Diaspora Disaster Development

Diaspora, **Disaster** Development

Sewa's Evolution Through Twenty-Five
Years of Disaster Management

Supported By:

SURYA

CONTENTS

CHAPTER 6: Twenty- five Years of SEWA International in India

Sewa International is an organisation with a mission to nurture institutions of social impact, and serve humanity. In our two decades of work, we have worked across the length and breadth of the nation to inculcate the spirit of Sewa as a means for societal transformation or Parivartan. Our direct projects span across India, and globally across 25+ countries as the 'Sewa' movement.

Vision

Sewa International, as a premier non-profit, would live in a world of equality, where everyone is happy, enjoys good health, has equal growth opportunities and lives in balance with nature. In the event of any disaster, Sewa will be called in and be among the first to serve.

Mission

Sewa International serves humanity in distress, aids local communities, and promotes volunteerism. We engage our beneficiaries to be agents of change in development and strive to make progress broad-based.

Sewa International would like to express its gratitude
to the following for their support to the

Diaspora Disaster And Development

**Sewa's Evolution Through
Twenty-Five Years of Disaster
Management**

ACKNOWLEDGEMENTS

T he report was written at a time when COVID had already revealed its ugly face to the entire world. It became increasingly evident that there were many difficulties in finding the information and resources that could help people dealing with the pandemic. So, we decided to provide some space to record past experiences and where people could come to get the information and resources they needed. This report is merely the precursor for this area.

The entire team of Sewa International, as well as many advisors, contributors, supporters, and the production team for the Diaspora, Disaster, and Development report, were themselves working amid various crises – the coronavirus disease, personal challenges, and social upheaval. Some had to deal with severe sickness (themselves or their families), while others had to focus on humanitarian crisis response. Many people had to adapt to new ways of working and living, managing this project. Sewa International would like to thank everyone who worked to make this report writing a success despite a very challenging year.

Contributors and Supporters

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- *Sh. Vijay Puranik, Joint General Secretary, Rashtriya Seva Bharati.*

Foreword

There has probably never been a more appropriate moment in history to present this report. Sewa International is celebrating its twenty-five years of continuance. During this time unceasing hazards have become more and more common. The frequency of unceasing hazards- frequent earthquakes and floods, cloudbursts in the Himalayas, COVID-19, rising temperatures and spurt in forest fires due to global warming, and Ukraine war effects are growing at an unprecedented pace and impacting globally. The effects of these disasters are being felt all over the world, directly or indirectly threatening people's health, but also deeply impacting them socially, financially, and institutionally. It is essential that we take action to combat these threats and protect ourselves and our communities.

In this report, we seek to document the practitioner's experience gained while working in response to varied disasters in the Indian subcontinent. Disaster events have doubled over the last twenty years.

Therefore, we must consider how much more we could have accomplished in that time frame if our efforts had been directed in the appropriate way. What could be done with knowledge that enables the development of rescue and relief models, and ensures the establishment of a stronger and more adaptable society? How much better would it be if we started investing in resilience?

As such, there has never been a more appropriate moment in history when it is vital to highlight the knowledge gained thus far.

Looking back, we can say that Sewa International emerged due to the need felt while working as a sporadic volunteer movement during the rescue and relief works in the 1990s. The 1993 Latur earthquake became a catalyst to organise volunteer work under a formal legal entity - a trust. What began in 1997 as an endeavour meant to provide relief to disaster-struck areas around the country, has since then grown and flourished into long-term sustainable rehabilitation and reconstruction programs for these communities.

Undertaking rescue, relief, and rehabilitation works in response to a range of disasters – from the smallest and local to the biggest, countrywide disasters in the subcontinent - we are ready to set a global benchmark in handling disasters by leveraging fund mobilisation across the globe, strengthening volunteer and institutional capacities, as well as building resiliency plans and measures. Sewa International has become an exponent in the past three decades in disaster response.

We have been the first to reach out for rescue, for instance, within 15 minutes of the glacier burst in Tapovan 2021, we were disseminating vital information to authorities. We have aided the government in one of the biggest evacuations in the world, called 'Operation Surya,' with 111,000 people being rescued during the Uttarakhand 2013 floods. Sewa International has been one of the premier non-governmental organisations to commission 32 oxygen plants in the country during the COVID-19 pandemic.

The exemplary courage and strength shown by our staff, volunteers, and most importantly the communities in the face of natural disasters are aligned with the volume of aid extended by various state governments, along with donors around the globe who have displayed an overwhelming commitment to helping victims affected by natural disasters.
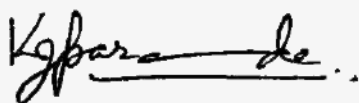
Those who are willing to help by providing comfort through food, supplies, and/or monetary donations are just as valuable as those who work relentlessly during disasters. Every small action makes a difference during the times of need. We have taken the first step in advocating investment in the area of disaster risk reduction - i.e. data collection and documentation of our 25 years of experience in disaster management. At the same time, we recognise our efforts in building not just an institution but also disaster prepared communities equipped to manage disasters. However, disaster resilience/preparedness is the need of the hour. It is rightly said, "The more your sweat in peace, the less you bleed in war". Disaster preparedness should become the main focus at the local and community level.

There is hope that the data we have gathered and the information we have organised will contribute to enhanced national and international cooperation with developing states and communities when it comes to disaster management and climate change. What we have learned from our experience in numerous disasters is that disasters necessitates national and international cooperation. We hope that the report leads to a better understanding of how we can responsibly manage our development and help prevent catastrophes that are triggered by devastating climate change.

For us, a few conferences opened the door to fresh insights. During the disaster management conference, incredibly knowledgeable panellists graced the sessions with their expertise, which spanned disaster management before, during, and after a crisis in order to foresee the development of a system of prevention, mitigation, readiness, and response. We recognised that we had a considerable distance to go. Whether they pertain to disaster assistance or livelihood and rehabilitation, our activities are only stepping stones.

Reflecting back on Sewa International's 25-year history, we are both humbled and proud of our achievements. I would like to thank all of our partners, funders, and stakeholders for their unwavering dedication and support, which is essential to the development of a sustainable society. Your guarantee of support equips us with the fortitude to innovate and provide more.

It is time to help build resilient communities/societies for future generations.

(K. G.) Shyam Parande
General Secretary

ACRONYMS & ABBREVIATIONS

ADB	*Asian Development Bank*
ADRC	*Asian Disaster Reduction Centre*
AIDR	*Australian Institute for Disaster Resilience*
AP	*Andhra Pradesh*
ASDMA	*Assam State Disaster Management Authority*
ASZ	*Amateur Seismic Zone*
CBOs	*Community Based Organisations*
CSOs	*Civil Society Organisations*
DDMA	*District Disaster Management Authority*
DES	*Directorate of Economics and Statistics*
DFO	*Dartmouth Flood Observatory*
DMA	*Disaster Management Act*
DMMC	*Disaster Mitigation and Management Centre*
DMRCDD	*Disaster Management, Relief & Civil Defence Department*
DRDM	*Department of Revenue- Disaster Management*
DRRR	*Department of Revenue, Relief and Rehabilitation*
DRR	*Disaster Risk Reduction*
EFICOR	*Evangelical Fellowship of India Commission on Relief*
EPTRI	*Environment Protection Training and Research Institute*
FSI	*Forest Survey of India*

ACRONYMS & ABBREVIATIONS

GHD	Good Humanitarian Donorship Group
GIDM	Gujarat Institute of Disaster Management
GoI	Government of India
GoM	Government of Maharashtra
GoR	Government of Rajasthan
GSDMA	Gujarat State Disaster Management Authority
GSHAP	Global Seismic Hazard Assessment Program
GVSS	Gramin Vikas Sewa Sanstha
HPC	High Powered Committee on Disaster Management
HPCL	Hindustan Petroleum Corporation Limited
IDRF	India Development and Relief Fund
IFRC	International Federation of Red Cross and Red Crescent Societies
IRP	International Recovery Platform
JHBSPH	Johns Hopkins Bloomberg School of Public Health
KSDMA	Karnataka State Disaster Management Authority
NCRMP	National Cyclone Risk Mitigation Project
NDMA	National Disaster Management Authority
NERC	National Emergency Response Centre
NGOs	Non-governmental Organisations
OECD	Organisation for Economic Co-operation and Development

ACRONYMS & ABBREVIATIONS

PCGF	*People's Standing Committee on Gujarat Floods*
PIB	*Press Information Bureau*
RDMD	*Revenue & Disaster Management Department*
SEC	*State Executive Committees*
SHG	*Self Help Group*
SKSPL	*Sewa Kala Srushti Private Limited*
SDMA	*State Disaster Management Authority*
SZM	*Seismic Zone Map*
TGLLP	*Tsunami Global Lessons Learned Project*
TISS	*Tata Institute of Social Sciences*
U.N. ISDR	*United Nations International Strategy for Disaster Reduction*
UBSS	*Utkal Bipanna Sahayata Samiti*
UN	*United Nations*
UNDP	*United Nations Development Programme*
UNDRR	*United Nations Office for Disaster Risk Reduction*
UNISDR	*United Nations International Strategy for Disaster Reduction*
USA	*United States of America*
WB	*World Bank*
WBDMCDD	*West Bengal Disaster Management & Civil Defence Department*
WHO	*World Health Organisation*

EXECUTIVE SUMMARY

India is prone to a wide variety of sudden and slow-onset natural and human-induced catastrophes, such as earthquakes, forest fires, droughts, cyclonic storms, floods, and sea-level rise, and so on; in conjunction, the country's existing socio-economic developmental challenges exacerbate the vulnerability of the populations of those regions. In spite of the fact that the historical frequency of disasters may be linked to a lack of knowledge, technology, management skills, disasters continue to strike India even in the present day. It cannot be denied that India is currently facing a greater variety of natural calamities than it ever had in the past.

Volunteer organisations have always led disaster assistance in India. Humanitarian organisations facilitate communication, technical support, manual labour, and financial aid in disaster-stricken areas. Sewa International inspired people of Indian descent to help humanitarian causes at home and in India, especially after natural disasters like floods, earthquakes, cyclones, tsunamis, pandemics, and others that destroy large areas and require large donations to reconstruct. Over 25 nations have joined the initiative.

This report makes an attempt to capture Sewa International's 25-year journey in the field of disaster management in India for the goal of documenting empirical research on the organisation's work. The swifter pace at which international and local strategies to reduce the effects of natural disasters and adapt to their aftermath are being developed and put into effect has increased the level of urgency associated with making effective use of limited resources. Because of this, having scientific ways to establish relevant research methodologies and having existing data from previous disasters that have been validated are becoming increasingly vital in supporting an evidence-based approach to the efforts of reducing the risk of natural disasters.

The COVID-19 pandemic demonstrated the vulnerability of the global community to an outbreak of unprecedented scale. In fact, another, more dire crisises are brewing for decades with rapid global warming and climate changes, and although people have begun to take steps to address it, they are still far behind where they need to be as entire nations and communities adjust to its realities. The purpose of this study is to collect all this information, learn from earlier experiences, and communicate knowledge obtained by Sewa International while working on rescue, relief, and rehabilitation operations in India between 1993 and 2021.

There are three main objectives for the project as a whole: a record of the work done, an analysis of what was learnt from the relief and recovery process, and a disaster recovery toolkit for use in similar projects in the future. This report which delivers on the first objective, its primary goal is to highlight fundamental efforts and the information and experiences obtained. This is an effort to comprehend crucial problems and choices in disaster management. The rise is the depletion of natural resources, food poverty, direct and indirect health repercussions, and displacement. Numerous towns are experiencing concurrent and consecutive disasters, leaving them with little time to recuperate before the next disaster strikes. If their needs and capacities are not comprehended and their opinions are not heard, the most vulnerable members of these communities risk being left behind.

Interviews with volunteers, workers, partner organisations, and affected community members from disaster areas, as well as focus group discussions and shared learning dialogues, complemented the data collected through the primary technique of historical research using secondary sources.

COVID-19 recovery strategies are being developed worldwide to rebuild more sustainably and adaptively using resources to improve community safety and resilience. We have the resources to adapt to climate-related disasters. However, resource utilisation is crucial. Supporting the vulnerable is another challenge. Conflict-affected groups, migrants and displaced persons, urban poor, and other marginalised communities may be especially sensitive to climate-related risks. Aid must be prioritised for disaster- prone communities. The report urges action over inaction. Late execution of much of what must be done has been recognised for years. We must also apply some current environmental lessons. We must ensure that governments, donors, and the humanitarian, development, climate, and environmental sectors prioritise help for the most vulnerable people, communities, and nations.

DISASTERS: A SNAPSHOT

INDIA[1]
3rd most disaster-prone Country

More than[1] **320** *disasters occurred in India*

Over[1] **6,93,000** *people lost their lives due to disasters.*

2000[1] *million people were affected*

2001 Gujarat earthquake killing around 20,005 people. [2]

The largest single event by death toll across India has been the pandemic caused by COVID-19, *resulting in the deaths of over* 5,00,000 *people.* [2]

2004 Indian Ocean Tsunami, which took 12,405 human lives [2]
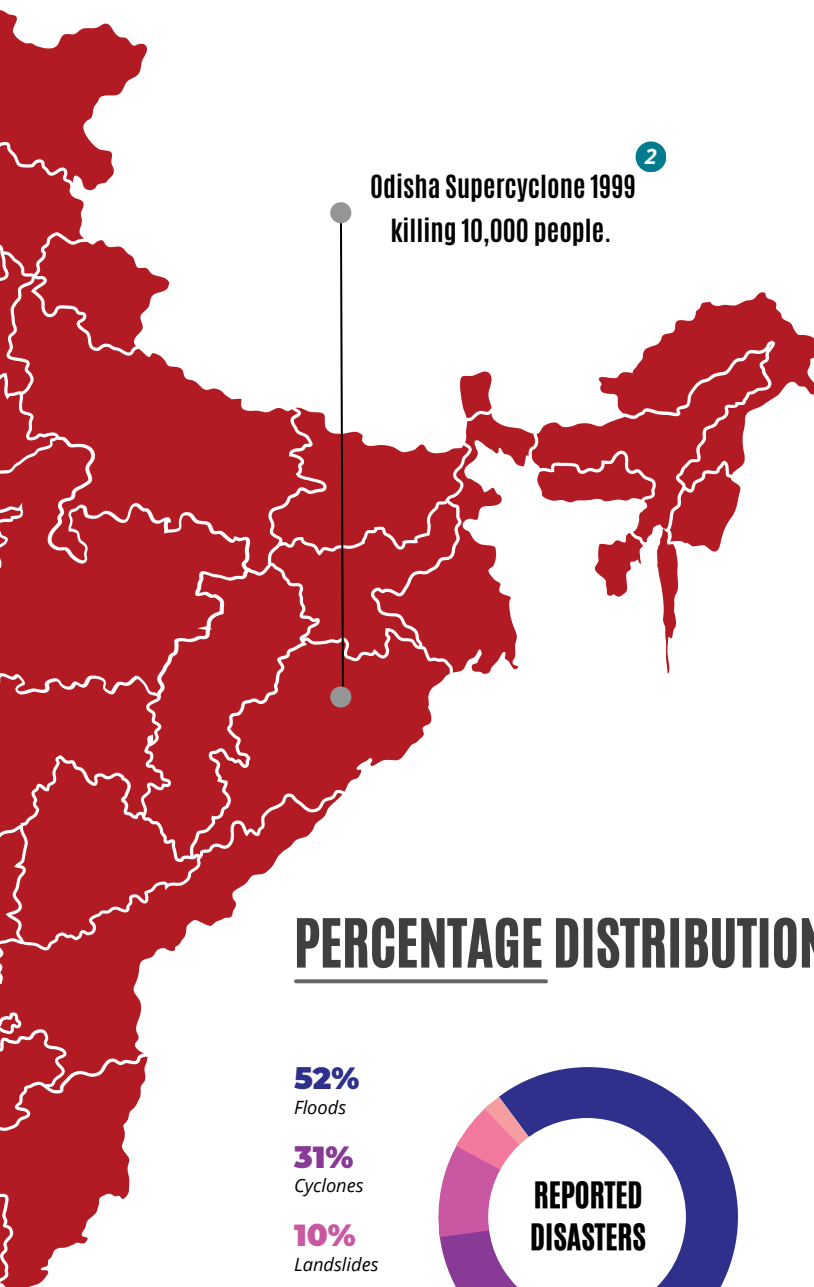
Hazard Vulnerability in India [4]

○ Over **60%** of land mass prone to earthquakes

○ More than **40 million** ha (8%) prone to riverine floods (urban, mountain and mountain floods un-included)

○ More than **7500 km** long coastline prone to cyclone seasons

○ Drought - low and medium rainfall region which constitutes **68%** of the total area vulnerable to drought

○ Hilly regions vulnerable to avalanche/ landslide/ hailstorms/ cloudbursts

○ Human-induced disasters - including a wide range of industrial-chemical, accidents, fires, stampede, etc, causing over one million house damage annually in addition to human, economic, social and other losses.

