixed-methods approach, by combining quantitative data analysis and qualitative assessments

This assessment is crucial in establishing Reliance Foundation's stronghold in Disaster Management sector as it:

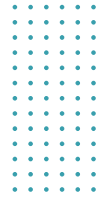
- (i) highlights the key learnings of the work by the Foundation in disaster management;
- (ii) recognizes the scale of the work and the ability of the Reliance Foundation to influence the discourse on private sector involvement in disaster management in Indian context.



Mitigation



- Promote location specific climate resilient agriculture practices
- Impact forecasting to support response and mitigation
- Promote crop insurance based on adverse weather incidences
- Leveraging technology & promoting innovations & best practices



Preparedness

- Building capacities for community readiness
- Strengthening delivery of early warnings
- Mapping evacuation routes and safety shelters

DISASTER INTERVENTION AREAS



Recovery

- On-ground diagnostic camps for the protection of crops and treatment of livestock
- Awareness & guidance on availing government compensation
- Introducing resilient crop varieties & animal breeds



Response



- Connecting individuals with rescue teams
- Supporting NGOs/ government at various levels for data-based humanitarian response activities
- Strengthening coordination among various stakeholders Distribution of relief materials for immediate sustenance of the disaster impacted communities
- Awareness on post-disaster disease management
- Conducting livestock and human health camps

Report Structure

PART 1:

'Introduction' highlights the relevance of the work of Reliance Foundation in the disaster management arena and sets the context of the impact assessment study.

PART 2:

'Methodology' of the report presents the approach, design and methodology adopted to carry out the impact assessment.

PART 3:

The section provides an overview of the interventions and systematically categorizes them for (i) Disaster Preparedness and (ii) Disaster Response and Relief under various thematic focus areas of action e.g. Understanding Vulnerabilities and Risks, Capacity Building and Inter Agency Coordination (Multi Stakeholder Involvement) etc. The section analyses interventions of the Foundation using key indicators and presents the learnings.

PART 4:

'Conclusions' assesses the alignment of the Reliance Foundation's disaster management initiatives with the national priorities, such as the Prime Minister's 10-Point Agenda and international goals and priorities such as those set by Sendai Framework for Disaster Risk Reduction (SFDRR) and Sustainable Development Goals (SDG) .

PART 5:

Provides recommendations to further strengthen interventions of Disaster Management vertical of the Reliance Foundation.

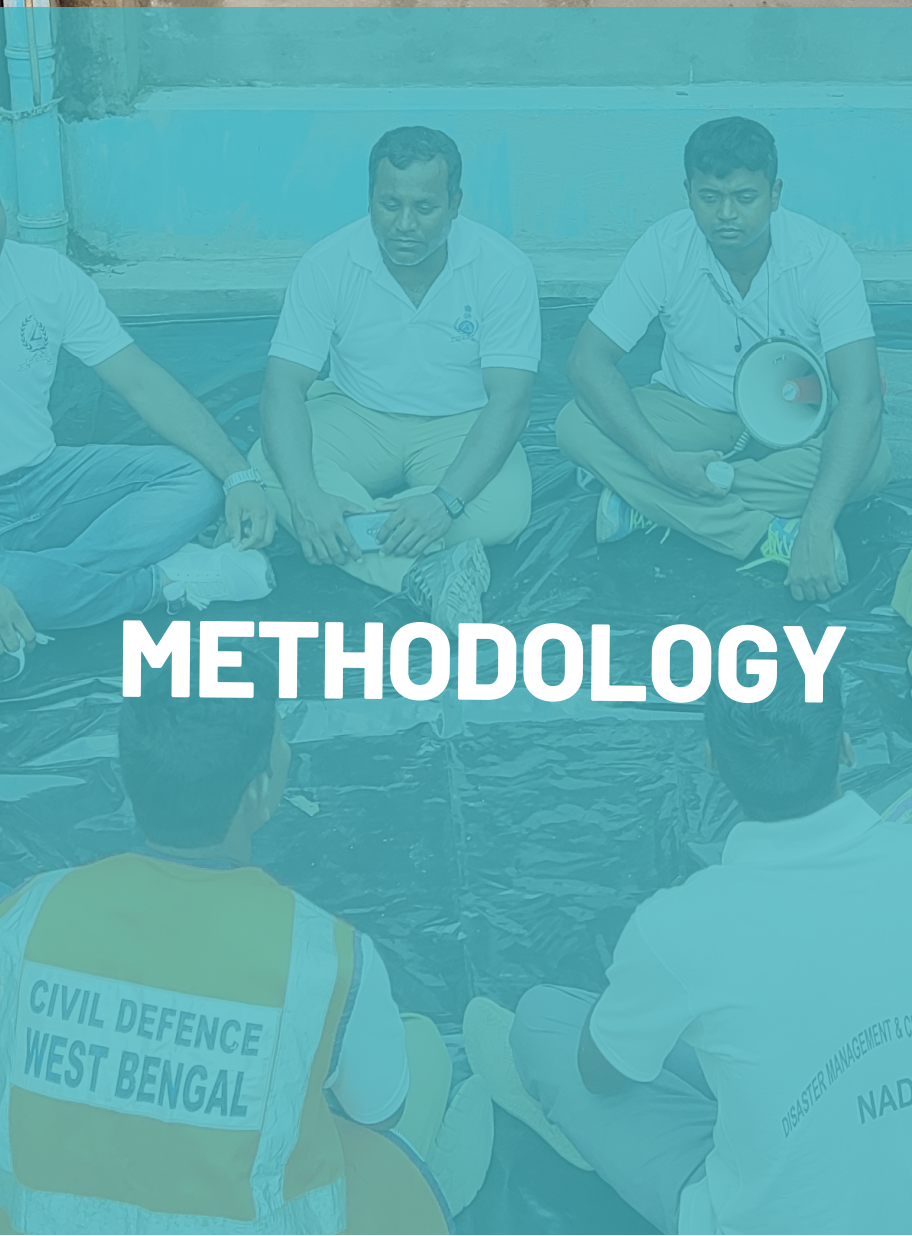
INTERNATIONAL DAY
FOR DISASTER RISK REDUCTION

Reliance
Foundation

Mock Drill for Youth Volunteers

In collaboration with
West Bengal Disaster Management and Civil Defence Section,
Ranaghat Sub-Division, Nadia

Place: Ranaghat Date: 13-10-2022
Reliance Foundation Toll Free Helpline: 1800 419 8800



METHODOLOGY



2. Methodology

Started with the response to the floods in Uttarakhand in 2013, the Disaster Management program of the Reliance Foundation has now expanded to a geographical span of over 22 states. The program focuses on major disasters including cyclones and floods.

The present study provides an overview of the Reliance Foundation’s interventions in disaster management through a comprehensive and systematic assessment. It identifies the key learning areas. The impact assessment follows a mixed-method approach involving desk review of the documents to systematically carrying out the study by; (i) giving an overview of the work and (ii) identifying and categorizing the stakeholders and their roles.

The report analyses the impact of disaster preparedness and response interventions against five indicators. The evaluation assessed the interventions on; (a) Relevance, (b) Reach, (c) Inclusiveness (vulnerable and most disadvantaged groups involved), (d) Involvement of multi-stakeholders, following a participatory decision-making process and (e) Sustainability in the approach.

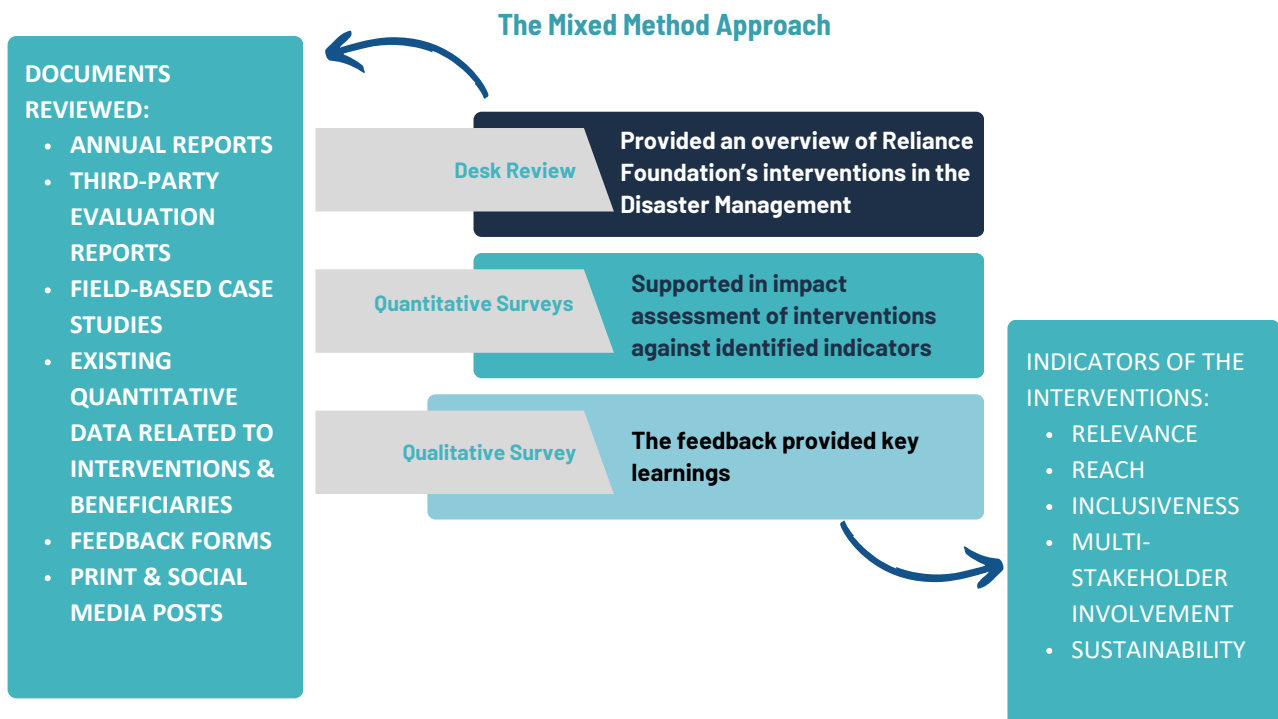


Fig. 2: The Approach Taken to Develop this Report

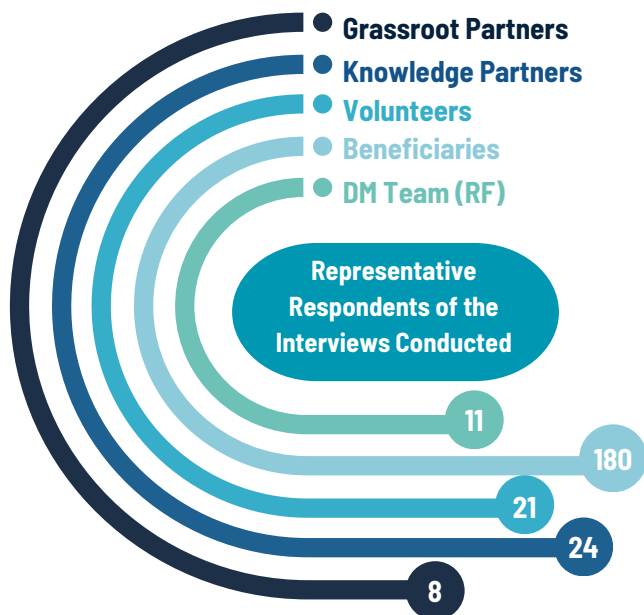


Fig. 3: Representative Respondents of the Interviews Conducted

To get insights of the interventions, all the published reports and secondary data of the Reliance Foundation Disaster Management Program was reviewed. From this desk review three key stakeholder categories were identified i.e. Facilitators, Beneficiaries and Catalysts (figure 4). These three key stakeholders were further divided into five groups i.e. Knowledge Partners, Grassroot Partners, Volunteers, Affected Communities and RF team (figure 3). Accordingly, five sets of questionnaires representing stakeholder groups were designed. The questionnaires were developed by integrating the critical indicators of disaster management interventions and had a semi-structured format, with interviews focusing on both quantitative and qualitative data. All the interviews were conducted virtually.