Odisha Supercyclone 1999 killing 10,000 people. [2]

PERCENTAGE DISTRIBUTIONS [3]

52%
Floods

31%
Cyclones

10%
Landslides

5%
Earthquakes

2%
Earthquakes

REPORTED DISASTERS
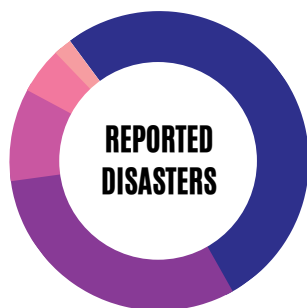
63%
Floods

19%
Cyclones

10%
Earthquakes

8%
Droughts

AVERAGE ANNUAL ECONOMIC LOSS OF INDIA

DISASTERS WHERE SEWA INTERNATIONAL WORKED

1525000+
SEWA Volunteers engaged

1200+
Partnered organizations

25,00,000+
Direct and Indirect Beneficiaries

35,000+
Villages, Houses, Community Halls Constructed

275
Schools and Hostel constructed

55+
Trainning Centres

492
SHGs formed

18000+
Community Membership

Sewa International worked in 45 Disasters in Indian subcontinent **5**

PAKISTAN

2013

2011 · 2005 · JAMMU & KASHMIR
2014 · Leh Ladakh
2010
HIMACHAL PRADESH
PUNJAB
2013 2019
HARYANA
2010 DELHI
2001 · RAJASTHAN

NEPAL
2005
2021 · UTTARAKHAND
1995
2011 · UTTAR PRADESH
2013
SIKKIM · 2011
ARUNACHAL PRADESH
ASSAM · 2004 NAGALAND
MEGHALAYA
TRIPURA · MIZORAM · MANIPUR
2004 · 2008
2007
BIHAR

2006 · GUJARAT
2001
1998
MADHYA PRADESH
2013 · 1995
MAHARASHTRA
2020
2020
2019
2006
2021
GOA
2009
2018
2019
KARNATAKA
2004
2015
2017
2018
KERALA
2004
2004

JHARKHAND
CHHATTISGARH
2001 · WEST BENGAL
2020
2004
ORISSA
1999 · 2007
2020 · 2019
2014
TELANGANA
1997
1996
ANDRA PRADESH
2014
2015
200
4
200
5
2011
TAMIL NADU 2020
2004
2017

ANDAMAN & NICOBAR ISLANDS
2004

LAKSHADWEEP

2004 · SRI LANKA

Legend

- 🔴 COVID
- 🟢 CLOUDBURST
- 🟡 DROUGHT
- 🟣 TSUNAMI
- 🌸 CYCLONE
- 🟠 HPCL BLAST
- 🔵 FLOOD
- 🔷 EARTHQUAKE

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5 Based on our secondary research, we have identified 45 disasters in India where Sewa International actively contributed in disaster management either in rescue and relief and/or rehabilitation operations. But due to lack of proper documentation, many details regarding the work processes during some disasters have been lost in time. We were able to find documented details of 40 disasters within the span of the last eight months of the commencement of writing this report. We plan to track the details of work in response to the other disasters as well.

"

"चिन्तनीया हि विपदाम् आदावेव प्रतिक्रियाः
न कूपखननं युक्तं प्रदीप्ते वह्निना गृहे "

Repercussions of crisis should be thought of
well in advance,
It's of no use digging a well when the house
is on fire.

"

Uttarakhand Glacier Burst, 2021.
Sewa volunteers provide first assistance to those who have been rescued.

INTRODUCTION

PREVIEW >>>

MYRAID DISASTERS

A brief examination of the material and social histories connected to India's many natural catastrophes, with the goal of grasping the full scope of their effect and influence.

THE REPORT

A quick summary of the report's contents and structure

WALKING DOWN THE MEMORY LANE AND THE NEED(S) OF THE HOUR

Understanding with the concept of "disasterscapes" and the pressing need for its discussion

METHODOLOGY

Understanding the research approach used for data collecting and analysis

CAUTIONS TO KEEP IN MIND

There are a few things that, as a note of caution, should always be kept in mind

India is home to a diverse collection of geographical features, some of which include the fertile alluvial plains, the Deccan plateau, the arid Thar Desert, and the snow-capped mountain ranges of the Himalayas. As a direct consequence of this, the country is frequently impacted by a wide variety of natural catastrophes, such as mudslides, forest fires, earthquakes, hurricanes, floods, cloudbursts, and droughts. In India, almost 85 percent of the geographical area is vulnerable to one or multiple natural disasters. These calamities can occur at any time of the year.

In general, India is subject to a wide array of natural hazards on account of the different geographical features that it possesses. These threats have the ability to bring about fatalities, cause damage to property, and even bring about the destruction of essential infrastructure. Every year, catastrophes and crises have a devastating influence on people on an individual level, as well as on groups of people and entire societies. It is frighteningly anticipated that their occurrence would increase in the years to come.

Earthquakes

Earthquakes are one of the natural disasters that can occur in India. A tectonic plate moving along a fault line in the earth's crust results in an earthquake, which is a powerful and sudden shaking of the ground. Ground tremors, soil liquefaction, landslides, cracks, avalanches, fires, and tsunamis can all be caused by earthquakes (WHO, 2023).

When an earthquake struck Uttarkashi on October 20, 1991, killing 73 of the town's neighbours, every adult male in Jamak shaved his head out of respect. No funeral pyres were to be lit. There will be no recitation of the rite of final departure. Mere oblivion beneath a mountain of rock. Dead bodies were hastily dumped into the Bhagirathi after being mauled by wild animals. The people who settled in Jamak changed the cheerful river into a moving cemetery (Kapur, 2010).

Exactly 30 years ago, a magnitude 6.4 earthquake shook the ground under almost 10,000 people in the Latur region of Maharashtra. It was turned into a graveyard with a mass of bodies mixed randomly with cement at around 3.56 a.m. on the full moon day of 30 September 1993. As the earth continued to tremble, these people did not, and would never again, rouse. The villagers were all sound asleep following the Ganesh Chaturthi festival. It seemed like a bulldozer had been let loose on the neighbourhood and destroyed everyone's houses. Bodies of both children and adults, wrapped in sheets and towels, were being transported to the local government hospital on tractor trolleys and lorries, adding to the eerie, quiet mood. The vast hospital grounds were quickly filled to capacity with dead patients. The outcome was the lighting of a bonfire outside the medical centre. Due to a lack of available wood, the funeral was conducted with splintered rafters and doorframes. When the sun went down and the electricity went out, the sky above the towns was illuminated by funeral pyres rising from the fields (Acharya, 2000).

Floods

Flooding is yet one of the natural disasters that occur most frequently in India. Flooding can occur for a number of reasons, including intense rainfall, rivers and streams overflowing their banks, and the failure of levees or dams. Floods have the potential to destroy homes, businesses, and other structures, in addition to claiming lives and causing injuries.

On August 7, 1991, the river Wardha transformed the village of Mowad, almost 1,000 kilometers from Nagpur, into a graveyard. Wardha's raging floods were responsible for washing enormous stones into Mowad, a city with a population of 10,000. Children's bodies were left hanging from trees, and the air was thick with the stench of decaying meat and rancid carcasses (Kapur, 2010).

More than forty percent of Bihar was inundated by flooding in August 2007. 19 districts, about 4822 villages, and 10,000,000 hectares of farmland were impacted by the floods. The United Nations referred to it as Bihar's worst flood. The "city that never sleeps," Mumbai, stopped in its tracks on July 26, 2005. The city saw 944 millimetres of rain in 24 hours, which is the most in the last century. At least a thousand people lost their lives, and 14,000 homes were wiped out (CNBC TV18, 2022).

Cyclone

Tornadoes and cyclones represent another major local hazard. A tornado is an air column that is violently rotating and in contact with the earth. They develop as a result of stratified atmospheric instability, and when the instability is severe, they have the potential to be very destructive (Warf, 2010; Alexander 2011). Conversely, cyclones are brought on by atmospheric disturbances in a low-pressure area that are characterised by rapid and frequently destructive air circulation. Storms and unfavourable weather are frequently present during cyclones.

One of the most severely impacted areas in the world is the Indian subcontinent. The subcontinent, which has an 8041-kilometre long coastline, is subject to around 10% of the tropical cyclones that occur worldwide. The majority of these strike India's east coast after having their primary origins over the Bay of Bengal. Every year, two to three potentially dangerous tropical cyclones can form out of an average of five to six that form. There are around four times as many cyclones in the Bay of Bengal as the Arabian Sea. Both coasts frequently experience cyclones (the West coast - Arabian Sea; and the East coast - Bay of Bengal) (NDMA, n.d.).

When a tornado tore along the coast on March 24, 1998, it erased at least seventeen villages from the map of West Bengal, including those in and around Dantan in the Midnapore district. Many sad stories can be heard in West Bengal's coastal communities. When a storm approaches, the men of this region are the first to brave the elements in order to safeguard their homes and livestock. The Sundarbans settlements have earned the moniker of 'bidhaba pally', or 'land of widows' due to the disproportionately high death toll among male residents. (Kapur, 2010).

After the 1999 cyclone, countless villages in Orissa, India, entirely disappeared in the water along with a sizable section of their inhabitants. As the storm ripped down the shore in the Erasama block of Orissa's Jagatsinghpur district, small towns were transformed into lakes, erasing all traces of human existence. Boats containing the remains of men, women, and children were discovered in rice paddies. The authorities were compelled to send out a fleet of tankers loaded with kerosene in order to dispose of hundreds of decomposing bodies more swiftly.

Droughts

Another common threat that can be found in India are droughts. Water scarcity can result from drought conditions, which occur when there is an absence of precipitation. Crop failure, wildfires, and adverse effects on human health are all possible outcomes of drought. About 68% of India's farmland is vulnerable to drought (Paik, 2020).

The drought situation is critical across a major fraction of Rajasthan. The western side of Rajasthan experiences the greatest yearly rainfall variability, with numerous droughts interspersed by severe precipitation in some years due to the passage of low-pressure systems. Since abstraction rates have far outpaced recharge rates, making natural recovery impossible, 207 out of Rajasthan's 237 administrative blocks have been labelled groundwater "black zones" (Kaushik & Sharma, 2015). So far, drought has been treated as a short term problem that must be dealt with on an as-needed basis, leaving people reliant on government aid rather than empowering them to take charge of their own resources in the face of adversity (Chatterjee, Chatterjee, & Das, 2005).

There was only dust and heat at Rohidi; no water, no rocks, and no sea. However, there were many dead cows, goats, and camels all throughout this village that was located close to the Pakistani border. The road from Viramgam to NalSarovar in Gujarat, a distance of about forty kilometres, was also likely covered with dead animals. Farmers were seen here peeling the hides off of recently slaughtered cattle. Many people in 1987 suffered the fate of Siddhi Gaga, a resident of the village of Shahpur, who was compelled to abandon his house after the death of his livestock signalled the onset of drought (Kapur, 2010).

According to government statistics, Bundelkhand saw only 12 years of drought between the nineteenth and twentieth centuries. However, this century's arid season had already lasted five years. Crop failure and debt led to the suicide of over 400 farmers in the seven districts that comprise the UP portion of Bundelkhand. Deaths from starvation were also reported. In response, the UP government declared Banda drought-stricken (affecting more than half of the crop) in December 2006. Drought was also declared in the districts of Chitrakoot, Mahoba, and Hamirpur. Saraswati Devi, 55, had a difficult five-year period. Her two boys have moved to Jabalpur, Madhya Pradesh, to work as construction labourers. The family's one-hectare plot in Ragauli Bhatpura gramme panchayat, Banda district, Uttar Pradesh, has been mortgaged. The money barely got Saraswati through the five-year drought that ravaged Banda and 12 other contiguous districts in UP and MP (Gupta, et al., 2014).

Landslide

Another type of natural disaster that could occur in India is a landslide. When there is intense rainfall, when there is a sudden change in the ground, or when there is human activity that has destabilised the ground, landslides have the potential to occur. The loss of life and damage to property can both be caused by landslides. Malpa, a small village in Pithoragarh district close to the Indo-China border, was completely wiped away in a landslide on August 18th, 1998.

Pettimudi, a village near Munnar in Kerala's Idukki district, was hit by a landslide on August 6, 2020, at around 22:30, after days of relentless rain. Four rows of homes for the tea plantation workers (layams) of Kannan Devan Hill Plantations (KDHP), located in the foot slope area of the Rajamala Hill ranges, were destroyed as a result (more than 80 people lived). As many as 66 people lost their lives. Distressed material was channelled into the topographic hollow, removing all of it from the landslide's flanks and flow path, after the landslide began as a shallow planar at the rock-overburden contact. It seems likely that the failure started at the top of a particularly steep gully or little brook (Geological Survey of India, 2023).

Forest fires

In our country, forest fires are a common occurrence, especially during the summer months. According to data collected for the forest inventory, 54.40 percent of India's forests have been affected by flames on occasion, 7.49 percent have been affected by fires on a fairly frequent basis,
and 2.40 percent have been affected by fires at a high incidence rate (FSI, 2021). Not only do they endanger the forest's resources, but they also pose a threat to the region's entire regime of fauna and flora, severely disrupting the bio-diversity and ecology of the area. Without rain for months over the summer, dead leaves and twigs litter the forest floor, waiting for a spark to set them ablaze.

The region has experienced a significant loss of vegetative cover as a result of the frequent burning of the Himalayan forests, particularly in the Garhwal Himalayas, over the previous few summers. The surrounding lush, green mountains usually make the famous Nainital lake in the northern Indian state of Uttarakhand look even more beautiful. However, for several weeks, smoke from forest fires has hidden the mountains, lessening the lake's allure due to its natural beauty. You can smell the haze from this side of the lake, where I live, according to a local forest historian. The situation is critical since even oak woodlands, which are less flammable than pine trees, are on fire. Residents of the most affected areas by forest fires have trouble falling asleep at night. In Pithoragarh district, the state's easternmost Himalayan region, Kedar Avani, a local of Banaa village, said, "We wake up in the middle of the night and check around the forests to make sure the fires are not approaching us. The fires have destroyed our haystacks and the grass we had saved for our animals, and now we fear that our homes may follow suit." Mr. Avani claimed to have sensed the fires' strong heat from a distance of 20 metres. We can't possibly put them out of their misery, he said (Khadka, 2021).Places like Jamak, Mowad, Latur, Morvi, Erasama Rohidi, Shahpur, and Bidhabapallys are found across the whole of India. Villages without lamps can be found in the Ganga plain, while communities dominated by widows can be found in the Ganges delta; Jamak is located in the heart of the Himalayas, Latur in the centre of peninsular India, Morvi and Rohidi in the heart of the Thar desert.

As is customary, the media shone a fleeting spotlight on the various physical factors that had acted to bring about such catastrophes. The natural disasters included a quake, flood, strong rain, cyclone, and drought. They had all come at various times of the day and months. Some, like a landslide, occurred in one central site, while others, like a hurricane or flood, spread out over a vast area; some, like an earthquake or an avalanche, were set off in a split second, while others, like a famine, took years to develop. It's true that some locations only experience one natural disaster, but most typically these events occur in clusters. After a dry period, a flood is likely to occur, while after an earthquake or a cyclone, a landslide or a tidal wave can be expected. Disease, poverty, and distress all accompany people who have been uprooted from their homes. Some disasters are caused by other calamities.

Walking Down the Memory Lane- A Disasterscape

The first wave of COVID and second-wave consequences are still fresh in our minds. This disaster has had ripple effects that are still being felt by individuals, families, and communities and will continue years ahead. The psychological aftermath is ongoing, as is the process of rebuilding homes and livelihoods. The pandemic has left a lasting mark on the entire globe. The loved ones of more than 64 lakh (6.4 million) people around the globe and around 5.5 lakhs (550,000) in India who lost their lives look back on this pandemic every day (IFRC, 2020; WHO, 2020a, 2020b) .

Disasters can be categorised in a variety of ways, including natural and man-made, technological and physical, old and new, silent and violent, slow and abrupt, short and long term, chronic and acute, and active and passive.Within the diversity they share a unity. All cause death, destruction, and impairment, leaving a wake of loss, harm, and grief in their wake. The sight of crushed, bloated, floating, or buried human bodies has been a typical sight in all calamities. Mass funerals and communal sorrow have become commonplace. At every location, what holds together are the wrecks of houses, the broken down buildings, and battered services. Such sites have a haunting appearance for days. Affected crops, dead cattle, or wrecked boats represent interrupted and devastated livelihoods.. All of these locations contain the memories of persons who have died, been hurt, gone missing, been misplaced, or been displaced. This refers to 'disasterscape'.

It is Anu Kapur (2010) who first uses the term "disasterscape". In the context of this research on India, we believe that the term 'disasterscape' is essential, as it adequately encapsulates the collective situation of disaster. Kapur argues that despite following in the footsteps of the word landscape, which is derived from the German Landschaft, a disasterscape is a distinct entity, as it refers to a region that exhibits the characteristics of a disaster. It is an aspect of a region that is noticeably distinct from the regular landscape, seascape, urbanscape, ruralscape, or waterscape. It is characterised by destruction, devastation, and a state of upheaval. A disasterscape is a location in which human life is lost or injured, relationships are severed, and livelihoods are disturbed. There are the dismembered limbs, deformed bodies, screams of despair, cries of pain, stink of decay, and odour of putrefaction. There is no tranquillity and no possibility of leisure. In unstable situations, the frequency of disasters and crises is significantly higher (areas affected by political instability, conflict and violence). By 2030, nearly half of the world's poor are projected to reside in fragile and conflict-affected nations (World Bank, 2022).

Being prepared for a disaster is critical, but there is no one-size-fits-all solution. Each disaster is unique and has different physical and emotional effects. However, we have seen time and time again the resilience of humanity when it comes to finding ways to recover from these devastating events. The months and years following a disaster are crucial for rebuilding, and this takes creativity and determination. If we can come together and focus on solutions, we can overcome anything.

Disasterscapes requests immediate repair and aid. Consequently, volunteers, armed forces, improvised hospitals, and distribution centres are also characteristics of each disasterscape. It is a location that can be photographed, sketched, and mapped, and has been so. The camera may frame a portion of the spectacle and take a photograph, ostensibly recording it in all of its living pain's starkness. These can be printed and utilised to elicit human compassion, donations, and aid. The purpose of such films is not only to depict a disastrous scene, but also to immerse the audience in its pain and sorrow. The disasterscape is also a commodity that can be purchased, politicised, and manipulated. As a result, our ecological, political, and personal sensibilities can be heightened. This necessitates more reflection and prudence so that the wider goal of serving humanity is not compromised.

For the rest of us, the recent wound in our hearts provides us with an opportunity to reflect on our memories of those we lost, not just during the recent pandemic but in all other natural and man-made disasters that the country has faced. Sewa International through this report tries to encapsulate its 25 years journey so far, recording all the work done in the field of disaster management and enabling us to reflect on what we have done and learned in the process.

Sewa International responds to all kinds of crises and disasters and works to minimise or lessen their effects. We do this for everyone, with a concentration on assisting the most vulnerable. Our top concerns are preserving human dignity, alleviating suffering, and saving lives.

We can improve our preparedness, response, and recovery efforts for future catastrophes by looking back at the lessons learned from the past. In this way, we may honour the memory of those who perished or were injured as a result of the tragic events. We may learn from this experience and do better the next time by analysing both our successes and failures.

Need(s) of the Hour

Major natural disasters -- like the 2001 Bhuj earthquake, the 2004 Tsunami, the Godavari floods in 2008, the Kerala floods in 2018, and the Tapovan disaster in 2021 -- have become more common in recent years. In India, disasters are neither uncommon nor recent. In India, natural disasters have continued to claim lives from ancient times, whether they occur suddenly or gradually. The fact that they were not viewed as "normal" indicates that they can be wished away but not ignored, despite being viewed as natural events or even divine interruptions.

Figure 1: Increasing Variety of Disasters, 321 b.c. Onwards

321-296 BC
(Arthashtra)

Flood
Famine
Fire
Disease
Rat
Serpent
Tigers
Demon

505 AD
(Brihat-Samhita)

Heavy rain, shortage of food, Drought or scarcity of rain
Famine
Earthquake
Devastating fire
Disease and plague
Pestilence
Suffering due to king

1881-1941
(High Powered Committee)

Flood
Famine
Earthquake
Cyclone
Plague
Malaria
Cholera
Other epidemics
Railway disaster

1941-2002
(Imperial Census of India)

Floods
Cyclone
Hail storm
Cloud burst
Heat and cold wave
Snow/ avalanche
Drought
Sea erosion
Thunder and lightning
Landslide and mudflow
Earthquake
Dam failure/ dam burst
Mine fire
Chemical & industrial accidents
Nuclear war
Forest fire
Urban fire
Village fire
Mine flooding
Oil spill
Major building collapse
Bomb blast
Air accidents
Road accidents
Rail accidents
Boat capsize
Biological disasters
Epidemics
Pest attack
Cattle epidemic
Food poisoning

Future

Floods
Cyclone
Hail storm
Cloud burst
Heat and cold wave
Snow/ avalanche
Drought
Sea erosion
Thunder and lightning
Landslide and mudflow
Earthquake
Dam failure/ dam burst
Mine fire
Chemical & industrial accidents
Nuclear war
Forest fire
Urban fire
Village fire
Mine flooding
Oil spill
Major building collapse
Bomb blast
Air accidents
Road accidents
Rail accidents
Boat capsize
Biological disasters
Epidemics
Pest attack
Cattle epidemic
Food poisoning
Climate change
Genetic engineering war
Biological war
Chemical war

Source: Kapur (2010)

A casual internet research suggests that India ranks among the top 10 disaster-prone nations for tropical cyclones, avalanches, and landslides. These have had a devastating impact on communities, causing loss of life, damage to infrastructure, and displacement of residents. In the aftermath of a disaster, socio-economic needs must be assessed and addressed in a timely and effective manner to safeguard community well-being as well as the state's economy.

The floods of 2018 in Kerala, the 2021 Tapovan glacial burst disaster, and the ongoing COVID pandemic has opened our vision of what future development should be and what our responses to such disasters entail. With climate change becoming an increasingly pressing global issue, the need for improved disaster management plans is more urgent than ever. Unfortunately, many development plans currently in place give scant regard to the fragility of the environment, and as a result, are ill-equipped to deal with the frequent disasters that are becoming more common.

Disasters like these underscore the importance of being humble in understanding our impact on nature. But we can't just sit and do nothing -- vulnerability is both a social and economic issue, as well as an objective reality. We need to work on addressing the underlying causes of disasters to improve safety for people living in vulnerable areas. With climate change, the idea of being environmentally vulnerable is something that affects more people -- and because of this, we should be more incentivized than ever before to learn from our mistakes.

Local, state, and national governments must work out long-term disaster management plans at both the macro and micro levels to mitigate the suffering caused by these disasters and improve the resilience of their populations. Such plans must take into account the expected effects of climate change, and be designed to deal with the increased frequency and intensity of disasters that are likely to result. Only by taking such action can we hope to protect vulnerable populations from the worst effects of climate change.

Socio-economic needs assessments provide vital information on the status of a population and can identify gaps. Disasters impose a hefty cost on the government's coffers. The government maintains an official record of losses for repair and reconstruction. This estimation does not account for the devastation caused by some individual catastrophic events. In the case of the cyclones in Orissa (1999) and Andhra (1990), the financial loss surpassed the 20 billion rupee threshold. The estimated financial loss from the Bhuj earthquake on 26 January 2001 was close to Rs 185 billion, while the Gujarat cyclone caused an estimated Rs 123 billion in damages (see table 1 below) (ADRC, n.d.). They are an important tool for disaster response planners, allowing them to identify and prioritise the most pressing needs. Addressing the needs of those affected by natural disasters is a complex task, but one that is essential to protect and improve the health of communities.

EVENTS	YEAR	DATE/ MONTH	Damage (Rs Billions)
Covid Pandemic	2020-2021		526
Uttarakhand Floods	2013	June	501.27
Bhuj earthquake	2001	26 January	185
Gujarat cyclone	1998	9 June	123

EVENTS	YEAR	DATE/ MONTH	Damage (Rs Billions)
Tsunami	2004	24 December	115.44
Gujarat storm	1990	25 August	90
Andhra cyclone (Kakinada)	1996	6 November	62
Killari earthquake	1993	30 September	53
Andhra Pradesh cyclone	1990	6 May	53
Floods across India	2000	August	50
Orissa cyclone	1990	November	33
Floods in northern India	1993	7 July	29
Bihar-West Bengal flood	2000	18 September	28
Orissa cyclone	1999	29 October	26
Andhra cyclone	1990	9 May	24
All India drought	2000	April	24
Uttar Pradesh flood	1993	11 September	21
Kosi Flood	2008	August	8.8
Uttarakhand Glacier burst	2021	7 February	20

Source: Based on data from Asian Disaster Reduction Centre; Niti Aayog; Archive PMO; india.gov.in

Even the Tenth Plan (2002–2007) document recognises unequivocally that 'due to natural disasters, the country has suffered severe economic losses that have impeded its development...' From 1990-2010, almost 12% of annual federal money has been diverted to disaster assistance. Similar amounts were used in

the following decade too. As individual stakes reach millions and billions of dollars, the nation loses approximately 2-5% of its gross domestic product to natural disasters (EM-DAT, 2020; MHA, n.d.; WMO, 2021). This is an astronomical bill. A nation like ours cannot afford to waste away its limited resources.

The accelerating pace of formulating and implementing international and local policies to mitigate and adapt to the impact of natural disasters heightens the urgency for wise use of scarce resources. Hence, scientific approaches to building relevant research methods are increasingly important in supporting an evidence-based approach to disaster risk reduction efforts.

The Report

India has a strong tradition of citizen-led relief efforts during times of distress due to volunteer organisations. Within the disaster-stricken area, the volunteer organisations facilitate communication, provide technical support, and offer manual labour and financial aid. Volunteer training, psychological support, physical first aid, food, water, medicine, other supplies, sanitation, hygiene, damage assessment, reconstruction, and financial relief are only some of the many services provided by the NGOs.

It is challenging to picture disaster relief activities without the assistance of the international and domestic populace. Indian diaspora abroad as well as international organisations and donor nations typically send disaster assistance resources to local level governments and grassroots organisations through on-site NGOs. Starting with the Indian diaspora all over the world, Sewa International has become a global movement (NRI) to mobilise the resources.

It prompted people of Indian descent to keep in touch with their heritage by supporting humanitarian causes both at home and in India, especially in the wake of catastrophic events like floods, earthquakes, cyclones, tsunamis, pandemics, etc., that leave large areas in ruins and necessitate sizable donations for rebuilding. As of now, over 25 countries throughout the world have become part of the movement.

Sewa International is working to be ready when a disaster strikes by making investments in climate adaptation and disaster risk reduction prior to the occurrence of the crisis. It insists on putting the impacted individuals and communities at the centre of preparation and response—which is the correct focus. We continuously support response methods that are as locally focused as feasible and advocate for moral strategies like cash programming.

By efficiently utilising technology and innovation to identify risks and hazards, promote proactive early action, and offer ecologically sensitive development initiatives, we strive to be in the right place at the right time. We collaborate to guarantee that we have the necessary resources, effectively coordinating across our local, regional, and international networks to ensure that we can meet the rising demand for humanitarian aid, and enhancing locally driven humanitarian action.

The objective of this study is to collect all this information, learn from prior experiences, and disseminate knowledge obtained by Sewa International while working on rescue, relief, and rehabilitation efforts in India between 1993 and 2021. The study is the documentation of the support we provide our members in acquiring the necessary competencies to respond to increasingly complex humanitarian catastrophic contexts, including those that are digital, urban, protracted, and technical.

The larger project has three primary goals, the first of which is to produce a documented work study; the second is to conduct a study of the lessons learned following the recovery; and the third is to create a disaster recovery toolkit for those who will be working on projects that are similar in the future. The first goal is to document basic efforts conducted- the knowledge and experiences garnered, and the deliverable for that goal is this report, which will eventually delve into the method of developing plans and carrying them out in order to minimise disaster risk. Additionally, it is the beginning of the process as a whole. This is an endeavour to obtain a better grasp of the essential concerns and decision points that are involved in the management of disasters.