The primary beneficiaries and volunteers of Reliance Foundation's interventions were interviewed through telephonic survey. Questionnaires were mailed to the government and non-government stakeholders for self-administration. Zoho application was used to collect data from all the beneficiary segments.

FACILITATORS

Include partner institutions like government departments, local community members, knowledge partners and grassroots partners (local NGOs, volunteers, panchayat institutions, communities and people)

BENEFICIARIES

Include disaster impacted communities.

CATALYST

Refer to the Reliance Foundation. The RF form a bridge between facilitators and beneficiaries, strengthening it with the prompt action.

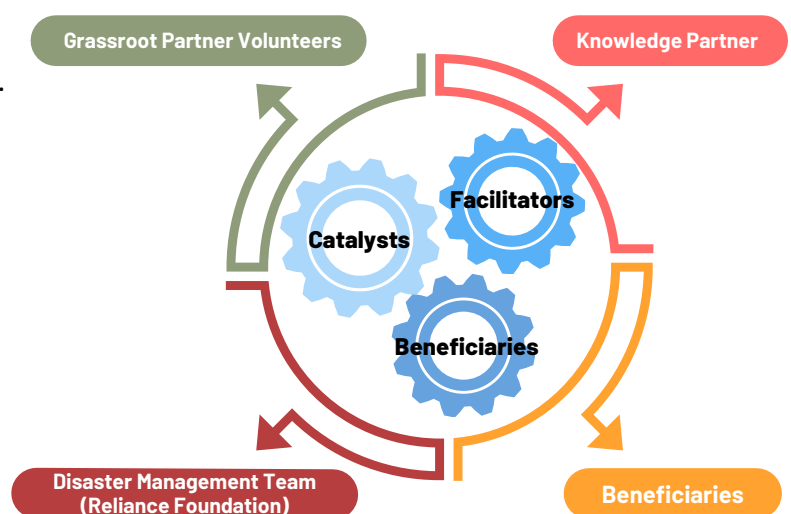


Fig. 4: Key Stakeholders and Stakeholder Categories



**DISASTER
MANAGEMENT
INTERVENTIONS
BY RELIANCE
FOUNDATION**

3. Disaster Management Interventions by Reliance Foundation

Apart from these major disasters, the Foundation has been supporting 'relief operations' subsequent to many other disasters and emergencies such as the earthquake in Nepal (2015) and the Covid-19 pandemic.

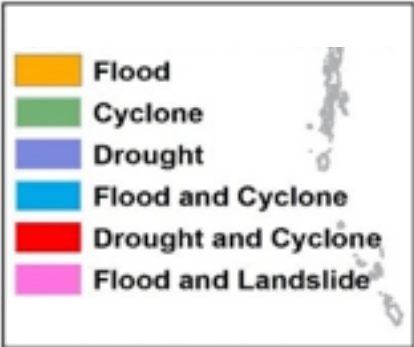
12,40,000
Disaster Impacted Individuals Benefitted

49
Disaster Events

19
States

293
Districts

3
UTs



to scale and for illustration purpose only

Fig. 5: Reliance Foundation's Widespread Disaster Management Interventions

Disaster risk reduction, mitigation and response have been integral part of Reliance Foundation's commitment to social responsibility.

As part of this commitment, Disaster Management is taken up as a focus area in Reliance Foundation, to primarily assist disaster-affected communities to prepare and recover from the impact of disasters in a quick span of time. The Foundation has systematized its work in disaster management to develop a program that is built on the lessons from past experiences and setting up a structure for the future.

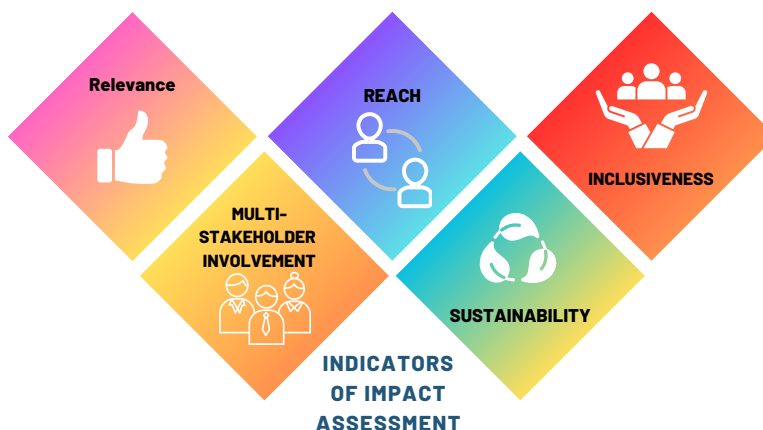


Fig. 6: Indicators for Assessing the Interventions

The program supports disaster-prone communities by preparing them to face repeated occurrences of disasters. The Foundation also works with communities to revive livelihoods, improve health and education to ensure sustainable development. Building resilience against climate change impacts has also been at the heart of the long-term priorities and planning of the Foundation as co-benefits of the interventions.

As a result, the program developed into a well-founded system that initiated working holistically for risk reduction, response, and community capacity building across multiple regions. The Foundation also assessed the gaps wherein limited effort has been made by organizations in crosscutting rural livelihood and disaster management. With a strong presence in rural areas, the Foundation also focused on addressing the climate impacts on rural livelihood.

In the span of 10 years the Foundation has contributed through variety of interventions to the management of 49 disaster events ranging from natural, biological, and man-made. Floods and cyclones have been the major disaster events where the Foundation intervened. Additionally, the organization was actively involved in the emergency disaster response during Nepal Earthquake in 2015 and COVID-19. In addition, the Foundation has carried out initiatives to facilitate preparedness, capacity building and disseminate awareness regarding disaster management. In a decade of Foundation's dedication to this cause, 293 districts in 19 states and 3 UT's have benefitted from their interventions and initiatives.

The Disaster Management program of Reliance Foundation has adopted ISO 9001:2015 standards (Quality Management System) for its process of responding to disasters. This makes Reliance Foundation notable among private sector companies.

The present chapter tries to categorize and analyse various interventions of the Foundation systematically via the lenses of Focus and Relevance; Reach, Scale and Impact, inclusiveness; Involvement of stakeholders; and Sustainability of the interventions.