Methodology

Because of the sheer size and diversity of the country's natural hazards, careful consideration must be given to the methodology used to gain insight into the specifics of its natural catastrophes. There are always several options available. One option would have been to focus on the effects of just one "natural" disaster—whether cyclones or floods—across India. A second option would be to focus on the dangers specific to a certain biome, such as the Himalayas or the Gangetic Plain. A third method is to pick a single incident and explain its particulars, such as the Latur earthquake of 1993 or the Bhuj earthquake of 2001. Lastly, a period of time could be set aside for the purpose of investigating past calamities.

While each of these four techniques has the potential to yield useful findings, it is important to note that they each offer just a limited, standalone perspective on disasters. If you focus solely on earthquakes, for example, you might forget about the other 'naturals,' like heat waves and thunderstorms, that are often invoked to explain these disasters in India. Comparatively, limiting oneself to only one area prevents one from fully investigating the nuances that exist within that location. Surely, if you were to make a statement on only one or two natural disasters, you would be acting in a narrow framework. Perhaps a bird's-eye view is the greatest way to understand the scope of calamities that have struck India in recent years.

This study has a national scope, much to how a bird may survey a wide area and identify subtle differences in the terrain. We have tried to include all disasters across the country for which Sewa International provided assistance in this report. The report is a historical record providing a bird's-eye view of Sewa International's disaster management activities from 1993 to 2021, which is why it focuses on those disasters for which it was responsible.

The report is compiled using the data that was gathered from a wide variety of different sources. The information that was utilised came from a combination of primary and secondary sources. Historical method of research has been a central research technique employed throughout the report overlapping other methods of research. In the multidisciplinary setting of the contemporary social sciences, "historical methods" refers to the use of a wide variety of historical source materials, methods, and modes of interpretation in social research. It examines historical occurrences and time steps and draws theoretical and comprehensive conclusions. It requires critical source analysis, data interpretation, narrative interpretation, and the utilisation of valid and trustworthy evidence to support the study's results (L'estrange, 2003).

There is no central authority in India responsible for keeping track of catastrophe deaths and casualty rates. So, was the case of data pertaining to all the work silently done by Sewa International. The task of mining twenty to thirty years' worth of data is a difficult one. In order to collect useful information, we sourced every written document, both official and unofficial, including calls for aid, project reports, yearly reports, brochures, pamphlets, and posters; personal letters; diary notes; speeches and presentations; and email trails. The process of sorting through the old, yellowed papers brought to light the significance of preserving these experiences before they are completely lost.

Numerous qualitative data containing narratives that address primary research concerns, but which have never been analysed was also utilised. Hence, secondary analysis was also conducted of qualitative data.

Secondary analysis of qualitative data refers to the process of using previously collected information in order to answer research questions that are distinct from those posed during the initial phase of research (Hinds., et. al, 1997). Barney Glaser (1963) suggested as early as 1963 that secondary analysis conducted by an independent researcher could, among other things, lend additional vigour to the body of fundamental social knowledge.

The application of a secondary analysis achieved the following objectives: (i) addressing a sensitive field of research; and (ii) gaining access to a difficult-to-reach research population, both of which are potential hurdles to doing research in sensitive regions or topics. Secondary analysis is distinct from approaches that strive to critically evaluate the theory, methodology, and outcomes of current qualitative research in order to produce and synthesise meanings from multiple studies (Long-Sutehall, et.al, 2012).

The information that was uncovered after searching through news archives, research publications, government reports, and electronic media was severely lacking in terms of quality, consistency, and legitimacy. This dearth of information, however, did not deter the investigation; rather, it only served to fortify the resolve to piece together what was available. So forth, primary research was carried out through the use of focus group discussions and semi-structured interviews in order to fill in the missing linkages that were found in the secondary data.

Focus group discussions are a great way to get answers to questions from a large number of people at once (who usually share common experiences). Conversations with other people shape our thoughts, emotions, and worldviews. Research methods focused on group discussions, as opposed to questionnaires or even less structured interviews, aim to reflect this by gathering information from participants in groups (Payne and Payne, 2004). Two approaches were used: highly specialised focus groups of community leaders who offered voluntary services, and smaller gatherings of invited informants (eight to ten people).

The advantages of employing focus groups include the opportunity to acquire a swift insight into how an issue is seen and discussed from complementary or conflicting views. Participants are invited to offer their opinions in turn, and as they may hear and think on what others in the group are saying, they can also give their response to what they have heard. This type of open and discursive data collecting can lead to group agreement because people may find it convenient or courteous to agree with the majority view. However, it also has the potential to reveal underlying tensions and conflicts as members of the group engage (Robinson, 2019).

First and foremost, there were three site assessments carried out on the ground: one each in Bhuj, Kutchch, and Jamnagar in the state of Gujarat, as well as in Uttarakhand. In addition, interviews were conducted over the phone with volunteers who have participated in a variety of crisis management procedures across the country.

People who lived in the area of the disaster and/or had personal experience with it were the primary subjects of the focus groups. In order to get the most out of group conversations, it's best to keep the groups small and made up of people who the participants often interact with. Key informants were chosen prior to the site visit and then taken to various homes in the community to introduce oneself and spark conversations regarding the lasting effects of the crisis period they had lived through. They were then randomly formed into smaller groups with people who already knew each other and felt a strong sense of belonging in the community. We were interested in the underlying attitudes, thoughts, ideas, etc. that members already have and which are expressed, amplified, and possibly modified by the collective interaction in that group. The presence of others can provide clues as to how individuals adjust to the presence of competing points of view.

Because of its low cost and quick implementation, group discussion is a valuable tool. You can collect data from eight or ten people in the time it would take to conduct two or three in-depth interviews with each of them. Because there wasn't enough time to cover many different locations in-depthly, group conversations were crucial to gathering a huge quantity of high-quality data. While we are able to learn less about each source, we are able to observe how others react to the information provided by each source. Because of this, it might be considered a social rather than an individualistic method of study. Nonetheless, we were able to zero down on specific responders for in-depth, semi-structured interviews because of this method.

Semi-structured interviews are a qualitative technique that requires the researcher to prepare a schedule of questions, but allows the participant to steer the interview's path. This means that the researcher can actively listen to what respondents say during the interview and utilise these comments to alter or amend questions, or even ask new ones that are pertinent to the participant's specific experience. The fundamental questions are not required to be posed in any particular order and may not even be posed explicitly if the answers arise in the course of discourse. Flexibility is the most crucial attribute of a semi-structured interview. This gives the interviewer the flexibility to focus on specific responses and steer the questioning in different areas as necessary (Kellett, 2005; O'Reilly and Dogra, 2017).

Throughout the several site visits and throughout the time spent with the focus groups, respondents for the semi-structured interviews were chosen at random. Key respondents had a hand in pre-identifying some of the other respondents. It was necessary to conduct several interviews of volunteers and volunteer leaders via the telephone and/or via online media because these individuals were difficult to contact due to the fact that they were constantly travelling or had other previous obligations.

Primary research methods were utilised in this investigation primarily due to the fact that the vast bulk of the material presented in the study originated from secondary sources. It is of the utmost importance to make certain that any and all sources of information are trustworthy and reliable. If a comprehensive assessment is not performed on the collected data, they can be misleading in a number of different ways. It is possible for the conclusions that are formed, the method that is used to gather data, the definitions of terms and categories, and even the quality of the data that is obtained to be affected by the purpose for which the information is collected and analysed. To eliminate the bias, the researcher tried to cross-verify the data collected through secondary sources with primary methods.

The Report Structure

This report is broken down into four different parts. The first section is an introduction to disaster management, which includes a definition of a disaster as well as an explanation of the key distinctions between a hazard and a disaster. In addition to this, it examines the three primary elements that contribute to the occurrence of a disaster: vulnerability, exposure, and risk. The final section of this first chapter provides an overview of the different types of natural catastrophes as well as the significance of taking preventative measures or minimising their aftermath.

In the subsequent chapter, we will talk about the many stages of the disaster cycle, the numerous strategies for reducing risk, and the various components that are utilised for disaster management. It is essential to have an understanding that disaster management is a complicated process and that various types of disasters will call for a variety of responses to emergency management strategies. The disaster preparedness, risk reduction phase, disaster management, and the disaster recovery phase make up the four stages that comprise the disaster cycle. At the international, national, functional, and local levels, several stakeholders are each responsible for a portion of the overall responsibility of disaster management. Risk management is an essential component of disaster management, and it entails the following five essential aspects: prevention, mitigation, preparedness, reaction, and recovery. The process of disaster management begins with a focus on risk mitigation as its primary objective. We can assist in the prevention of major disasters from occurring, or at the least, we can lessen the impact of those events when they do occur.

In the fifth section of the report, Sewa International's development from a spontaneous movement in 1993 to a formal organisation in 1997 is described in detail, along with the organization's activities in disaster management in India and other neighbouring countries (included in the appendix) up until the year 2021.

The third section of the report examines the 2005 Disaster Management Act and the involvement of nongovernmental organisations. A country's capacity for self-sufficiency is of special interest to private and government humanitarians and crisis management experts. This illustrates the state's capacity to support emergency assistance and recovery efforts both within its borders and in neighbouring nations. Central to this analysis are the Republic of India's organisation for managing significant natural and man-made disasters, its capacity for effective response, and its capacity for establishing unity of effort across government and non-government organisations. India is a rising world power; it is the second-most populous nation and will surpass China in terms of population by 2050 (Pal and Ghosh, 2018). The non-governmental actors responsible for the planning and execution of emergency aid in times of severe need place significant value on India's capacity to aid itself and others.

In the fourth chapter, more information is provided regarding the function of financial resource distribution. It is not only important to consider the total amount of money that is spent, but also where and how the money is being used. This indicates that countries and communities that are at danger of crises should be provided greater resources during times of calamity, and that funding methods should be established based on what the actual needs are of the respective people and places. The developed nations have a duty to contribute financially to the relief efforts (IFRC, 2020), and it is essential that every penny be spent in a manner that will have the greatest possible positive impact on the lives of those who are enduring hardship. Integrating the knowledge and experience of local people who are on the front lines of disaster response is necessary to accomplish this. It will take a concentrated effort to target the areas with the highest number of vulnerable individuals and to devise finance strategies that encourage positive outcomes for people.

Cautions to Keep in Mind

It is difficult to present a balanced coverage of such a broad and diverse subject spanning three decades of work and experience. This report is broad in scope, so it can only provide a general overview of the events that transpired. Some might say that it does not do justice to the gravity of the situation, as it does not go in depth about the hardship and suffering of those affected. It is also important to note that this report does not include the experiences of authorities and other stakeholders who responded to the disaster, as that is beyond the scope of this document. Moreover, there is so much that we still do not fully understand and a lot that might have been overlooked, undocumented or unpublished as the data might just have been lost in time. Further, criticism of responders is a potential threat to their future efforts. It is important to improve post-disaster recovery through constructive criticism of response efforts of different stakeholders. Given that so many different people and groups contribute to the success or failure of a project, it is important to remember that no single individual or organisation can take all the credit or be blamed for everything. Instead, we must work together to constantly strive for better outcomes and realise the dream of a better tomorrow.And while our tools and technologies have changed and developed over time, they have yet to match your aspirations. But the effort has been genuine and widespread. All over the world, people are working to create new and better tools that will help us realise our dreams. Finally, the main purpose of this report is to serve as an exhaustive experience-sharing toolThis report is not a "how-to" manual, but rather a document meant to provide lessons learned from the many actors involved in disaster recovery. The priority is simply to learn from these experiences and embed them in operational practices for lasting impact. The people involved in disaster recovery have a wealth of experience, and it is hoped that this document will help in putting that knowledge in context.

Nepal Earthquake, 2015. Rescue and relief efforts are being helped by Sewa volunteers.

" There is no such thing as a natural disaster . . Disasters result when a hazard affects human settlement which is not appropriately resourced or organized to withstand the impact, and whose population is vulnerable because of poverty, exclusion or socially disadvantaged in some way. **"**

— Mami Mizutori, United Nations Office for Disaster Risk Reduction (UNDRR), 2020

Nepal earthquake, 2015. Relief collected from all around the world collected by Sewa International being distributed to help those affected by then earthquake there.

Decoding Disasters

Hazards + Exposure + Vulnerability = Disasters

PREVIEW >>>

WHAT IS A DISASTER?

Insight at a glance into catastrophic events.

WHAT ARE THE HAZARDS?

An overview of the several ways in which risks might be classified, including those that are natural, human-made, or technological in origin.

WHAT DOES VULNERABILITY AND EXPOSURE HAVE TO DO WITH DISASTERS?

Analysing how the variables that characterise the disaster's reach and impact—risk, vulnerability, and hazard—are intertwined

What is a disaster?

The term disaster refers to a sudden catastrophic event that may be due to natural causes and/or man-made hazards causing serious disruptions to the functioning of the community or society (WHO/EHA, 2002; Matthews, 2014; UNDRR, n.d.; IFRC, 2022). Disasters are characterised by their randomness, spontaneity, and rapidity. These events are either natural or controlled by humans, exceed the tolerated magnitude within or beyond specific time limitations, impede adaptation, cause catastrophic property and income losses, and immobilise living activities. Disasters test or exceed the community's capacity to cope with the impact, which may be immediate and localised (such as the Uttarakhand cloudburst of 2013) or could last for a long period (e.g., COVID19).

Disasters are the consequence of improperly managed risk, where the risks are the product of hazards and vulnerability (Prasad & Francescutti, 2017; UNDRR, 2020). Miami Mizutori, Special Representative of the Secretary-General for Disaster Risk Reduction, UNDRR, says disaster results when "a natural or man-made hazard affects a human settlement which is not appropriately resourced or organised to withstand the impact, and whose population is vulnerable because of poverty, exclusion or socially disadvantaged in some way" (2020).

Losses due to disaster can be categorised as environmental, anthropological, socioeconomic, developmental, infrastructure, and economic (Kapur, 2010; Pal and Ghosh, 2018). These categories reflect the breadth of effects that natural disasters have on our civilization.

- **Environmental aspects**
- **Anthropological aspects**
- **Socioeconomic aspects**
- **Developmental aspects**
- **Infrastructural and economic losses**

The DMA (2005) defines disaster, as "…a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area."

Social

- Loss of lives
- Loss of health and wellbeing
- Damage to livelihood
- Psychological stress and trauma
- Loss of employment
- Law and order problems

Economic

- Loss of environmental reserves (i.e., water, land/soil, land-use, landscape, crops, animals/livestock, wildlife, etc.)
- Loss of environmental services (i.e., forests, aquaculture, lake/rivers/estuaries, etc.)
- Loss of environmental functions
- Loss of resources for livelihood
- Contamination of resources

Environmental

- Loss of services
- Loss of industry/production
- Loss of productivity and sustainability
- Loss of income
- Insurance losses and relief costs
- Economic costs of physical and environmental losses
- Recovery costs

Physical

- Loss to property and goods
- Loss of infrastructures (i.e., roads, bridges, dams, industries, etc.)
- Loss of amenities (i.e., schools, hospitals, hotels, shopping complexes, etc.)

All major disasters have three main effects. First, they have an adverse effect on all primary resources, including life and gender, water, land, and biomass. They also harm forests and green spaces, livestock and wildlife, people, and property. Finally, they have a negative effect on the economy, education, infrastructure, health and sanitation, and employment.

Human vulnerability brought on by poverty and social inequality, environmental degradation brought on by improper land and water use, rapid population growth—especially among the underprivileged and uneducated—and lack of preparedness are the main factors that contribute to the disastrous effects of a natural hazard.

सुरेश भैयाजी जोशी

क्या हम प्रकृति को अपने अधिकार में लाना चाहते हैं। क्या हम किसी विषय के बारे में अतिक्रमण कर रहे हैं। क्या हमारी कल्पनाओं व चिंतन में कोई गलती हो रही है। जब आवश्यकताएं बढ़ जाती हैं तो हम कई चीजों को भूल जाते हैं। हम आकाश तत्व पर चर्चा करने के लिए आए हैं। कुछ लोग आकाश के मालिक बनना चाहते हैं। विकास की कल्पनाओं को लेकर हम कौन सी बातों पर समझौता कर रहे हैं। इस पर गंभीरता से विचार करना होगा।....

What are the hazards?

Hazard is a term that is often used interchangeably with disasters. But it is important to differentiate between them. Hazards are any phenomena, substance, human activity, or condition that may result in loss of life, injury or other health consequences, destruction of property, social disruption, or environmental degradation (U.N. ISDR, 2004). A disaster, on the other hand, is a potential outcome of a hazard, where the local collective is unable to deal with the effects of the hazard, given the resources at their disposal (Prasad & Francescutti, 2017). Figure 2 demonstrates the conceptualization of how a hazard relates to a disaster given the ability of a population to utilise available resources.
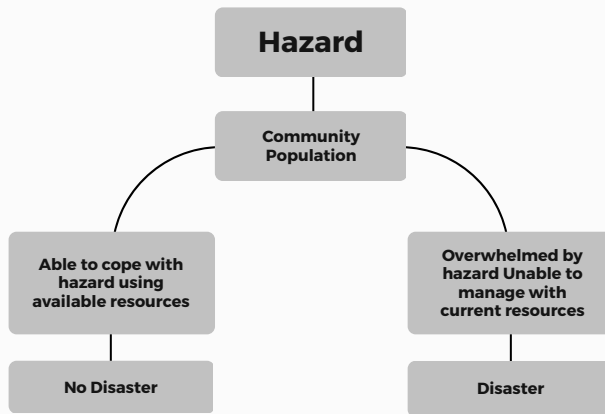
In short, hazards are anything that causes harm to life or destruction property and the environment and are mainly differentiated into two types:

1. **Natural Hazards** are naturally occurring physical phenomena, suddenly with little or no warning, or can build up slowly over time. They can be
a. *Geophysical*: a hazard originating from solid earth
b. *Hydrological*: caused by the occurrence, movement, and distribution of water on earth
c. *Climatological*: relating to the climate
d. *Meteorological*: relating to weather conditions
e. *Biological*: caused by exposure to living organisms and their toxic substances or diseases they may carry

2. **Man-made and technological hazards** are events that are caused by humans and occur in or close to human settlements. They include complex emergencies, conflicts, industrial accidents, transport accidents, environmental degradation, and pollution. (IFRC, 2022)

Figure 2: Differentiating between a hazard and a disaster (Prasad & Francescutti, 2017)

Jubin Nautiyal, Musician & Singer

"Uttarakhand is a disaster-prone state and Sewa International has been instrumental in the rehabilitation and relief of the disaster-stricken areas. Even during Covid19 pandemic which almost brought human life to standstill, Sewa and its volunteers worked tirelessly to extend medical and essential support to the needy. As someone closely associated with Sewa through 'Umeed Ke Sur' a fundraiser to support covid relief in Himalayas, I appreciate the organisation's initiatives for the beautiful state of Uttarakhand and its people."

Classification of Disasters

To differentiate types of disasters, it is important to understand their origins. Disasters originate from different types of hazards - natural, man-made or technological and are classified according to their origins (U.N. ISDR, 2004; Kapur, 2010; Prasad & Francescutti, 2017). Figure 3 shows the classification of disasters based on three hazards, focusing on natural disasters, modified from U.N. ISDR. Additionally, it also displays that separate components of natural disasters can interact. For example, floods and droughts can create a prime environment for biological hazards through vector-borne illnesses, such as cholera and malaria. Hazards only become disasters when human lives are lost, and livelihoods damaged or destroyed.

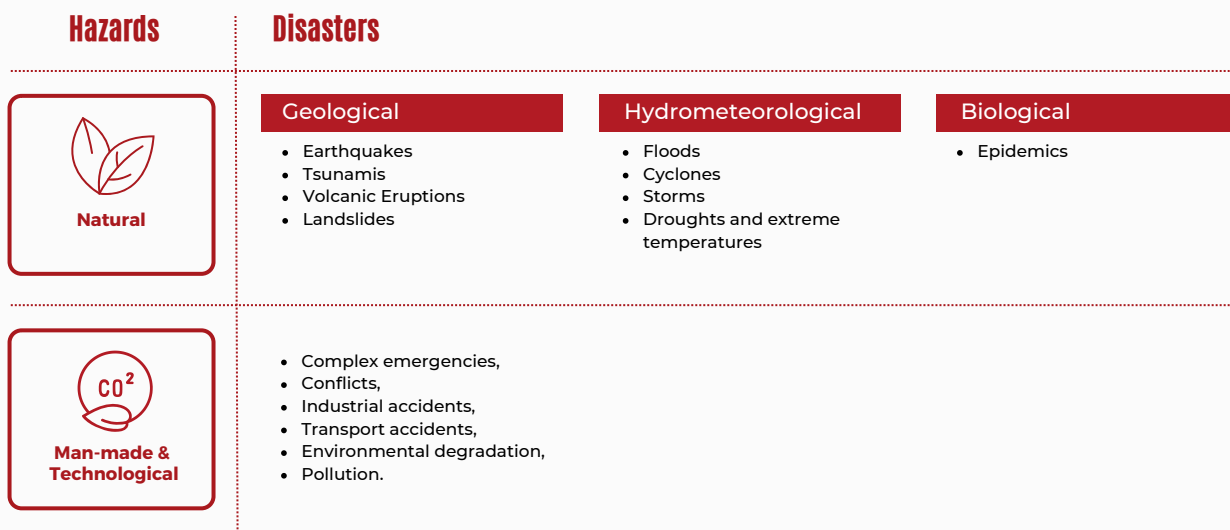| Hazards	Disasters		
Natural	**Geological** • Earthquakes • Tsunamis • Volcanic Eruptions • Landslides	**Hydrometeorological** • Floods • Cyclones • Storms • Droughts and extreme temperatures	**Biological** • Epidemics
Man-made & Technological (CO_2)	• Complex emergencies, • Conflicts, • Industrial accidents, • Transport accidents, • Environmental degradation, • Pollution.		

Figure 3: Classification of hazards and natural disasters (Prasad & Francescutti, 2017).

At present, economic crises and violence-related extreme events are also considered disasters (Sawada, 2007). Economic crises may diminish output leading to famine, hyperinflation, or result in financial, currency, or debt crises — such as the 1997-1998 Asian Financial Crisis and the 2008-2009 Global Financial Crisis. Similarly, violence-related disasters include terrorist attacks, civil wars, and international wars (ADB, 2021). Further, multiple disasters are often compounded. For example,the 2011 Great East Japan Earthquake and Tsunami, which was a geological disaster, led to the Fukushima nuclear power plant technological disaster.

The High Power Committee on Disaster Management, constituted in India in 1999, under the chairmanship of Shri. J.C. Pant. Members of the HPC were chosen from among experts in related fields as well as from Ministries, States, and NGOs. It was India's first attempt at developing a methodical, thorough, and all-encompassing disaster response plan. Over the course of two years, the High Powered Committee's work focused on the topic of disasters and the vulnerability of disasters to both natural and man-made hazards. HPC was the nation's first concerted effort, and it developed as a result of adopting a participatory methodology. It has identified 31 various disasters categorised into five major subgroups-

Disaster Category Hierarchy

I. Water- and climate-related disasters

• Flood and drainage management
• Cyclones
• Tornadoes and hurricanes
• Hailstorms
• Cloudburst
• Heat wave and cold wave
• Snow avalanches
• Droughts
• Coastal or river bank erosion
• Thunder and lightening
• Tsunami

II. Geological-related disasters

• Landslides and mudflows
• Earthquakes
 Dam failures/ dam bursts
• Mine fires

IV. Chemical/ Industrial/Nuclear Disasters

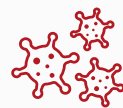1. Chemical and Industrial Disasters
2. Nuclear Disasters

III. Accident-related disasters

• Forest fires
• Urban fires
• Mine fires
• Oil spills
• Major building collapse

V. Biologically related disasters

1. Biological Disasters and Epidemics
2. Pest Attacks
3. Cattle Epidemics
4. Food Poisoning

The new classification separates disasters into two categories: natural disasters and technology disasters. The six categories of natural disasters are extraterrestrial, biological, geophysical, meteorological, hydrological, and climatological. Each group includes various primary categories of disaster, and each includes various disaster subtypes (Pal and Ghosh, 2018). An overview of the grouping of natural catastrophes is provided in the tables below.

Grouping of Geophysical Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Natural Disaster	*Geophysical*	*Earthquake*	*Ground Shaking*	
			Tsunami	
		Volcano	*Volcanic eruption*	
		Mass movement (dry)	*Rockfall*	
			Avalanche	*Snow Avalanche Debris avalanche*
			Landslide	*Mudslide, lahar debris flow*
			Subsidence	*Sudden subsidence, Long-lasting*

Grouping of Meteorological Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Disaster Generic Group	*Mateorological*	*Storm*	*Tropical storm*	
			Extra-tropical cyclone (winter storm)	
			Local/convective storm	*Thunderstorm/lightning*
				Snowstorm/blizzard
				Sandstorm/dust storm
				Generic(severe) storm
				Tornado Orographic storm (strong winds)

Grouping of Hydrological Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Natural Disaster	*Hydrological*	*Flood*	*General (river) flood*	
			Flash flood	
			Storm surge/ coastal flood	
		Mass movement (dry)	*Rockfall*	
			Landslide	*Debris flow*
			Avalanche	*Snow avalanche Debris avalanche*
			Subsidence	*Sudden subsidence, Long-lasting subsidence*

Grouping of Climatological Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Natural Disaster	*Climatological*	*Extreme temperature*	*Heat wave*	
			Cold wave	*Frost*
			Extreme winter condition	*Snow pressure*
				Icing
				Freezing rain
				Debris avalanche

		Drought	Drought	
		Wildfire	Forest fire	
			Landfires (grass,scrub, bush,etc.)	

Grouping of Biological Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Natural Disaster	Biological	Epidemic	Viral infectious diseases	
			Bacterial infectious diseases	
			Parasitic infectious disease	
			Fungal infectious diseases	
			Prion infectious diseases	
		Insect infestation	Grasshoppers/locusts/ worms	
		Animal stampede		

Grouping of Extra-terrestrial Disasters

Disaster Generic Group	Disaster Group	Disaster Main-Type	Disaster Subtype	Disaster Sub-subtype
Natural Disaster	Extraterrestrial	Meteorite/ Asteroid		

Source: Pal and Ghosh, 2018

The Sendai Framework for Disaster Risk Reduction 2015-2030 classifies disasters based on impact (UNDRR, n.d.):

- Small-scale disaster: A type of disaster only affecting local communities which requires assistance beyond the affected community.
- Large-scale disaster: A type of disaster affecting a society which requires national or international assistance.
- Frequent and infrequent disasters: Depend on the probability of occurrence and the return period of a given hazard and its impacts. The impact of frequent disasters could be cumulative or become chronic for a community or a society.
- A slow-onset disaster is defined as one that emerges gradually over time. Slow-onset disasters could be associated with, for example, drought, desertification, sea-level rise, and epidemic disease.
- A sudden-onset disaster is one triggered by a hazardous event that emerges quickly or unexpectedly. Sudden-onset disasters could be associated with earthquakes, volcanic eruptions, flash floods, chemical explosions, critical infrastructure failure, and transport accidents.

As mentioned above, classification of disasters is frequently based on their origin, whether they are "natural" or "man-made." Modern and sociological understanding of disasters, on the other hand, regards this disparity as artificial, since the majority of disasters are produced by the actions or inactions of humans and their social and economic institutions. The majority of natural disasters are the result of human actions that degrade the environment, the growth or overpopulation of metropolitan centres, and a dynamic process of altering or perpetuating social and economic institutions to meet human needs. Due to their low socioeconomic status, communities and populations residing in locations vulnerable to the effects of a rampaging river or powerful earth tremors are always exposed to a high level of danger. This is exacerbated by the fact that every part of nature is prone to seasonal, annual, and sudden variations, as well as the unpredictability of the timing, frequency, and severity of natural disasters. For the report, we will be using the disaster classification based on their origin.

What does vulnerability and exposure have to do with disasters?

Exposure refers to the duration and/or extent of people and property subject to the hazard (Twigg, 2004; U.N. ISDR, 2004; Wisner et al., 2004; Brunschot, E. G. and Kennedy, 2008; Penuel, Statler, and Hagen, 2013; Matthews, 2014). For instance, in earthquakes, exposure may reference not only the duration of the tremors of the earthquakes but also the duration of the aftershocks. It may also be a measure of the population being affected by the earthquake or the degree to which they were left exposed. Vulnerability, on the other hand, pertains to susceptibility to damage or harm by a hazard.

Different communities have varied vulnerabilities depending on their physical assets (building design and strength), social capital (community structure, trust, and family networks), and political access (ability to get government help and affect policies and decisions) (U.N.ISDR, 2004; Brunschot, E. G. and Kennedy, 2008; Penuel, Statler, and Hagen, 2013; Matthews, 2014).

Exposure and vulnerability along with hazards define the scope of the disaster. The prospect of a specific hazard occurring and its possible effects on people and property are understood as disaster risk (Twigg, 2004). The risk formula succinctly encapsulates the relationship between vulnerability and exposure to disaster. Conceptualised by Wisner et al. (2004), it attempts to capture the various components which influence the amount of risk that a hazard may produce for a community or population.

$$\text{RISK} = \text{HAZARD} \times \text{EXPOSURE} \times \frac{\text{VULNERABILITY}}{\text{MANAGEABILITY}}$$

Conclusion

Based on above discussion, risk, hazard and vulnerability can be understood as:

- Hazard is any substance, phenomenon, or condition that has the potential to disrupt or harm people, their property, their services, or the environment.
- Vulnerability is a notion that identifies variables or limits of an economic, social, physical, or geographic nature that reduce the capacity to plan for and respond to the effects of risks.
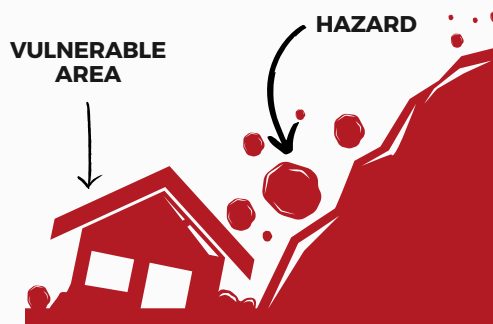
Risk is the possibility of unfavourable outcomes when hazards interact with sensitive places, people, property, and the environment. The possibility that an event will occur is the risk.