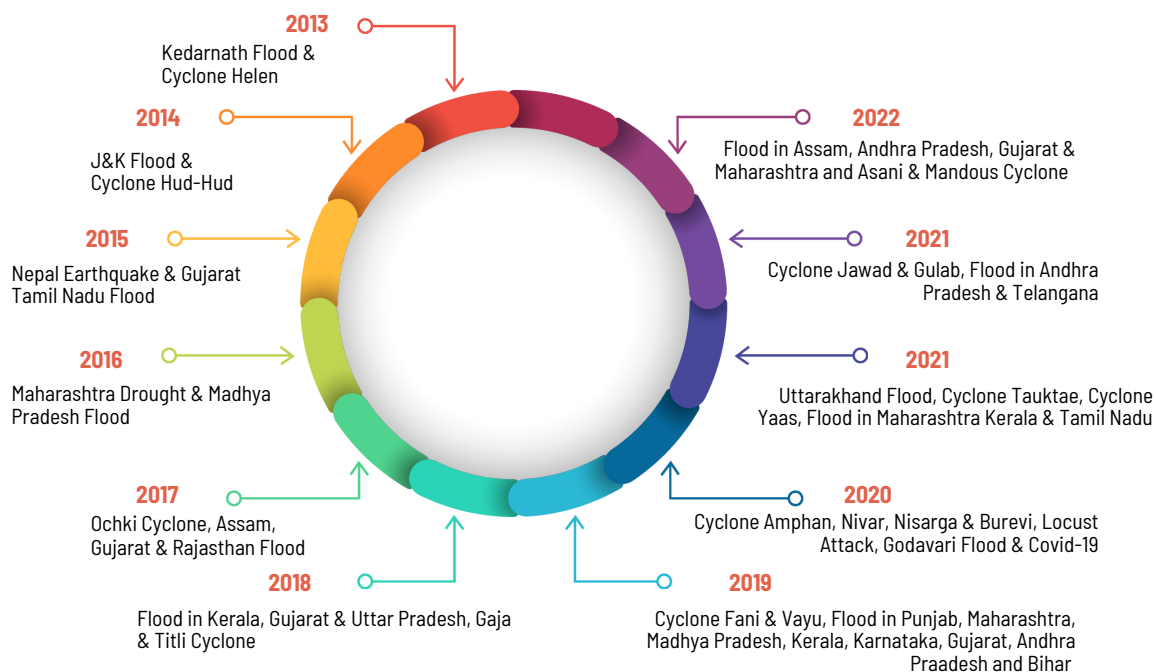


Fig. 7: Major Disaster Management Events in which Reliance Foundation Intervened

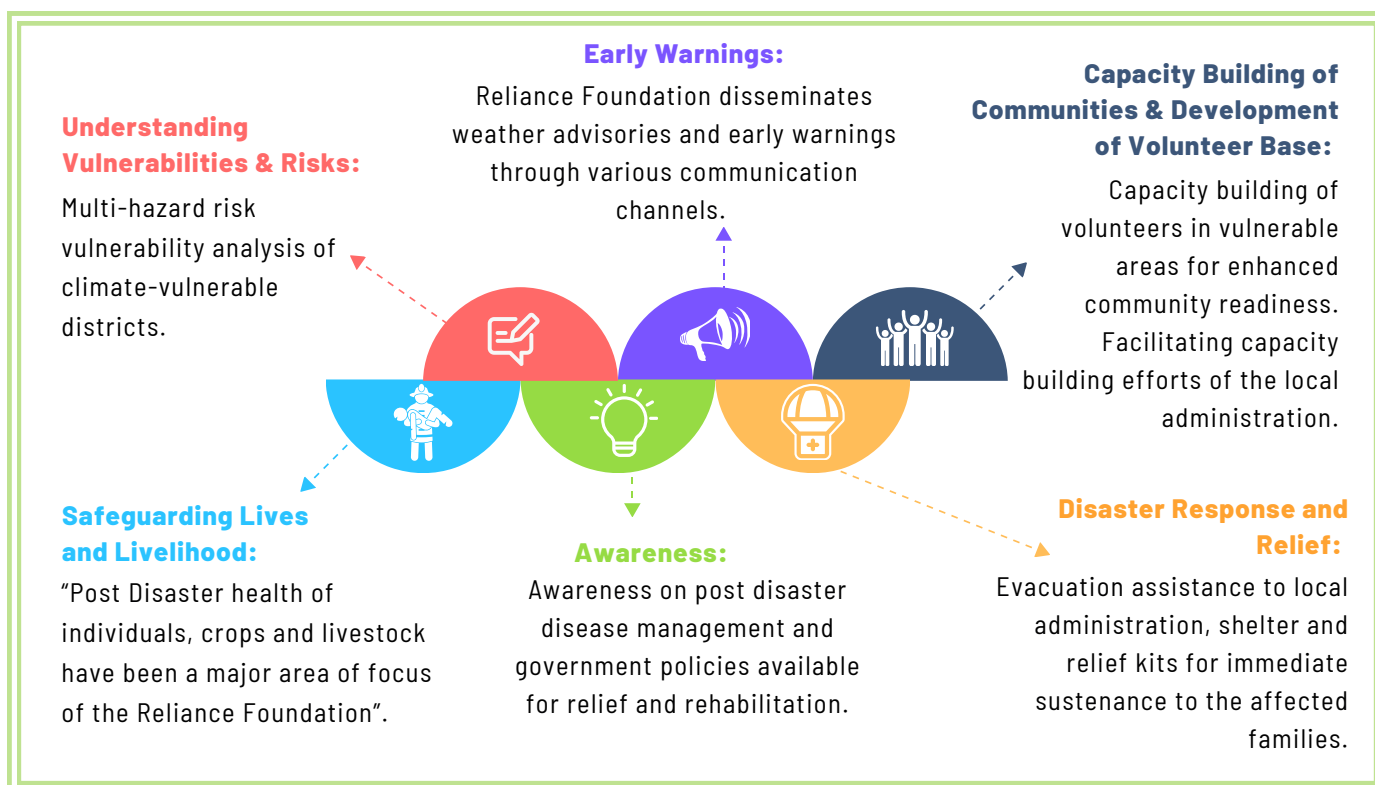


Fig. 8: Thematic Areas of Various Interventions Before-During-After Disasters

3.1 Disaster Preparedness



Reliance Foundation disseminates weather advisories and early warnings through various communication channels.

Understanding vulnerabilities and associated risks of the climate vulnerable districts are significant area of intervention of the Reliance Foundation.

Reliance Foundation supports the capacity building of stakeholders including the communities and local administration.

A) Understanding Vulnerabilities & Risks

B) Early Warnings & Advisories

C) Capacity Building of Communities and Development of Volunteer Base

D) Safeguarding Lives and Livelihood

A. Understanding Vulnerabilities & Risks

Understanding vulnerabilities and disaster risk through multi hazard risk and vulnerability analysis is a critical aspect of effective disaster management. This method involves comprehensive assessments that examine multiple hazards, such as earthquakes, floods, cyclones, and even pandemics, to identify their potential impacts on communities and infrastructures. Accordingly, it is possible to develop informed and need based preventive and response measures. Overall, Multi Hazard Risk and Vulnerability Analysis contributes to informed decision-making processes by providing valuable information on potential risks and enabling proactive measures for enhancing resilience in order to minimize loss of life, damage to property, and social disruptions associated with disasters. Reliance Foundation has conducted Flood Risk Assessment for Cachar District, Assam (2022) and Multi Hazard Risk and Vulnerability Analysis for eight climate vulnerable districts of five states (Odisha, West Bengal, Kerala, Andhra Pradesh and Bihar).

Flood Risk Assessment of Cachar District, Assam

Outcome:

209 highly vulnerable villages identified in the Cachar district, Assam.

Stakeholders Involvement:

DDMA, Community Facilitation and Resource Centre (CFRC), Inter-Agency Group (IAG), Respondents from Gram Panchayats, local civil society organisations

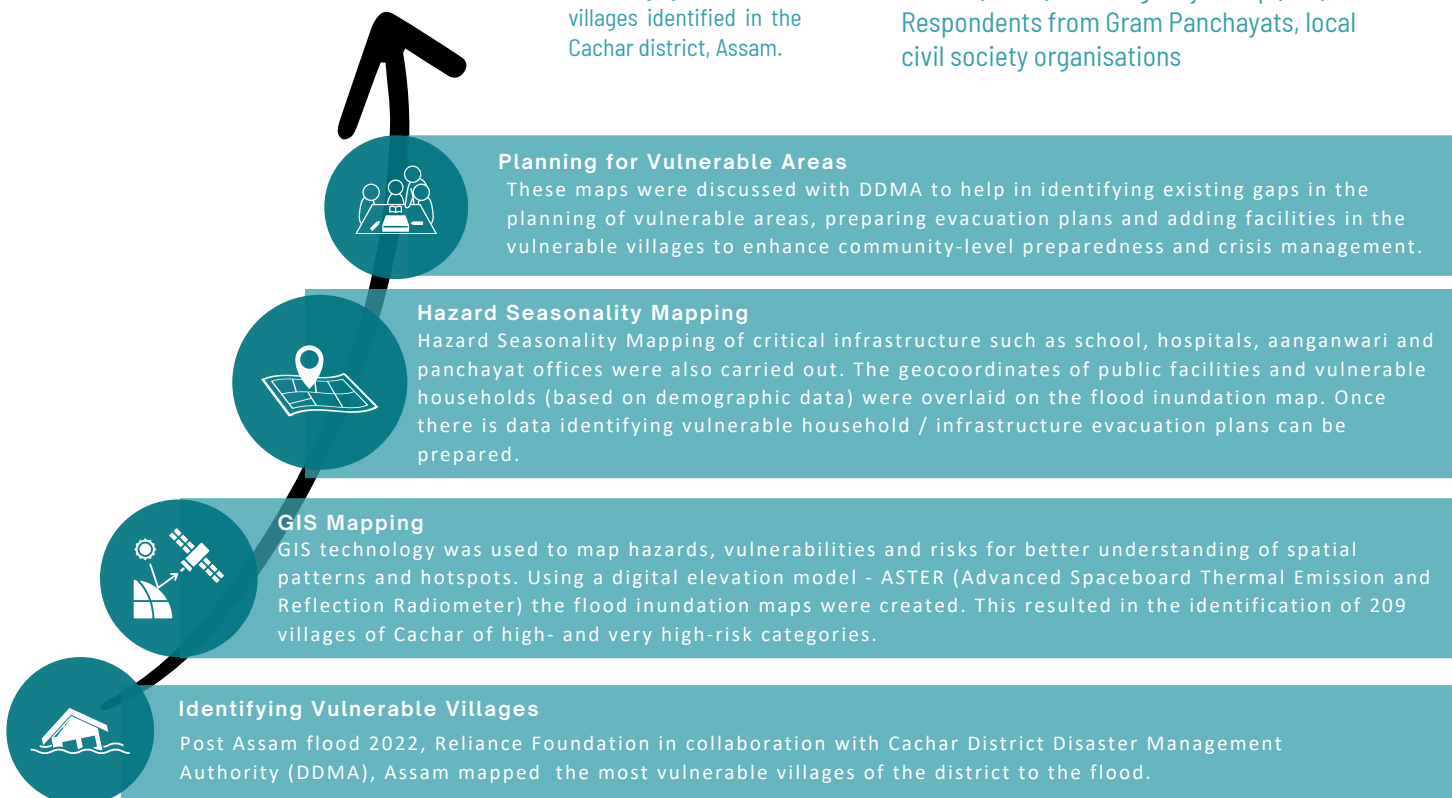
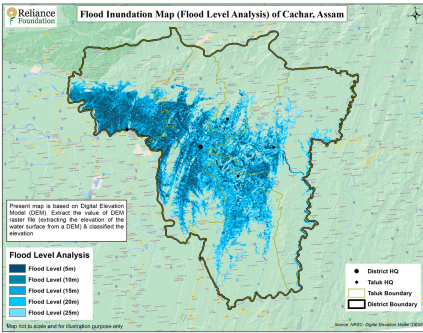


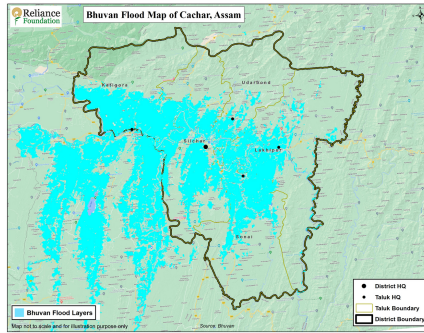
Fig 9: Flood Risk Assessment of Cachar District, Assam

Process Followed to Prepare Hazard Map of Cachar District of Assam

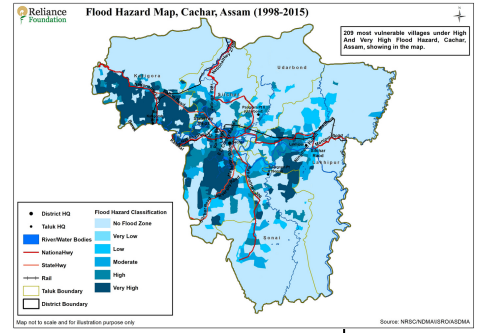
ASTER Digital Elevation Model (Low lying area -extracting the elevation of the water surface from a DEM)



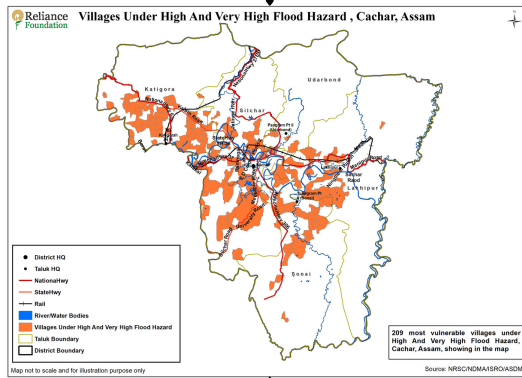
Historical Flood Map
Source: Bhuvan Data Products - Indian Space Research Organisation



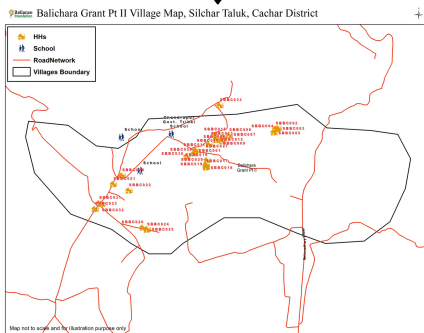
Historical Flood Hazard Map Source: National Remote Sensing Centre



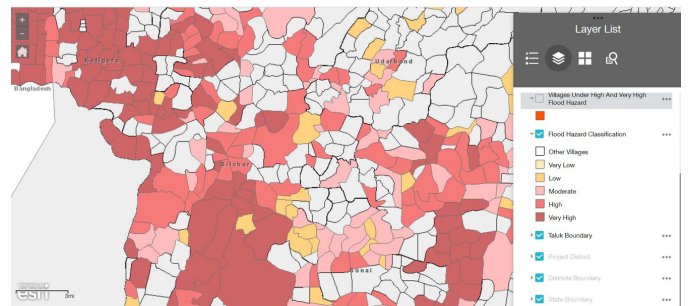
Most vulnerable villages under High and Very High Flood Hazard



Village map with administrative boundaries, hydrological features, Household, Critical Infrastructure etc.