Risk can be viewed as the mix of hazard, exposure, and vulnerability. These elements combine to create a risky scenario, which can be represented by a triangle with three sides. If either of these sides rises, the triangle's area increases, and so does the level of danger. Similarly, if any of the factors diminishes, the risk reduces. If we can completely eliminate one side, there will be no risk.
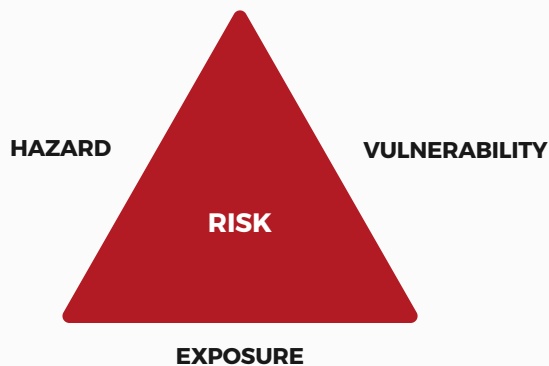
The Risk Triangle

Gujarati native tribe working together on the Kutch Kala project

"

Climate change is expected to cause more severe and more frequent natural hazards. As our cities and coasts grow more vulnerable, these hazards can lead to disasters that are far worse than those we have seen to date.

"

— Ban Ki-moon, Secretary General of the United Nations (UNISDR, 2007)

Ockhi Cyclone, 2017. Local populace trying to salvage from the damage.

Understanding Disaster Management and Risk Reduction

What happens during a disaster and will we do better next time?

PREVIEW >>>

WHAT IS DISASTER MANAGEMENT?

Comprise pre-disaster, during disaster and post-disaster actions

DISASTER RESILIENCE

Preparedness in terms of risk reduction before and after disaster

CAN DISASTERS BE PREVENTED?

Through Disaster management and Risk Reduction Measures such as knowing, assessing and mitigating the risk

The impact of disasters on individuals, society, as well as the government varies drastically. One natural hazard may create destruction differently than other natural events (i.e., a tornado is entirely different from a flash flood). Similarly, the vulnerability of populations or communities where the event occurs can also differ.

The severity of a natural disaster can depend on a variety of factors, from the resources available to the type of governing bodies in place. For example, a severe tornado that rips through an open, unpopulated area may not be as disastrous as a mild one that goes through a heavily populated city. This is because the population in the city is more likely to be overwhelmed by the tornado, and there may not be enough resources available to help them recover. Additionally, financial stability and the accessibility of resources can also play a role in determining the severity of a natural disaster. Given the high variability of natural disasters, as well as varying vulnerability, managing disasters is certainly unique to the parameters of the situation.

This phase transitions into the reconstruction (rehabilitation) phase. During this phase, the lessons learned are applied to mitigating or preventing the effects of future recurrences of that type of disaster and, at the same time, preparing to respond to this type of disaster in case of recurrence. Full prevention of a disaster is highly unlikely, but steps can be taken to prevent small hazards from becoming disasters (prevention) or reduce the impact and devastation resulting from a disaster (mitigation) (JHBSPH, IFRC, 2008).

The purpose of configuring the disaster cycle is to conceptualise the processes that occur following a disaster so that effective planning strategies can be developed. Figure 4 is a diagrammatic representation by the WHO of the disaster management cycle, based on four phases in the management of an emergency. Each country or jurisdiction may have different management strategies for each type of emergency; however, the disaster cycle is a well-established framework that provides the basis for developing a strategy.

Disaster Cycle

Disasters are often understood and seen as a cycle. The natural event may or may not occur with a warning phase. Certain disasters can be predicted, whereby an early warning issued can help in reducing the impact. The next stage is a response which is made following a disaster, generally organised through a national civil defence or emergency management authority. CSOs may be the first responders. They may be aided significantly by any preparedness actions taken before the disaster occurred. Rescue and relief activities occur during the emergency phase, which follows the impact of the disaster.


Figure 4 (Prasad & Francescutti, 2017)

Challenges in the Disaster Life Cycle

The pre-disaster phase of preparation is thought to lead to improved response activities during and after the disaster. According to UN estimates, prepositioning can really save fifteen dollars in post-disaster response costs for every dollar invested (UNDRR, n.d.). However, as the operational complexity of all humanitarian assistance is altered by a crisis, specific techniques will vary depending on the type of disaster.

The distinction between man-made and natural disasters in the classification of disasters does not provide significant inference for study in humanitarian operations. However, when determining the operational difficulties, a classification based on time and place might be extremely beneficial (Apte 2009). Disasters can be divided into two categories, slow-onset versus sudden-onset, and localised versus scattered (Apte, 2009), as shown in Figure 2.2. The resulting 2X2 matrix in the illustration gives a few examples of recent disasters. When disasters are widespread and have a quick beginning, as was the case with the 2004 tsunami in the Indian Ocean, which devastated numerous nations, transportation and distribution of essential goods and services suffer. There are distributed and sudden-onset disasters on the one hand, and localised and slow-onset disasters on the other. Rest, localised and sudden-onset, or distributed and slow-onset are in between (such as the 2009 H1N1 flu pandemic).

The disaster lifestyle is another useful concept for humanitarian operations study (Apte 2009). Preparation, reaction, and recovery are the three phases of a disaster's life cycle.
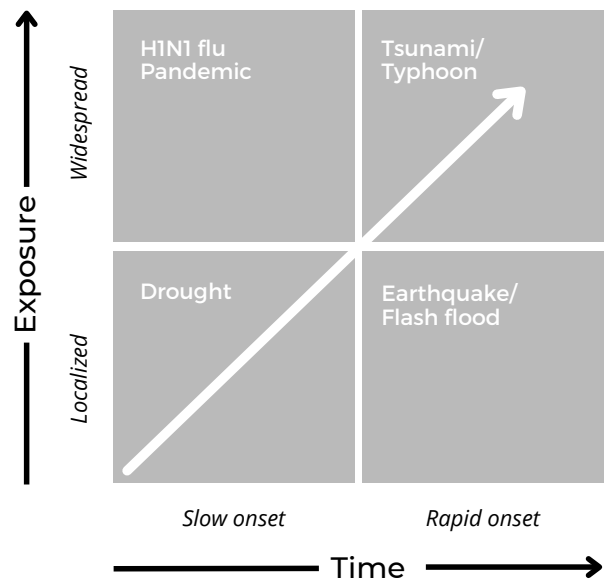
Source: Adopted form Apte, 2009.

Dr. Vandana Shiva, Founder, Navdanya

"Sewa International has done commendable work in preserving the ecosystem in the Himalayas. Great to see their work with farmers."
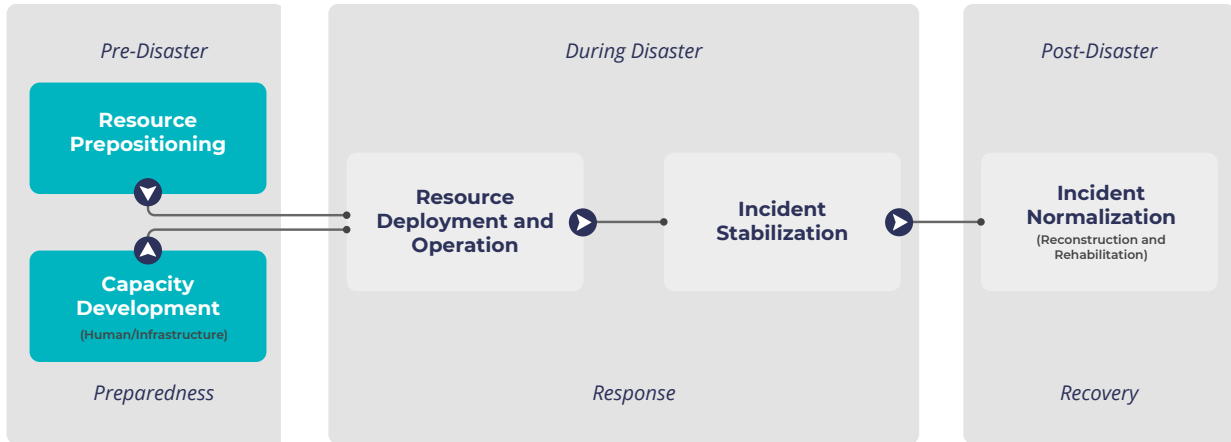
Another important idea to consider when studying relief efforts is that of the disaster lifestyle (Apte 2009). The three stages that make up the lifecycle of a disaster are known as preparation, reaction, and recovery (figure above). Certain indicators have been identified as a result of the experience and knowledge gained over the past two decades.

Being prepared reduces the impact of a tragedy or conflict. In uncertain military operations, readiness is key. Preparation involves planning for and building appropriate capacity and resources, vital infrastructure, and information-flow technologies. Military organisations face many such issues, thus they have policies and procedures tested in war or other crises. Commercial supply networks face comparable issues. Some private-sector initiatives, such as agility, adaptability, and global supply chain alignment (van Wassenhove 2006), can aid with disaster response. In the pre-disaster phase, essential concerns like emergency facility location and resource allocation can typically be handled utilising classic analytical models like facility location and capacity limited network-optimization models. Due to their unique nature and location in the humanitarian response supply chain, requirements assessment and information management demand novel methods. Managing relationships and building trust during the response phase is crucial to a smooth flow of aid to the affected people. Even if the infrastructure is in place, humanitarian missions won't succeed if the host community won't cooperate.

Building confidence can increase local or stakeholder collaboration. Confidence may be tougher to gain in a supply chain of transient suppliers and volunteers. Existing infrastructure includes roads, electricity networks, and supply chain distribution and transportation. Infrastructure can also be community education and disaster awareness, leading to confidence and teamwork.

Post-disaster involves largely recuperation. After recovery, the impacted community's situation may or may not match its pre-disaster state. Obtaining, keeping, and gaining from information are key to the recovery process. Post-recovery knowledge enables disaster preparedness. Information and knowledge management aid throughout disaster phases.
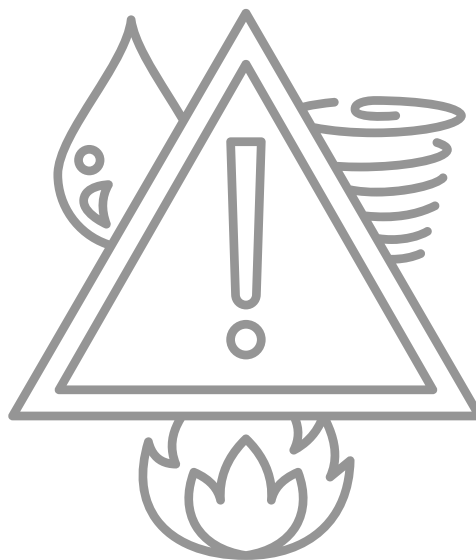
What is disaster management?

Disaster management seeks to minimise, reroute, or prevent possible losses from hazards, ensure immediate and appropriate aid to disaster victims, and accomplish quick and efficient post-disaster recovery (Warfield 2008). The disaster management cycle illustrates the continuous process by which authorities, organisations, and civil society prepare for and lessen the effects of catastrophes, respond during and right after a disaster, and take action to recover the post-disaster situation.

Disaster risk management (DRM) is the umbrella term for all activities, programmes, and actions undertaken before, during, and following a disaster with the intention of preventing a disaster, lessening its effects, and efficiently recouping losses. The following are the three primary stages of activities that are involved in DRM (Twigg, 2004; Lloyd-Jones, 2006; Apte, 2009; Pal and Ghosh, 2018; IFRC, 2020):

1. Pre-disaster actions are those that are carried out to lessen property and human losses brought on by possible hazards. For instance, launching awareness campaigns, bolstering the present inadequate institutions, creating household- and community-level disaster management plans, etc. These risk-reduction steps are referred to as mitigation and preparedness actions since they are conducted during the pre-disaster phase.

2. During a disaster: Activities during a disaster include efforts to address the needs and requirements of victims and lessen their suffering. Emergency response actions are those undertaken during this stage.

3. Following a disaster (post-disaster): Post-disaster activities refer to steps conducted in the wake of a disaster to hasten the recovery and rehabilitation of impacted populations. Response and recovery actions are what they are known as. The emergency response and recovery phases of a disaster are likely to involve a wide range of initiatives, as shown by the DRM cycle (DRMC). Some of these actions span both stages (such coordination and the provision of continuing support), while others are specific to each stage (e.g., early warning and evacuation during emergency response, and reconstruction and economic and social recovery as part of recovery).

सीताराम केदिलाय (सामाजिक कार्यकर्ता)

भूसंपदा, जल संपदा, वन संपदा, जीव संपदा, गौ संपदा, कुटीर उद्योग और संस्कृति संपदा सहित देश की आठ संपदाएं खतरे में हैं जिनका संरक्षण किए जाने की आवश्यकता है....

Disaster Management Continuum

Preparedness Capacity Development

Prediction and Early Warning

Mitigation and Prevention

Risk Management

Disaster Impact

Rehabilitation/ Reconstruction

Crisis Management

Needs Assessment/ Damage and Loss Assessment

Recovery

Response
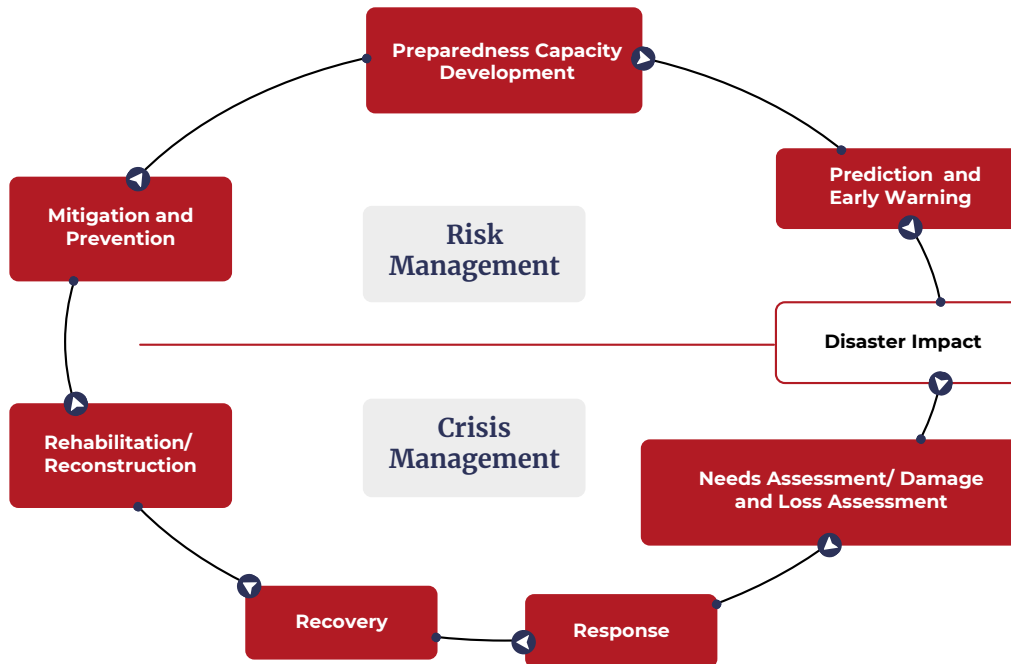
Source: Pal and Ghosh, 2018

Needs Evaluation/Damage and Loss Evaluation: What Is the Impact?

All major disasters have three main effects: they damage the forest and greenery, livestock and wildlife, population, and property; they have a negative effect on the economy; and they have an adverse impact on education, infrastructure, health and sanitation, and employment. These effects are felt on all primary resources, including life and gender, water, land, and biomass.

Human vulnerability brought on by poverty and social inequality, environmental degradation brought on by improper land and water use, rapid population growth—especially among the underprivileged and uneducated—and lack of preparedness are major factors that contribute to the disastrous effects of a natural hazard.

Response

Emergency response is to offer immediate aid to improve the impacted population's health, preserve life, and boost morale. Such aid might range from giving particular but limited relief, including providing transportation, temporary housing, and food for refugees, to constructing semi-permanent colonies in camps and other places. The initial rehabilitation of harmed infrastructure may also be necessary. Until more permanent and long-lasting solutions can be developed, the response phase's main goal is to satisfy the basic requirements of the populace. This stage of the crisis management cycle is typically characterised by a substantial presence from humanitarian organisations (Twigg, 2004; Chan, 2017).

In conversation with volunteers and karyakartas involved in disaster rescue and relief operations, they argued that emergency management's response entails steps taken before, during, and right away after a hazard occurrence that are intended to reduce injuries, fatalities, property damage, and environmental harm.

As soon as it becomes clear that a hazard event is about to occur, response procedures are started, and they continue until the emergency is declared over. Since it is carried out under conditions of extreme stress, in a short amount of time, and with little information, response is the most difficult of the four emergency management functions. 'Responding with shaky assurance and needless delay causes tragedy and devastation', was constantly reiterated among many conversations involved with different karyakartas of different disaster managment operations.

Information gathering and coordination are key components of disaster response. Each incident is different in terms of the people involved, the victims, the needs of the community, the timing and sequence of what happens, and the methods used.

Recovery

The impacted populace can engage in a wide range of activities focused at reinstalling their lives and infrastructure supports now that the emergency is under control. There is no set time when temporary respite transforms into long-term recuperation and sustained development. During the recovery phase, there will be numerous opportunities to improve preparedness and prevention, hence lowering vulnerability. A smooth transition from recovery to continuous development is preferred (Twigg, 2004; Chan, 2017; ADB, 2021).

The recovery stage's activities continue until all systems are improved or back to normal. Measures for both short- and long-term recovery include restoring essential life-support services to minimal operational levels, providing temporary housing, educating the public about health and safety, rebuilding, counselling programmes, and conducting economic impact analyses.

Data collecting connected to reconstruction and the recording of lessons learned are examples of information resources and services (Lloyd-Jones, 2006; JHBSPH & IFRC, 2008).

The final stage of post-disaster measures, such as rebuilding infrastructure, livelihoods, or upgrading damaged structures, is recovery. Disaster recovery is an emergency management function used to restore, rebuild, or recover what has been lost due to a disaster and, ideally, lessen the likelihood of a similar tragedy occurring in the future. Recovery operations may begin as early as during the planning processes and actions, many years before a disaster actually occurs, in an integrated emergency management system that incorporates pre-disaster planning, mitigation, and preparedness initiatives. Following a disaster, recovery efforts—both planned and unplanned—may last for weeks, months, or even years.

Reconstruction and Rehabilitation

Housing and temporary public utilities are provided as interim measures during rehabilitation to aid in longer-term recovery. Reconstruction aims to improve community performance prior to a calamity. It entails replacing structures, infrastructure, and lifesaving amenities in order to improve long-term development possibilities rather than maintaining the same circumstances that made a region or population vulnerable in the first place (Twigg, 2004; Lloyd-Jones, 2006; JHBSPH & IFRC, 2008).

Long-term initiatives such as infrastructure, homes, and livelihoods are all included in reconstruction.It requires a lot of capital, careful planning, and community involvement. Additionally, it offers a great chance to plan more robust and resilient developmental activities (Twigg, 2004; Lloyd-Jones, 2006; JHBSPH & IFRC, 2008).

**Shri Trivendra Singh Rawat,
Former Chief Minister of Uttarakhand**

"Sewa International has been our ally in the field of development and it has been an honour for me to work with them side by side. When noble NGOs like Sewa and political leaders come together, the development of an area becomes unstoppable."

Prevention and Mitigation

Prevention refers to activities and measures to avoid existing and new disaster risks (often less costly than disaster relief and response) -- for instance, relocating exposed people and assets away from a hazardous area. Mitigation, on the hand, implies lessening or limiting the adverse impacts of hazards and related disasters (Van Wassenhove, 2006; UNISDR, 2009; 2015).

The disaster management cycle can be improved by taking appropriate action at every stage, which increases readiness, improves warning effectiveness, and lessens the vulnerability of future disasters. The full cycle of disaster management entails developing public policies and programmes that alter the causes of disasters and either lessen or alleviate their negative consequences on people, property, infrastructure, and the environment.

There are no gold standard methods for the management of disasters. When referring to disaster management, it comprehensively covers all aspects -- disaster risk reduction, disaster risk management, disaster response, and post-disaster recovery.

The proposed definition by UNISDR for disaster management is -- "the organization, planning and application of measures preparing for, responding to and, initial recovery from disasters" (UNISDR, 2015). In other words, it involves preparedness, transfer, prevention, and mitigation.

Sewa International while working during the 2013 Uttarakhand floods in rescue and relief had amassed a lot of ground information about the geographies and communities living in those areas. To prevent or reduce the impacts of natural disasters such as flooding in the hills, we developed a holistic rehabilitation programme that in its essence pivots on disaster prevention and mitigation.

For one sweet grape who will the vine destroy?
– Shakespeare, The Rape of Lucretia

Sewa International promotes organic farming practices that cater to the needs of ecological and socio- economical aspects. Sewa International defines sustainability as respecting the long-term future and its capacity for continuation. More often, organisations conceive 'sustainability' as narrowly as "the protection or conservation of the physical and biotic environment" (Moseley, 2003, p. 19) which treats environmental protection as a counterbalance to the main business of developing the economy. In other words, it treats conserving nature like a premium service provided in addition to creating jobs.

But what many people don't often discuss is the need for conservation and development to not just mutually coexist but be complementary with one another so that both can flourish. The 'environment' is one of the several resources that demand to be conserved. The two are not opposed to one another but rather complement each other in a way that is beneficial for all. To be able to make conservation and development into a mutually reinforcing bond rather than something going on parallel to one another is really what sustainability is about.

Our project, HARELA, sees 'sustainability' as the destination, and sustainable development as the journey. The term refers to 'Himalayan Agriculture Rejuvenation and Enhancement of Livelihood for Agri-preneurs'. It was started in 2018 with targeted interventions aimed at improving farming in 20 villages each of Rudraprayag, Chamoli and Dehradun by 25%-30% while aiming to increase the farm income of the farmers themselves. It celebrates the form of words coined by the Brundtland Commission in 1987: 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Cheltenham Observatory, 1998).

In India, current farming practices focus more on what and how much can be produced in the immediate future with little to no regard for the environment. This approach has led to the use of chemical fertilisers and other such chemicals that are responsible for water pollution and soil loss and has forced farmers to rely excessively on financial aid from external organisations. We have been working with farmers to share sustainable practices that help improve soil quality and grow quality crops while maintaining economic stability and balance in the mountain environment.

"It is a dynamic process that enables all people to realise their potential and to improve their quality of life in ways that simultaneously protect and enhance the Earth's life support systems" (Moseley, 2003, p. 21).

Transfers

The process of formally or informally shifting the financial consequences of risks from one party to another whereby a household, community, enterprise, or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party (Twigg, 2004; Van Wassenhove, 2006; UNISDR, 2009; 2015). For instance, insurance.

Microinsurance, micro credit and micro savings have strong synergies with one another. Insurance offers protection to assets created under credit programmes and protects savings from being wiped out by shocks arising out of sickness, death, accidents, or asset loss caused by fire, drought, floods and riots. While both savings and insurance protection against such shocks, insurance offers a higher degree of protection. But there is a lack of such measures or institutions for the poor and rural population.

With the objective of financial inclusion, Sewa International works in developing self-help microfinancing groups in rural India. To help members of the community to manage their savings to aid each other in times of crisis is a small-scale initiative by Sewa International, where these savings after being built up provide an adequate cushion on their own. These savings will at present not only contribute towards meeting their immediate needs but also acts as a protection against one-off losses and calamities, reducing the ongoing uncertainty induced by vulnerability to such shocks.

Several women in the Rudraprayag and Chamoli area of Uttarakhand began coming together to form their samooh, post mobilisation by Sewa International's field coordinators. One of the ways they worked to save money was by borrowing or 'inter-lending' among themselves. Each month they would write things down and record the data in their registers, as well as bank details should they have any. Sewa International provided them with training on how to maintain these registers and help keep proper tabs on inter-lending procedures. They were also provided support in opening bank accounts. Over time, more women have joined these samoohs and memberships have grown. And soon enough, female members began helping one another with advice as well as lending each other funds for small-scale business loans that aided personal growth in their communities. With the vision of using these savings in times of need, Sewa International works on building these micro-institutional frameworks to act as a buffer in times of calamities.

Preparedness

Preparedness includes the gathering of knowledge and capacities of governments, CSOs, communities, and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, or current hazard events or conditions -- for instance, installing early warning systems, identifying evacuation routes, and preparing emergency supplies (Twigg, 2004; Van Wassenhove, 2006; UNISDR, 2009; 2015).

SEWA Sahaas, one of the projects that Sewa International started post-Uttarakhand floods 2013, is an ecotourism and disaster management initiative. It focuses on creating livelihood and skill development for the unemployed youth of the region in the non-farm sector for both males and females. The project activity includes finding new treks in the target districts; preparing the profiles of the villages; researching opportunities, challenges, and intervention strategies for improving conditions; exploring vegetation of the region and video documentation of places of scenic beauty for developing treks.

The youth are also trained in disaster management preparedness and adventure tourism, hospitality and tour planning. These activities not only create livelihood through ecotourism, promote Himalayan culture and cuisine and prevent distress migration due to unemployment but also prepares a strong trained volunteer human resource to bank on in case of disaster event for rescue and relief. The information amassed through the survey activities will also help in knowing the local geographies to identify different routes for rescue and relief operations.

Albeit total prevention of disasters is not possible; however, the goal of management strategists following a disaster is to help as many people as possible using the available resources. Learning from past experiences, as well as learning from other communities is imperative in reducing the impact of future disasters. An effective disaster response begins with effective planning but must include many other steps. "Disaster Management conveys the important idea that protecting populations and property also involves the estimation of risks, preparation, activities which will mitigate the consequences of predictable hazards and post-disaster reconstruction in a way that will decrease vulnerabilities'' (JHBSPH; IFRC, 2008, p. 34).

Sewa International's Approach to Community-Wide Disaster Mitigation and Preparedness

Discussions about disaster mitigation always include a call to action to raise awareness of the hazards, but implementation is usually left to someone else. 'Awareness' frequently refers to the fact of hazards and how to live with or avoid them, rather than making decisions and modifying behaviour to lessen risk, was pointed out by our on-ground staff from the Uttarakhand team. None of the common risk assessment systems consider mitigation or measure risk reduction over time.

In disaster response, the engineering emphasis on structures (rather than the people in them) is replicated in training. That would establish a huge reliance on structures, ignoring the need to mobilise spontaneous responders and use a flexible "incident command system" to improve response.

Governments and huge development agencies tend to employ a "top-down" approach to disaster mitigation planning, where planners construct solutions for beneficiaries rather than letting them choose (Moseley, 2003; Twigg, 2004; Van Wassenhove, 2006). "Top-down" techniques emphasise physical mitigation measures over social adjustments to build up vulnerable groups' resources. They rarely succeed because they act on symptoms, not causes, and fail to meet people's needs. They impair the community's self-defense (Moseley, 2003; Chan, 2017; Pal & Ghosh, 2018). Develop mitigation policies with local community groups using strategies and actions they can organise and administer with minimum outside technical assistance.

"Community-based mitigation programmes are more likely to result in actions that respond to people's real needs and to contribute to the development of the community, its awareness of the hazards it faces, and its ability to protect itself in the future, even though technically they may be less effective. They maximise local labour, materials, and organisations", says Sewa Bharati volunteer from Odisha.

Applying community-based policies depends on numerous aspects, such as active local community groups and agencies that may give technical aid and support. A robust mitigation strategy should always include community-based measures. They'll be cheaper and more sustainable.

In several focus group discussions with the ground volunteers and community leaders, it was propagated that successful mitigation techniques require community and development agency engagement. Figure 5. Functional areas of resilience (Chan, 2017). The local community must be aware of the risk and take action to prevent it. They may need technical, material, and capacity-building assistance. If not, external agencies must give this help. An agency can enhance community protection by allowing communities to formulate their own project proposals and negotiate with the government and larger development agencies for the appropriate government actions and material assistance. This is true for engineering projects such massive embankments, spillways, and diversion works. Hand-labor and local materials alone may result in weak community defences, for example. Local labour augmented by heavy machinery and local materials bound by factory-made materials (e.g., cement or wire mesh) can result in long-lasting defences the local community can trust and maintain. A community-based mitigation approach may need government intervention to provide land for safer resettlement of the most vulnerable, which the community can determine. Community empowerment developed by achieving such goals and receiving government aid is likely to be a permanent development benefit.