Graphic Representation of earth surface with administrative boundaries, Household, Critical Infrastructure Mapping



GIS based digital model

Fig 10: Process followed to prepare Hazard Map of Cachar district of Assam

B. Early Warnings and Advisories

B1. Disaster Risk Reduction requires not just understanding the risks but also its communication with the communities to enhance community preparedness. Reliance Foundation coordinates with national agencies to procure weather forecasts. This information is used to disseminate early warnings along with disaster preparedness advisories provided by experts from the State and District level agencies.

Reliance Foundation uses wide array of communication channels - digital, online, and offline to disseminate early warnings and disaster preparedness advisories. Voice SMS, multi-media messages, mobile applications, WhatsApp, JioChat, YouTube, warning messages on local television channels and announcements on All India Radio, local newspapers and volunteers spreading awareness amongst communities via auto rickshaws and other available modes of public transport are means to make sure that the information reaches the concerned population.

The advisories include:

- Weather-related advisories on heavy rains, wind speed (especially to the marine fishing communities) and early warnings on cyclones and storm surges.
- Expert advice on agronomical practices to help save crops against high wind velocity and heavy rain; need-based suggestions on irrigation practices, safe storage of harvested crops, pruning of orchard crops, removal of excess water from the field and livestock protection.

Early warnings also aim to help the government authorities in safe evacuation of vulnerable populations and in the distribution of relief materials.

Stakeholders Involved

National Level Partner Agencies

Indian Institute of Tropical Meteorology (IITM) Pune; National Centre for Medium Range Weather Forecasting (NCMRWF), Noida; India Meteorological Department (IMD) and Indian National Centre for Ocean Information Services (INCOIS)

State and District Level Agencies

Dept. of Agriculture, Krishi Vigyan Kendra, Dept. of Fisheries, Dept. of Animal Husbandry, and expert agencies on disaster management like SDMA and DDMA.

Corporate Partners

Centre of Excellence in Artificial Intelligence and Machine Learning- Jio (Technical Support)

Outcomes

The weather information-based disaster preparedness advisories disseminated to over 6 million fisher folks and farmers in 6 states.

Early warning and livelihood advisories are being regularly sent to 17 states.

Early warning system has proved particularly useful during the Cyclones Phailin, Leher and Helen, Hudhud, Jawad, Tauktae, Yaas, Gulab, Ochki, Amphan, Nisarga, Burevi and Kerala flood.

Fig. 11: Stakeholders Involved and Outcomes of Early Warning Interventions

B2. For fisherfolk, a specific application “Machli” has been Jointly developed by the Reliance Foundation Programme, Centre of Excellence – AI/ML Jio and Indian National Centre for Ocean Information Services (INCOIS). The application provides real-time updates on critical weather and oceanographic parameters such as wind speed, wave height and strength of ocean currents to marine fishermen to warn them against venturing into the sea for their safety and the safety of their assets. This is available in 9 Indian languages and covers the entire coast of India.

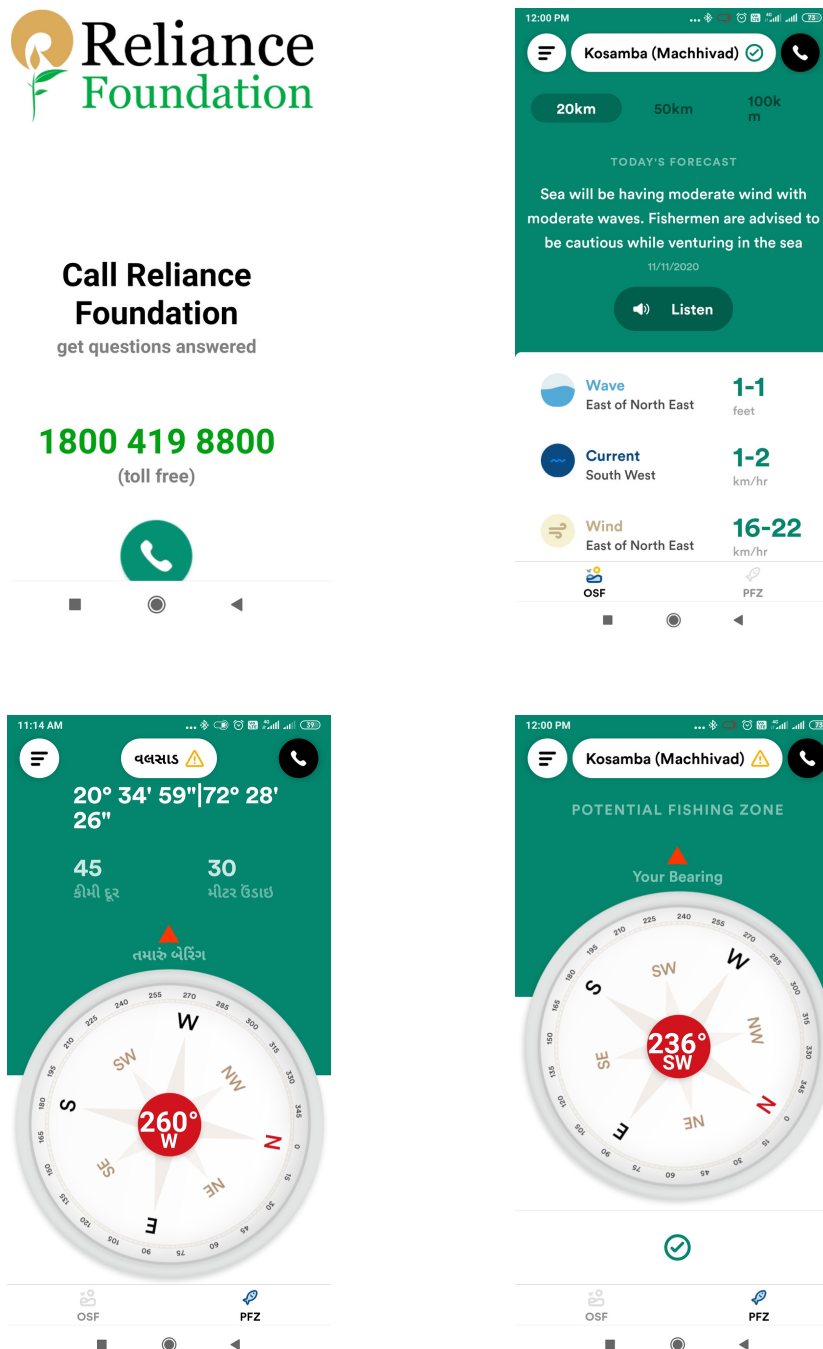


Fig. 12: Reliance Foundation's Machli Application

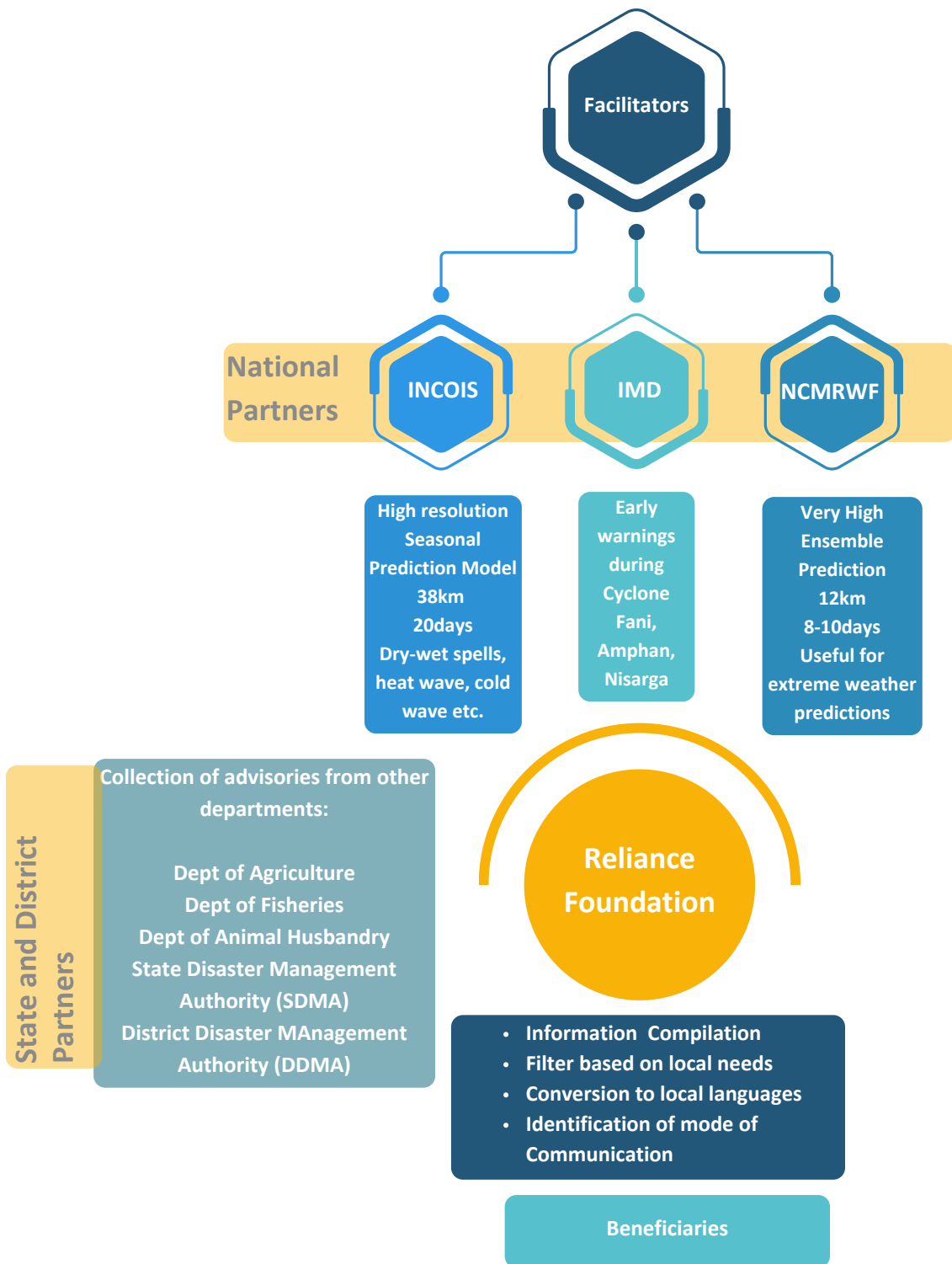


Fig. 13: Reliance Foundation's Multilevel Early Warning and Advisory Systems

C. Capacity Building of Communities and Development of Volunteer Base

Building community readiness is key to effective disaster management. Reliance Foundation uses Community Based Disaster Risk Management (CBDRM) approach in building community’s resilience to safeguard lives and livelihood in face of a disaster event.

- The focus has been building capacities of the youth from the vulnerable communities in the disaster-prone districts. The aim is to deepen knowledge of community volunteers on the basics of disaster management, disaster management cycle, importance of volunteering, roles and responsibilities of volunteers, as well as build skills to identify the local hazards and vulnerabilities and learn basic survival and life-saving techniques, first aid and fire safety measures.



Fig. 14: Stakeholders Involved and Outcomes of Capacity Building Interventions

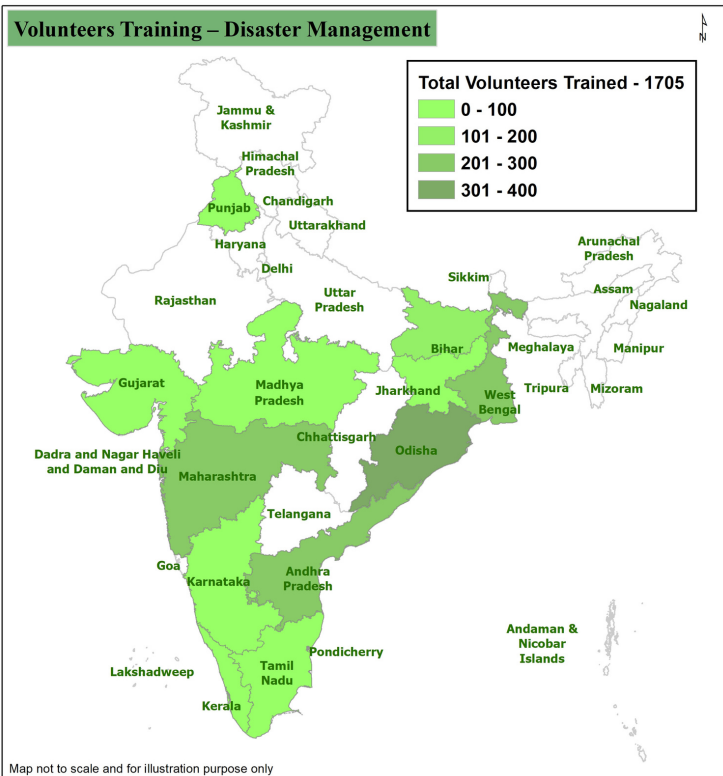


Fig. 15: Training Programs Conducted in 14 States of India

- The Foundation focuses on developing a pool of volunteers from the RIL businesses to respond to various disasters. Through capacity building they are empowered to understand challenges and risks associated with disasters. As part of the training, skillsets of employee volunteers are specifically tapped to serve communities. The training provides knowledge on basic concepts, terminologies and institutions working in disaster management, maintain humanitarian standards while providing relief, personal preparedness of volunteers, communication policies, and a detailed overview of intervention in disasters.

- The volunteers act as bridge between affected communities and different relief players.
- The Foundation also facilitated training and mock drills to prepare local administration to better manage tsunamis, cyclones, and other disasters. This approach is particularly used for better preparedness for tsunamis and cyclones.

Identified volunteers are provided basic training on disaster management. They take part in the mock drills. The volunteers play crucial roles in bringing life to normal when the relief operations continue for 15 to 20 days and the terrain is difficult.

D. Safeguarding Lives and Livelihood

D.1 Awareness via Dissemination of Information for Risk Mitigation to Safeguard Livelihood of Livestock Farmers

Vaccination on foot and mouth diseases, Brucellosis, Ranikhet plague in poultry, goat plague etc are pre-dominant in India. Timely access to information on vaccination schedule of livestock motivates and helps livestock farmers to protect the livestock during disaster situations. Reliance Foundation works towards improving livestock health and thus the livelihood of livestock farmers via dissemination of the related advisories through various digital platforms and field consultations.



Fig. 16: : Stakeholders Involved in Interventions to Safeguard Lives and Livelihood

D.2 Post Disaster Health Interventions

Wide range of activities have been carried out in this front during all the major disaster events that occurred during the past 10 years. Setting up medical camps in the affected areas, deploying mobile medical vans with a general practitioner to provide immediate medical aid, sensitization of the local community about the health concerns post floods through Knowledge on Wheels (KOW), release of regular health advisories using VMS on the prevention of vector borne diseases are a few of the interventions of the Foundation.

Post Disaster Animal Health Camps:

Numerous epidemic diseases that develop right after a disaster reduce the productivity of many animals and also result in the death of animal communities. The other significant factors that contribute to the continued decline in an animal's health are poor nutrition immediately post-disaster. Reliance Foundation works towards conducting livestock treatment camps and programs on livestock health and diseases with the help of livestock health experts to provide timely treatment and thus safeguard the animals.

3.2 Disaster Response and Relief



A) Evacuation Assistance to Local Administration

B) Relief

C) Community Awareness

A. Evacuation Assistance to Local Administration

Reliance Foundation's toll-free helpline facility remains available 24x7 during the disasters to address SOS. The helpline also serves as a focal point to address queries related to livestock, crops and compensation schemes available to affected communities. The Foundation acts as a catalyst in such situations to speed up administrative machinery for urgent evacuation and to provide other livelihood support.

Stakeholders Involved

District Emergency Operation Centre, District Disaster Management Authorities, State Disaster Management Authorities, State Marine Police, Coast Guard, Indian Navy, Cyclone Shelter Management & Maintenance Committee.

During Cyclone Ockhi, Tamil Nadu (2017) the Reliance Foundation coordinated with the coastguard and Indian Navy to facilitate rescue of 300 fishermen and 35 boats from deep sea following a SOS received on Toll free Helpline number.

On receiving SOS from the district administration, a team of 75 volunteers along with Reliance Foundation volunteers conducted evacuation response saving hundreds of people in the Jodiya Tehsil in Jamnagar during Gujarat Floods (2017).

During Kerala Floods (2018) assisted Kerala State Disaster Management Authority by appealing to the existing 37,371 beneficiary fishermen from nine districts to join hands with district administration in rescuing people stranded in flood-affected areas. Many Fishermen who received the advisory came forward, participated and deployed their boats in the rescue operations saving thousands of lives.

Set up toll free helpline 1800 419 8800 to address cyclone-related queries and assisted the state government in evacuation during Cyclone Fani (2019), Odisha and Andhra Pradesh. The Reliance Foundation's team in Srikakulam district of Andhra Pradesh and Puri district of Odisha also conducted evacuation drives in collaboration with Marine Police and Department of Fisheries rescuing more than 600 and 20,000 families from the respective districts.

Reliance Foundation and Fisheries Department communicated early warnings and sensitized the community for quick evacuations. Based on the announcement, around 300 villagers (120-Male, 130-Female and 50-Children) were moved to the Talchua Cyclone Shelter of Rajnagar Block of Kendrapara District by the district administration in Cyclone Amphan, Odisha (2020). There is no causality reported.

Reliance Foundation deployed its trained youth volunteers, who helped district authorities evacuate over 11,800 people from 50 villages to nearby cyclone shelters during cyclone Yaas (2021), West Bengal and Odisha.

During Maharashtra Floods 2021, 100 families in Ambavali and 261 families in Kurle, Raigad districts exposed to landslide risk were evacuated and shifted to safe shelters. Reliance Foundation distributed food kits and other essentials to all the families sheltered in safe places.

During the three cyclones, Phailin (2013), Leher (2013) and Helen (2013), the technology platforms of the Foundation were used by the Marine Police of Andhra Pradesh to deliver early cyclone warnings and alerts in the form of SMS and audio advisories. These messages helped the Police reach out to maximum people and minimise the risk of loss of lives.

B. Relief

In the aftermath of severe disasters in different states of India and neighbouring countries Reliance Foundation reached out to the victims and provided support in the form of relief kits for immediate sustenance. These kits are customised depending on the socio-cultural contexts of the region and gender specific needs. Nutrition standards are considered while preparing dry rations and ready-to-eat food materials.

In addition, the Foundation also facilitates setting up of community kitchens in the remote and difficult terrains so as the disaster response teams of Disaster Response Force, Defence Forces, and volunteer can continue operations. The Foundation also works towards providing shelters to the affected population.

The relief material consists of:

- Ready to Eat Food Material
- Drinking Water
- Dry Ration
- Staples
- Sanitation Material
- Sanitary Pads
- Kitchen Utensils
- Shelter Kits
- Masks
- Clothing
- Blanket
- Fodder Kits

Over 13 Lakh individuals have been supported through relief material (2013-2022) distributed by the Reliance Foundation during various disaster events.

During Dhauli Ganga, Rishi Ganga and Alaknanda rivers flood in Uttarakhand (2021) community kitchen served daily meals and refreshments to 250+ members of the Indo-Tibetan Border Police, National Disaster Response Force and State Disaster Response Force.

Provided shelters to 75 families in Uttarkashi and Rudra Prayag in Uttarakhand Flood, 2013. Provided 217 mid-term shelter during heavy rains & floods in J&K, 2014.

C. Community Awareness

C.1 Awareness about Government Policies and Schemes

Reliance Foundation leverages digital coordination platforms to create awareness about government policies related to relief and rehabilitation. With the help of audio/ video conferences using Jio 4G platform compensation procedures are explained to the affected population and issues are resolved. During Madhya Pradesh Flood 2016, Bihar Floods 2019, Cyclone Yaas 2021 and Godavari Floods 2022 this coordination model for awareness was implemented.

C.2 Post Disaster Health Awareness

Awareness is another area of intervention wherein the Reliance Foundation works via establishing a digital communication channel between the affected population and health officials. This model is based on acquiring the contact details of the disaster affected population and service providers such as ASHA workers, Anganwadi workers, volunteers of district administration and schoolteachers from the district information officer and establishing interaction between them. The work includes awareness about supply and usage of halogen tablet, bleaching powder, calcium powder, 102 Ambulance facilitates, special health arrangement for expecting pregnant women etc.

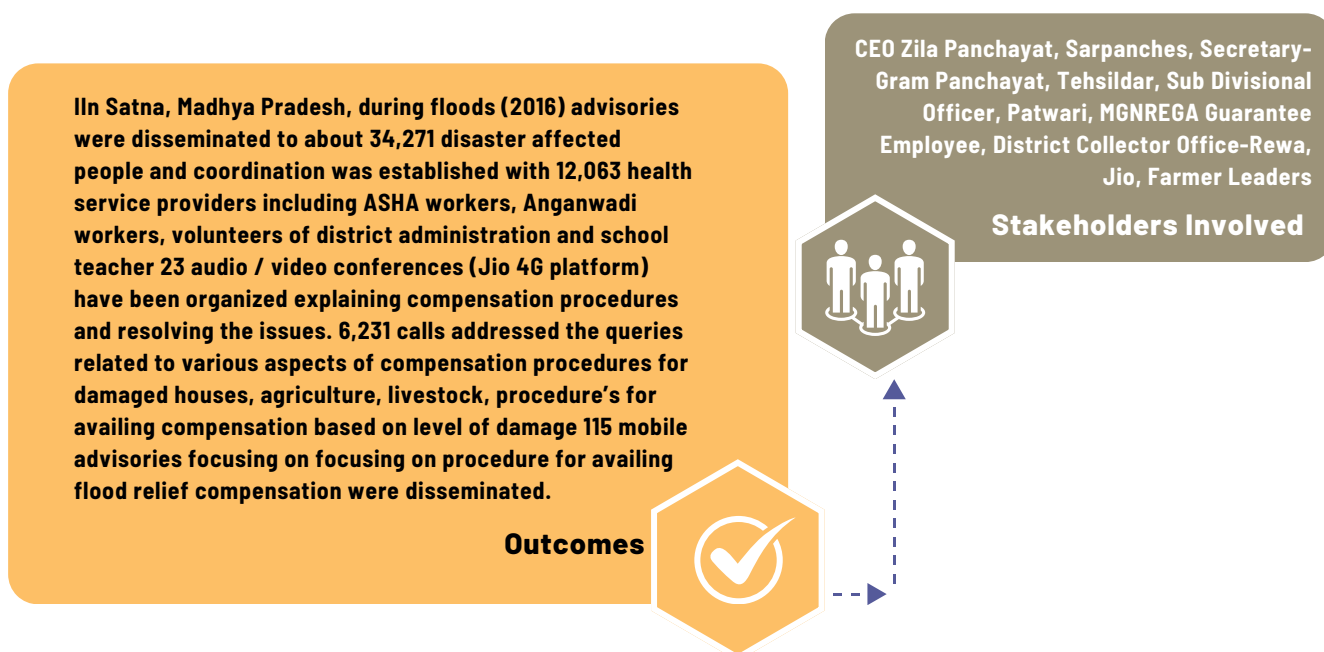


Fig. 17: Stakeholders Involved and Outcomes through Community Awareness

Interventions of Reliance Foundation during COVID-19

Reliance Foundation have launched five Mission Programs to support the affected communities during COVID-19. These Missions are Mission Anna Seva, Mission Oxygen, Mission Vaccine Suraksha, Mission Covid Infra and Mission Employee Care. Interventions towards fulfilling medical care requirements, food emergencies, enhancing community preparedness through awareness, supporting economic activities of rural communities (farmers, fishers, SHG and FPO), strengthening market linkages of the rural communities and providing guidance about government schemes are some of the major areas of interventions.

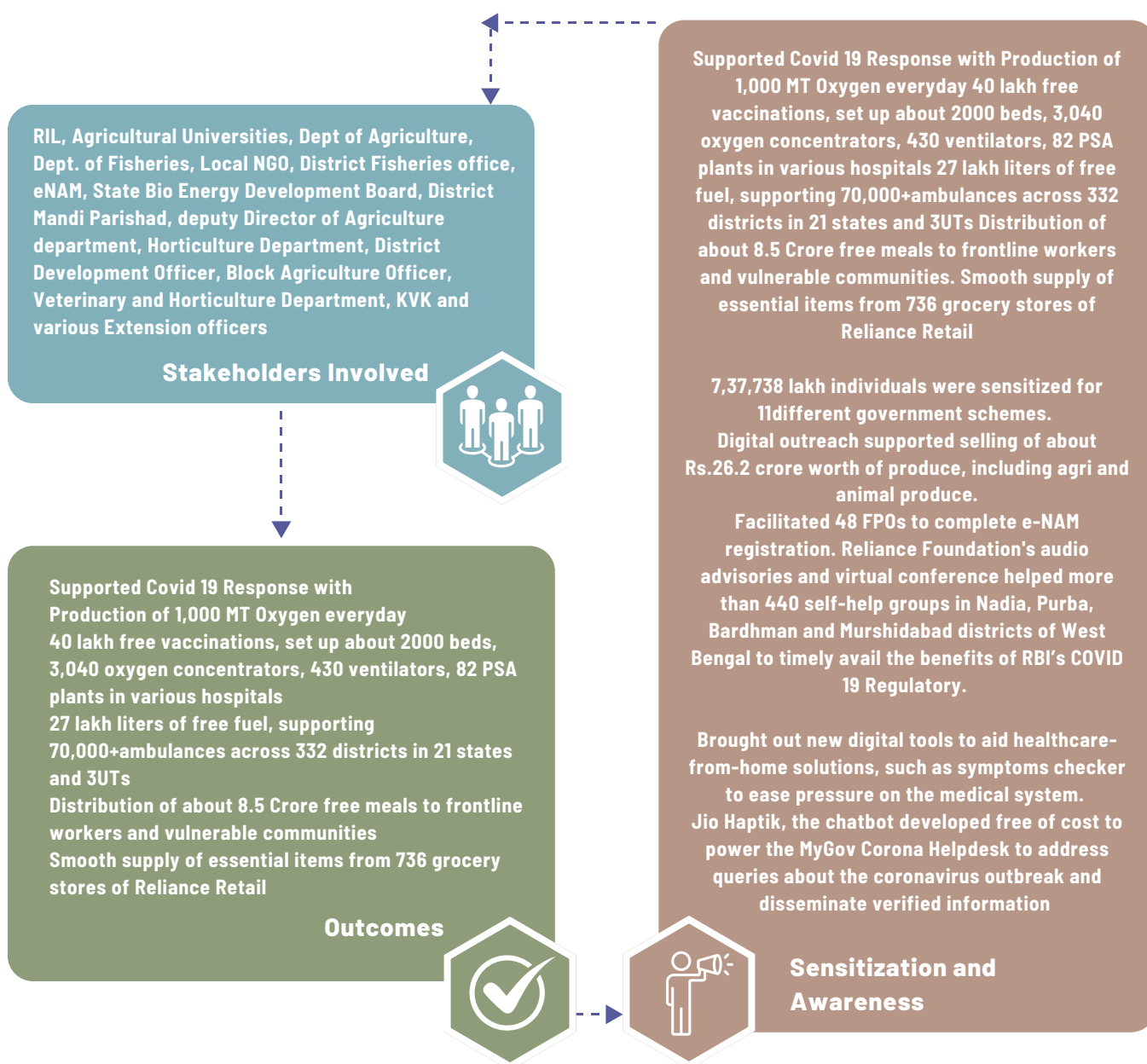


Fig. 18: Highlights of Interventions during COVID-19



Stakeholder's Perception



A. Safeguarding Lives and Livelihood

A.1 Early Warnings Provided and Sufficient Response Time

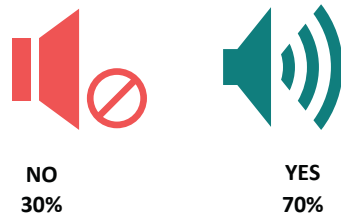


Fig. 19: Reduced Loss of Lives and Assets due to On-Time and Accurate Early Warnings for Disaster Events. Source: NCEAR, July 2020.

A.2 Farmers Increased Annual Income (in Lakh)



Fig. 20: Farmers and Fishermen Reported Higher Income Following Weather Advisories. Source: NCEAR, 2020.

The following information is based on the study “Assessing the impact of weather-based advisories disseminated by Reliance Foundation” conducted by the National Council of Applied Economic Research (NCEAR), in July 2020:

- Livelihood advisories make farmers, fishermen and livestock herders learn adaptive strategies
- 94% of Farmers reported an increase in annual income due to weather and expert livelihood advisories provided
- Reduced mortality and loss of assets with accurate and on-time early warnings

B. Multistakeholder involvement – A Participatory Approach

B.1 Joint Intervention with Partner Institutions

- Multiple interventions were planned with various partners, allowed for a participatory process can be followed

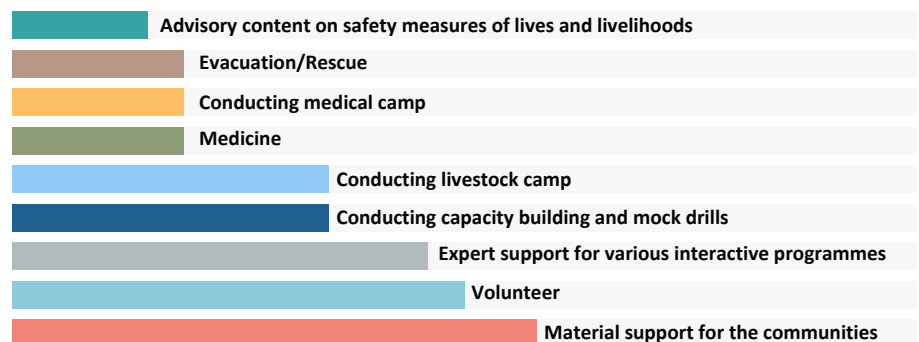


Fig. 21: Major Activities Conducted in Collaboration with Key Stakeholders

B.2 Understanding the Partners Perception

- High ratings were given by grassroots partners for Response Coordination and Resource Mobilization.
- Partner's perception reveals more efforts should be targeted towards capacity building (preparedness) of the communities and supply of relief material during disaster
- Partner's also suggested that Reliance Team cover more districts for disaster management

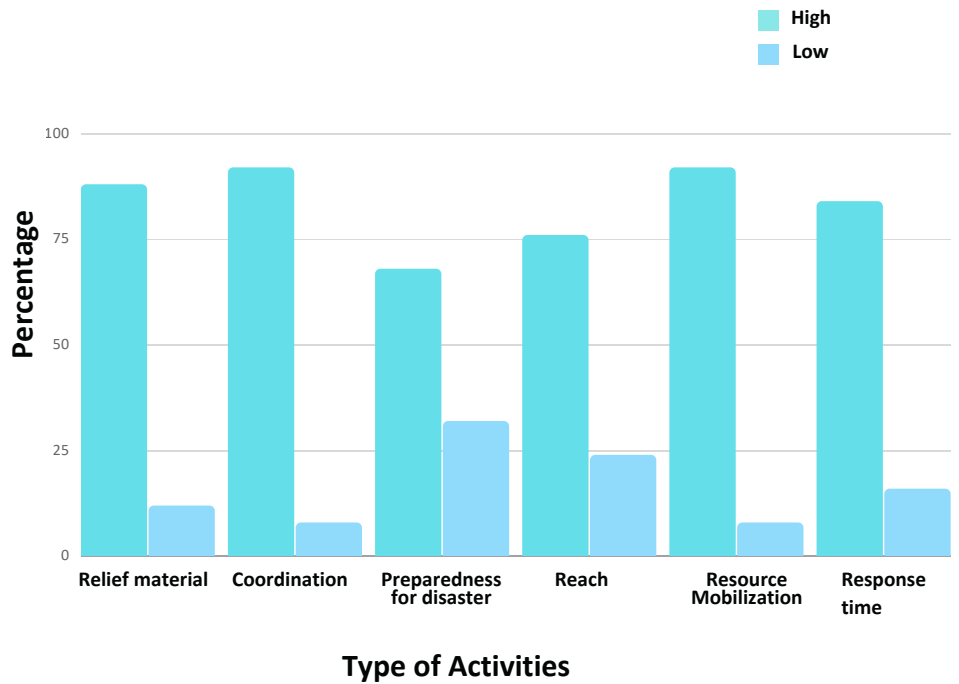


Fig. 22: Key Stakeholder Perception of Major Group of Activities

C. Community Preparedness

C.1 Usefulness of Trainings



Very Useful
95%



Somewhat Useful
5%

- The beneficiaries gained increased confidence to manage disaster Post RF capacity building initiatives.
- Farmers, Fisher Folks and Livestock herders learnt adaptive strategies
- Early warnings, evacuations and health awareness reduced loss of life and livelihood, making resilient communities

Fig. 23: Post Training Community Volunteers Feel More Confident

C.2 Confidence Level of Trainees to Tackle Disasters Post Training

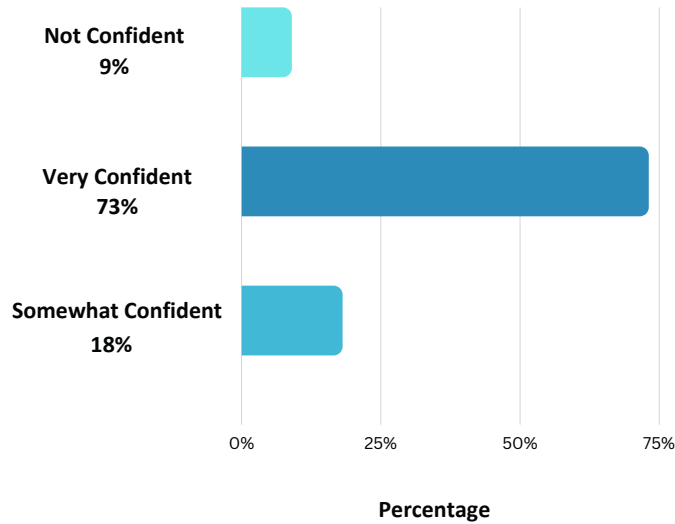


Fig. 24: Impact of Training on Stakeholders

D. Overall Impact of Interventions

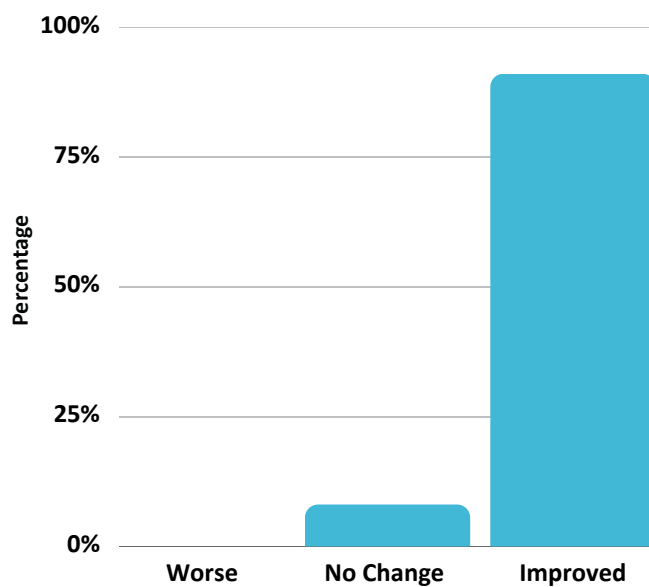


Fig. 25: Stakeholders Response on Community after Reliance Foundation Interventions

- **Resource Optimization:** Provided last mile connectivity between experts and rural communities thus improved reach of disaster preparedness and response without additional resources.
- **Decrease Relief Response Time:** Provided resource support to grassroots level organization, thus decreasing response time in providing relief to affected communities.
- **Providing Technological Support Helping** organizations in using technological tools such as GIS for disaster preparedness (e.g. HVRA for floods).



Key Learnings





Fig. 26: Indicators for Assessing the Interventions

1. Focus and Relevance of the Interventions

Reliance Foundation Interventions cover all four phases of disaster management. The Hazard Risk Vulnerability Analysis carried out for the climate-vulnerable districts from five states indicates systematic efforts towards mitigation. Dissemination of early warning and Community Based Disaster Risk Management (CBDRM) focus on preparedness while rescue and relief are major area of intervention in all the major cyclones and floods so far. These interventions are also at the core of climate change mitigation and adaptation and therefore contribute not only towards the national efforts to reduce disaster risks but also towards combating climatic change induced concerns.

2. Interventions have Wider Reach, Considerable Scale and Impact

- Use of weather advisories have increased from 8% in 2015 to 54% in 2019
- 91% stakeholders reported improvement in reach and impact due to timely interventions
- 96% beneficiaries reported improved vaccination schedule of livestock against seasonal diseases due to weather advisories
- 88% livestock rearers took decisions related to fodder management based on advisories
- 87% modified sheds and shelters based on advisories

The Reliance Foundation have contributed to the management of 49 disaster events in 22 states in a decade (2013-2023).

Through interventions during various phases of disaster management the Foundation reached over 60 lakh people in different geographies across the country. By establishing effective coordination channel among stakeholders, it has effectively channelised disaster relief reaching to 12 lakh people with relief kits. Post disaster health monitoring is very crucial for crops, livestock and human population.

The post disaster work of the Foundation focuses on the improved health of crops, livestock and human population via medical camps and advisories. Treatment of 70,000 livestock and sensitisation of 7.37 lakh individuals about 11 different government schemes during the pandemic indicates towards that. Establishing networks and coordination channels using state of the art communication tools are one of the highlights of the work.

3. Multi-Stakeholder Involvement is the Underlined Theme in all the Interventions

All the interventions are being carried out in collaborative mode with partner institutions paying especial emphasis to ensure resource optimisation and sustainability of the efforts. In the effort more than 500 partnerships have been established consisting of national and regional knowledge institutions, local administration and various sector specific departments, NGO's, FPO's, CBO's and communities. Efficient coordination between various arms of the (relief) providers and beneficiaries using state of the art digital communication system is the key to the success of the interventions. Majority of the surveyed partners at the national and district level also indicated towards efficient digital coordination of the Foundation. This has resulted in the exchange of information between the service providers and the beneficiaries at crucial hours of the disasters for timely delivery of the warnings, advisories, need based support in evacuation and distribution of relief material possible.

4. The Interventions are Inclusive

Inclusive interventions are required so that the benefits reach equally to all the sections and class of the society. It appears that interventions of the Foundations are designed with an eye to keep the needs of the women, disabled, persons with special needs & age and economic strata in mind. This is clearly visible in two of the major areas of interventions Community-based disaster risk management and post disaster relief.

For example, in the relief kit easy access to women is ensured and their needs related to hygiene have also been kept in mind. The survey of the beneficiaries reveals that most of the beneficiary have land holdings below 1 acre and annual income less than ₹1 lakh indicating towards inclusion of the marginalized section of the society.

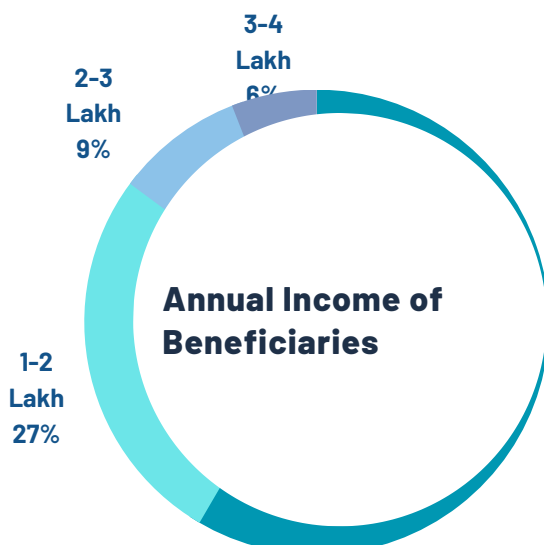


Fig. 28: Annual Income of Beneficiaries Interviewed (based on primary data)

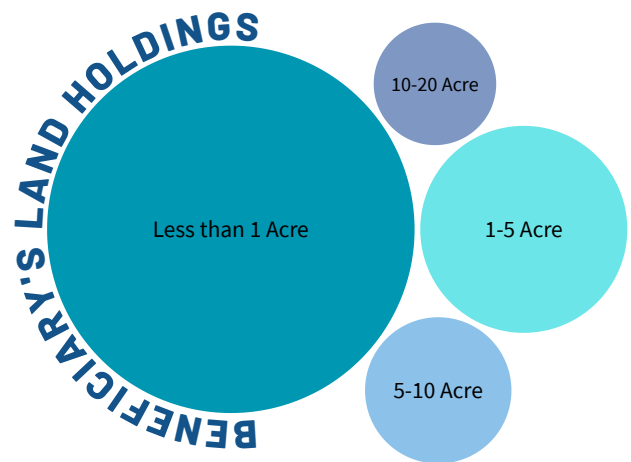


Fig. 27: Landholdings of Beneficiaries Interviewed (based on primary data)

Less than 1 Lakh 59%

5. Consistent Efforts of the Foundation have a Component of Sustainability

Reliance Foundation has contributed to the management of all the major natural disasters that happened in the last decade related to cyclones and floods. The consistent efforts have built the organization's capacity to understand these events, plan and implement specific interventions to reduce disaster risks and losses, build vulnerable communities' resilience against this disaster, coordinate interventions to save lives, properties and livelihoods and facilitate post-disaster relief. Facilitating capacity-building efforts of the administration has been a major area of intervention and ensuring sustainability capacity building of the communities via building a volunteer base has been given due priority to enhance community readiness. The variety of the interventions carried out during COVID-19, and their scale indicate the decade long experience of the organization in carrying out timely and efficient interventions.





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CONCLUSIONS

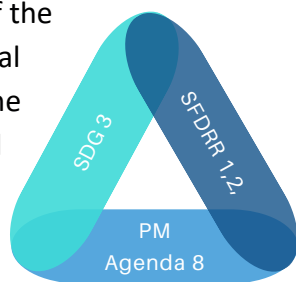
4. Conclusions

The need-based interventions of the Reliance Foundation span across the various phases of the disaster management cycle. The underlining idea of the interventions of the Foundation has been to leverage from the state-of-the-art communication technologies and tools, coordination and multistakeholder participation. Within a span of 10 years the Foundation has been able to establish impactful interventions in the major thematic areas related to disaster management. Interventions to enhance systematic understanding of risks for mitigation, build community resilience for preparedness and response, post disaster relief and rescue are a few examples of that. The relevance of the focus is evident from the thematic areas being aligned to the Sendai Framework of Disaster Risk Reduction (SFDRR). The principal value additions of the interventions are the following.

1 Enhancing Local Capacities for Disaster Risk Reduction

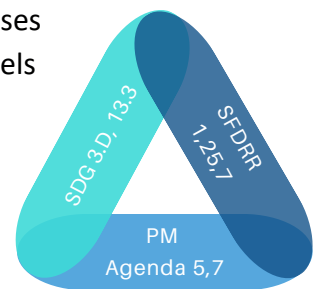
Building capacities of the communities and local institutions ensure the availability of trained human resources to provide immediate support in case of disasters.

This is the priority area of the Foundation which has focused on building capacities of the youth from vulnerable communities for effective and timely response in case of disasters. Trainings on basics of disaster management and mock drills, two important approaches to better prepared communities for disasters are used for this. Reliance Foundation has also facilitated capacity building efforts of the administration. This multi-pronged approach has resulted in effective management of disaster events in more than 13 states in the last 10 years



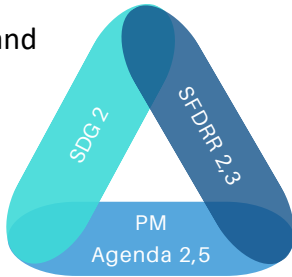
2 Leveraged Technology for Efficient Disaster Risk Reduction

Reliance Foundation uses communication channels such as VMS, mobile apps, TV channels and WhatsApp to efficiently communicate accurate early warnings, adverse weather and health advisories to disaster-prone and impacted communities. The organization also uses these tools for community awareness related to crop and livestock management in pre- and post-disaster phases. The development of digital innovation-based dedicated application providing real-time updates on critical weather and oceanographic parameters to the disaster-prone fisherfolk working in precarious conditions is a step towards fulfilling the need of the hour. This is a multipronged approach to improve overall community preparedness for disasters, decreasing response time to reach affected communities and save lives & livelihood.



3 Promoting Digital Extension Services for Livelihood Support and Enhanced Risk Coverage

Access to relevant and timely information and knowledge to the communities is crucial for better response and recovery from



the disasters. Connecting the communities to the knowledge resources is one of the priority areas of the Foundation. In this regard, interventions of the Foundation to enable virtual interactions between disaster-prone and impacted communities with knowledge experts and extension officers to help them to better manage their crops and livestock from the diseases, provide access to the market and to spread awareness about various compensation schemes of Government of India are especially noteworthy. It is worth mentioning that the Foundation has very aptly connected communities and various other stakeholders from different arena and area using digital platforms required for this kind of work.



4 Promoting a Collaborative Work Approach

The collaborative work approach of the Foundation is behind the success of its interventions. All the interventions are implemented on ground with the collaboration of knowledge partners such as universities & research institutions, government departments, grassroots organisations, extension service officers and local administration etc. The collaborative work approach is a crucial strategy for efficient use of resources and helps exchange of knowledge, expertise and lessons learned from the field. Reliance Foundation received high stakeholder ratings in the surveys for their coordination during disasters.

This multistakeholder approach ensures a participatory process is followed and all stakeholders' perceptions are accounted for.

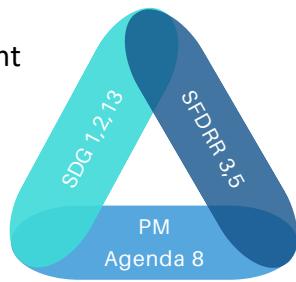


5 Improving Community Resilience

A resilient environment is the first step towards sustainability.

This understanding reflects in the interventions of the Foundation wherein consistent efforts are being directed to enhance the resilience of the vulnerable communities from disasters. The Foundation promotes zone specific climate resilient agricultural practices by introducing flood, salt and disease tolerant varieties. It also promotes resource efficient technologies such as Zero tillage, line sowing, drum seeder, foliar application of inputs, and seed hardening etc.

Enhancing capacities via mock drills and trainings, access to the knowledge by many digital communication tools, applications, and traditional offline tools such as medical and livestock camps further strengthen the Foundation's commitment to the cause. The marginalized farmers, fisherfolk, livestock rearers and other vulnerable sections are the primary beneficiaries of the interventions of the Foundation.



6 Improving Health Awareness and Access to Healthcare

There are many interventions of the Foundation such as 'mobile medical van' which focus on improving access of the communities to the healthcare and enhance health awareness. These initiatives are particularly helpful for the disaster impacted communities to get immediate medical care. Similarly, intervention 'Knowledge on Wheels' has effectively been used in raising awareness about disease management in post flood situations. Medical and livestock camps have also been organized successfully in order to reduce post disaster mortality and strengthen livelihood.

These interventions are conducted in collaboration with medical professionals, Primary Healthcare Centre workers, ASHA workers, District Medical Officers etc. Reliance Foundation has consistently supported communities across the country that are impacted by the natural disasters. The Foundation has systematized its work in disaster management to develop a program that is built on the lessons from past experiences and setting up a structure for the future.





RECOMMENDATIONS

5. Recommendations

With more than a decade of engagement in disaster-related activities across multiple geographical areas, Reliance Foundation has cumulated immense learning and experience that will be useful for the engagements in future activities. The involvement of various stakeholders along with the effective utilization of advancements in communication technologies, tools and instruments have been crucial in successfully carrying out the interventions. The Foundation's interventions are primarily in the following areas:

- Understanding Vulnerabilities & Risks
- Early Warnings and Advisories
- Capacity Building of Communities and Development of Volunteer Base
- Safeguarding Lives and Livelihoods
- Disaster Response and Relief

The study report proposes certain recommendations that would be useful to Reliance Foundation in further scaling up the best practices based on the learnings and experiences. The recommendations focus on designing and implementing majorly technology-driven programmes in a network mode. This includes addressing local vulnerabilities and disaster risks, promoting nature-based solutions for disaster risk reduction, and disseminating learning and experiences. The specific recommendations are given below:

1. Expanding the Horizon of Reliance Foundation in Disaster Management, and Strengthening Newer Areas:

- **Development of a Geospatial Data Hub:** Reliance Foundation's Disaster Management Portfolio covers information management on disaster forecasting and early warning. Linking this with geospatial mapping can enhance preparedness and disaster response. It is, therefore, suggested that Reliance Foundation may undertake the interventions to develop a geospatial data hub that may also support in maintaining a GIS based database for livelihood and livestock at different administrative levels and can be used by multiple stakeholders for decision making. This is coherent to the National Geospatial Policy, 2022 that calls for active participation of private enterprises in developing Geospatial technology and data for nation building activities like military operations, disaster and emergency, management, environmental monitoring, land and city planning

-
- **Nature Based Solution (NbS):** Reliance Foundation works closely with local communities and local administration. As 'Nature-based Solution (NbS)' is also a risk reduction strategy, the community-driven nature-based interventions focusing on biodiversity, forests/ mangroves and water conservation may also be considered as a part of the Foundation's Disaster Management interventions. In this regard, training of the stakeholders covering these aspects would be a very effective strategy.
 - **Local/ Community-Based Disaster Management Plans:** Government of India envisages the development of village-level disaster management plans. Reliance Foundation may also focus on facilitating such plans and provide necessary training and capacity-building support to the local administration. Additionally, the local/ community-based disaster risk reduction initiatives should promote social inclusion and gender mainstreaming.

2. Partnerships and Collaborations:

- Partnerships and Collaborations can be expanded by engaging with schools and colleges, and by strengthening network of HAM Radio Clubs for Risk Communication to support local administration, NDRF, SDRF and Aapda Mitra. The network of schools can be supported in the awareness creation of disaster management through the development of easy-to-understand communication material in the local language.

3. Strengthening Institutional Capacities and Knowledge Management:

- Reliance Foundation may create state-of-the-art facilities for imparting training and mobilizing resources.
- Development of an integrated knowledge management platform for Disaster Risk Reduction / Mitigation.
- Supporting the development of near Real Time Disaster Database at the district level by making available technical know-how and facilitation at the district level.

4. Strengthening Learning Management System, Knowledge & Information Outreach for wider Use:

- Each disaster is unique in its own. The valuable experiences and learning from each disaster need to be documented and shared with a larger audience. Utilizing its core strength in digital interventions, network of knowledge partners and grassroots partners, Reliance Foundation may develop an online web portal to share the learning, experiences, and best practices along with projects, interventions, and entrepreneurial initiatives. Such portal will serve as a valuable knowledge-sharing platform in the disaster management sector.

5. Periodic Impact Assessments:

- Periodic Impact Assessments given the multitude of interventions implemented around disaster management, it is important to systematically understand the impact of these interventions and do midcourse corrections. Reliance Foundation may consider carrying out annual / biannual impact assessments of interventions to track progress and identify gaps for continuous improvement.

Annexure

The Reliance Foundation Disaster Management approaches align with the following goals and targets of SDGs, SFDRR and Prime Minister’s 10 Point Agenda.

Sustainable Development Goals (SDG)	Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030	Prime Minister’s 10 Point Agenda on Disaster Risk Reduction
<p>Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	<p>Target 1 Substantially reduce global disaster mortality</p>	<p>Agenda 2 Risk coverage must include all, starting from poor households to SMEs to multi-national corporations to nation states</p>
<p>Goal 3 Sustainable Development to ensure healthy lives and promote well-being for all at all ages</p>	<p>Target 2 Substantially reduce the number of disaster affected people globally by 2030</p>	<p>Agenda 5 Leverage technology to enhance the efficiency of disaster risk management efforts</p>
<p>Goal 13 Take urgent action to combat climate change and its impacts</p>	<p>Target 3 Reduce direct disaster economic loss in relation to GDP</p>	<p>Agenda 6 Develop a network of universities to work on disaster-related issues</p>
<p>Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	<p>Target 5 Contribute to the national and local disaster risk reduction strategies</p>	<p>Agenda 7 Utilise the opportunities provided by social media and mobile technologies for disaster risk reduction</p>
	<p>Target 7 Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people</p>	<p>Agenda 8 Build on local capacities and initiatives to enhance disaster risk reduction</p>
		<p>Agenda 9 Make use of every opportunity to learn from disasters and, to achieve that, there must be studies on the lessons after every disaster</p>



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