Disaster Resilience

Resilience in the context of disasters is the ability of a system, community or society that is exposed to hazards to resist, absorb, accommodate to, and recover from the effects of a hazard in a timely and efficient manner (UNISDR, 2009). Figure 5 displays the functional areas of disaster resilience and their relationship with other domains across communal, organisational, and individual levels.
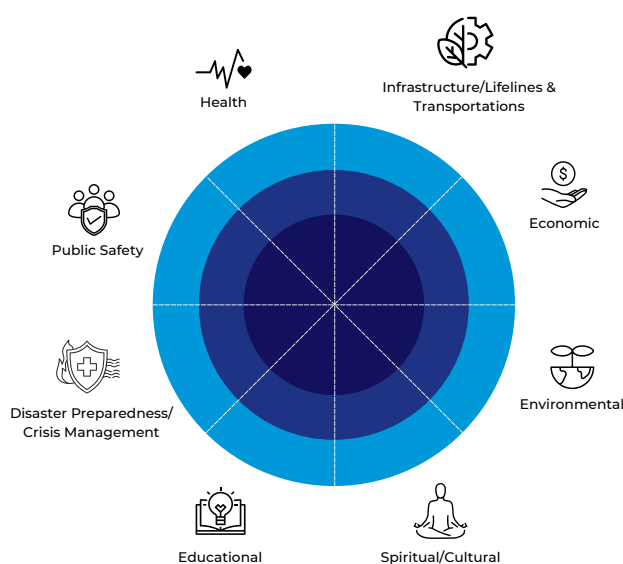
Individual

Organization

Community

Figure 5. Functional areas of resilience (Chan, 2017)

The entry point for building disaster resilience is reducing risk. "Disaster risk reduction (DRR)... entails diminishing vulnerability and exposure to natural hazards that are at the highest risk of becoming disasters, whether as local events or major catastrophes" (ADB, 2021, p. 21). As the ravages of a disaster can continue for an extended duration of time and diffuse to other locales, strengthening disaster resilience is key to managing disaster risk. Raising disaster preparedness increases resilience, but other factors, such as previous exposures to disasters or having a stable health care workforce, are also factors that enhance resilience. Disasters can present "windows of opportunity for promoting risk reduction measures as the significance of failing to act is very deeply embedded in the minds of all involved. However, it is hard to tell how long the window will remain open, or what conditions must be met to take advantage of the opportunity" (Twigg, 2004). Disaster resilience is multifaceted and requires collaborative efforts among international organisations, local governments, and civil societies.

Risk reduction before disaster

The need for disaster preparedness has become important now, more than ever. Natural and human-induced disasters such as epidemics, floods, storms, droughts, and wildfires are all expected to become more frequent and severe, affecting hundreds of millions of people every year across the globe (IFRC, 2020).

Disaster preparedness comprises three components: first, forecasting events and issuing warnings; second, taking precautionary measures in response to warnings; and third, proving response by organising and strengthening capacity to deliver timely and effective rescue, relief, and assistance. Hence, preparing for disasters saves countless lives, speeds up people's recovery and saves money.It not only avoids impending disaster threats but also puts plans, resources, and mechanisms in place to ensure that those who are affected receive adequate assistance (Twigg, 2004).

Risk reduction after disaster

There needs to be a long-term perspective behind post-disaster action. There is widespread agreement that relief and rehabilitation should contribute to long-term development and the reduction of vulnerability, where they can. They should not simply reconstruct the existing risk. Hence, when referring to risk reduction after a disaster, it generally implies integrated actions for rescue, relief, recovery, and development, where rehabilitation is the distinct linking phase between relief and development.

Shri Hardeep Singh Puri, India's Union Minister for Housing & Urban Affairs & Minister for Petroleum and Natural Gas.

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"'Sewa International' has displayed remarkable selflessness to help the relief and rescue efforts in Operation Ganga. They showed true patriotism and personified the philosophy of Vasudhaiva Kutumbakam with poise and dignity."

- Intervene at the earliest possible stage in the disaster cycle to protect livelihoods and reduce vulnerability -- for instance, Sewa International was the first responder during the Tapovan disaster in 2021 – where the disaster occurred at 10-10:15 am and we started disseminating information at 10:38 am reducing damage and saving lives with timely warning in the lower areas.
- Incorporate development principles into disaster relief operations (e.g. build up local capacities, adopt participatory approaches) -- for instance, after the Bhuj earthquake in 2001, Sewa International not only provided structural rehabilitation in the form of building houses, community halls, health clinics, and schools but also worked in building the local capacities of the communities to re-establish their lives after such a disastrous earthquake such as marketing and selling their local crafts by providing them training in market trends, quality and design requirements, and exposure visits to manufacture products that can cater to the international market.

1. Participation.

2. Accountability.

3. Decentralised control.

4. Demonstrating concern for sustaining livelihoods.

5. Basing strategies on the reality of a disaster.

6. Identifying the needs and capacities of diverse disaster survivors.

7. Building on survivors' capacities.

8. Building on local institutions.

9. Setting sustainable standards for services.

(IFRC, 1996)

Relief and post-relief initiatives tend to operate on different scales, with mass coverage being more easily achieved in relief operations. Many post-disaster assistance projects come to an end too soon and too suddenly. Disaster response organisations often have different perspectives on "exit strategies." While external agencies may see it as a phase-out, affected communities may see it as a cop-out. It's important for organisations to be aware of this potential disconnect and to ensure that their actions align with the needs and expectations of the communities they serve.

Sewa International, reflecting on its vast experience in rescue and relief operations, tries to avoid this in two ways: first, engaging with already present local grassroots organisations and civil society networks working with the community for its rescue and relief operations and supporting it further for rehabilitation and recovery programs. This avoids the local community feeling the agency is concerned about walking away rather than seeing the job through to the end, and offers transparency, as it is being managed by locally based organisations and communities. Second, we enter the field directly where we create a bond with the community, identify their needs and then undertake projects to realise the community aspirations. One example is of the post-Gujarat earthquake in 2001, where the Kutch Kala program by Sewa International is a case in point. To create a sustainable livelihood for Kutch women, we worked to identify and mobilise marginalised and vulnerable women in the rural areas towards skill-based work, deliver capacity-building workshops/training, facilitate exhibitions, and provide financial assistance by linking them to the banks and enabling them to avail soft loans timely and efficiently. The journey which initially began with providing training to women embroiderers to counter the gaps assessed in the domain -- i.e. forward/backward market linkage(s), technical knowledge and local opportunities --

eventually led to almost 1,200 women members organising themselves in 92 SHGs covering almost 16 villages of Kutch District -- Kuran, Jhura, Keshav Nagar, Lodai, Dhaneti, Madhapar, Atal Nagar, Jiyapar, Narayan Nagar, Nava Nagar, Nakhatrana, Ashapar, Dayapar, Guneri, Kotada, and Mangwada. Sewa Kala Srushti was established to connect craftsmen and their craft to the market. Another milestone was achieved when in 2012, the then Chief Minister of Gujarat, Narendra Modi, inaugurated the Sewa Design Development Centre that is aimed at developing new products, capacity building of artisans, and serving as a facilitation centre for alternate livelihood. The centre aimed to provide training with ongoing market trends and resources to meet market demands. For the socio-economic development of Bhuj and surrounding areas post-disaster, this has become a self-sustainable model now with little intervention from Sewa International. Similarly, after the Uttarakhand cloudburst disaster in 2013 we entered rescue and relief operations, being the first responders in the region and have continued our recovery and development activities since then, ensuring their sustainability.

Rebuilding Better

Several challenges impede the process of disaster management and mostly relate to governance difficulties. For instance, overwhelmed local administrative capacity, or failure to consult with relevant local stakeholders, leading to delays in rebuilding. Further, some are long-term challenges, where disaster reconstruction does little to reduce the risk of future disasters or when disasters have longer-lasting impacts on livelihoods and economic activities. There is a need for coordination and adequate capacity to plan and implement the projects through close collaboration among national, subnational, and local governments as well as other civil society organisations (Lloyd-Jones, 2006). The recent global paradigm shift toward disaster resilience is accompanied by an exploration of risk management strategies for and participation by local communities and households. Community participation and empowerment allow both a shift in attitude and build the capacity of populations who are often at the front end of disasters.

Examining the meaning of "rebuilding better," it is possible to summarise four objectives: safety, speed, fairness, and inclusivity (ADB, 2021). Sewa International tries to incorporate all four tenets into its disaster management operations. Safety is the guiding priority of post-disaster government policy, though outside the regulation of CSOs and needs to be ensured by government bodies. As a non-governmental organisation involved in post-disaster infrastructure reconstruction,

Sewa International ensures that infrastructure constructed henceforth is within the safety compliance of that region. All the infrastructure constructed after the Bhuj earthquake in 2001 was according to the earthquake safety standards. For instance, the houses were designed using hollow cement bricks to be able to withstand the shock waves. The speed of recovery is also important, through the swift, efficient, and decisive implementation of well-designed post-disaster actions. Sewa International runs its program based on inclusive consultation with the local community, ensuring a fair process and outcome, crucial to achieving smooth recovery. Engaging the community through participatory planning and rebuilding consultations not only informs the design of better disaster risk management policies but will also yield a stronger commitment to DRR and sustained recovery across the community.

Disaster and Development

A disaster has a significant negative impact on all aspects of development, and as a consequence, it causes a significant social and economic setback for the development. On the other hand, the process of growth and the kind of development decisions that are made in many countries can occasionally create the potential for natural disasters. The following table provides an overview of the complex relationship that exists between natural disasters and the process of development.

Disaster Limit Development	• Disposal of fixed assets. • Loss of production capacity, market access, or input materials. • Infrastructure failures in transport, communications, or energy. • Loss of means of subsistence, savings, and physical capital.	• Loss of staff and infrastructure in the health or education sectors. Death, disability, or migration of significant social actors causes a decline in social capital.
Development Causes Disaster Risk	• Practices of unsustainable growth that provide income for some at the expense of unhealthy working or living circumstances for others, or that destroy the environment.	• Paths of development can produce cultural norms that foster social isolation or political exclusion.
Development Reduces Disaster Risk	• Access to sufficient drinking water, floods and waste management, and a protected well enhances the resilience of the populace. Technology and commerce can reduce poverty. Investing in financial mechanisms and social security can mitigate exposure to risk.	• Enhanced educational and health capacity boosts resiliency via fostering community cohesion, acknowledging marginalized people or social groups (such as women), and offering chances for greater participation in decision-making.

Mainstreaming involves political commitment, public understanding, scientific knowledge and know-how, risk-sensitive development planning and practice, a people-centred early warning system, and catastrophe response systems. Safeguarding human rights and integrating gender concerns are also key to mainstreaming notions locally and nationally. Disaster risks influence multi sectoral development efforts (such as education, health, environment, governance, employment, and livelihoods). An assessment of how these social domains consider natural or human-induced risks (current and prospective) in programme development is critical. This also means that development programmes must analyse whether a project could cause/increase the danger of a future disaster and if countermeasures for risk control are needed.

Risk concerns in development and post-disaster recovery are seen as crucial to reducing disaster losses. Managing hazards could reduce future disaster risks by "corrective" development planning that ensures development activities don't create new dangers.

Economic development that affects housing, education, nutrition, health, etc. can reduce vulnerability; but, unplanned increase of human settlements and unhindered exploitation of natural resources, especially in low-income, high-growth countries, could create additional hazards in the long run. Mainstreaming DRR in development will be a challenge in the future years. Innovative techniques and methodologies must be developed to prevent future disasters from being caused by uncontrolled development. These technologies must be tested, customised to local needs, capacities, and resources, and deployed through a participative approach. DRR with climate change adaptation and high-density urban expansion would be another problem. This requires innovative solutions. Innovative solutions need building the capacity of national, regional, and local players, sharing knowledge and best practices, and regional cooperation.

Numerous dialogues with volunteers for disaster relief, coordinators for disaster management on the ground, and our Sewa staff members who participated in the process during various disasters have led to the identification of a

number of regional imperatives, national needs, and prospects for mainstreaming. When creating a strategy for integrating DRR into development, the following methodologies and tools need to be created and improved further.

1. Determine development-induced catastrophes. Inappropriate development contributes to risk accumulation. In a variety of ways, economic growth and societal progress increase disaster risk. Example: rapid urbanisation. The rise of informal settlements and inner-city slums, fueled by international or domestic migration, has led to unstable living conditions. These towns are frequently situated in ravines, on steep slopes, along flood plains, or in close proximity to polluting industrial or transit facilities. This has increased the risk of landslides in Rudraprayag, Chamoli, and several other Uttarakhand districts. This also applies to smaller and medium-sized urban centres and other megacities. When the rate of population growth exceeds the capacity of urban authorities and the private sector to provide housing and infrastructure, informal settlements can become hazardous. In cities with a large migrant population, social and economic networks are weak. For many, especially minorities and low-status groups, social exclusion and political marginalisation can result in a lack of resources and heightened vulnerability.

2. All development initiatives should include a required guideline for integrating DRR in terms of social and physical vulnerability. Reducing exposure or susceptibility reduces risk. Risk can also be reduced by decreasing the likelihood of a hazard. For instance, when constructing a road in a mountainous environment, slope stability measures can reduce the probability of hazards and the overall risk. Education and poverty alleviation programmes can reduce societal vulnerability and disaster risk. Additionally, limiting growth in high-risk areas can reduce exposure and overall danger.

3. Create sector-specific mainstreaming policies: DRR must be integrated into specific sectors with clear rules and goals. Sectoral

guidelines include:
- Public works, roads, building
- Utilize risk data for land-use planning and zoning.
- Before constructing new roads or bridges, risk assessments must be conducted.

4. Conduct sector-spanning risk analysis at the national, regional, and local levels. Whenever possible, the development components of ongoing initiatives across industries should be merged for a superior outcome. This should be accomplished through medium- and long-range planning. If a hydroelectric project is constructed, the effects on soil erosion and landslides must be evaluated. This requires multidisciplinary work across sectors.

5. Develop area-specific recommendations for mainstreaming in disaster-prone coastal and mountainous regions.

6. Develop a technologically-based legal mechanism for DRR legislation. A regulatory agency may conduct compliance and implementation evaluations. Hydroprojects, for instance, necessitate afforestation, and its positive impact must be properly evaluated and implemented.

7. Conduct a disaster impact assessment (DIA) to evaluate potential threats to any location (village, city, country, etc.) or element (infrastructure/land use, etc.). Therefore, it is essential to investigate all project-related risks. This task may be difficult and requires the analysis of natural and social data. Some aspects of the Disaster Impact Assessment (DIA) are similar to those of the Environmental Impact Assessment (EIA), and as such, it must adhere to the same guidelines.

8. Private–public partnership: both unorganised and organised private sectors will play a significant role in economic expansion. To implement DRR in a development programme, public–private partnerships are necessary. This alliance may have an effect on communication, infrastructure, markets, health, and other facets.

9. The incorporation of disaster mitigation and reduction into development is reliant on R&D. Research and development (R&D) in earthquake,

flood, drought, climate change, industrial and nuclear accident, and other fields must identify risk early and limit it by incorporating mitigation measures into the development model. Scientific institutions must reorient their programmes to support safe development. Road development agencies must take mass transit needs into account and provide viable, environmentally sustainable infrastructure.

10. Sensitization, instruction, and capacity building: All parties must recognise the connection between disaster and development. With DRR provisions, development can be implemented; this must be understood and communicated. This understanding will increase the demand for disaster audits, thereby ensuring sustainable development. Awareness must be raised at all levels, from school curricula to basic construction training to project management. Capacity building through education, training, and mid-career intervention must be implemented to rapidly cover a large labour force. Utilizing existing capacity for catastrophe risk is an effective strategy for creating capacity for future hazards arising from novel contexts.

11. One of the most effective incentives for the application of DRR in development is the acknowledgement of outstanding efforts. It also encourages honorees to continue their good work and find new ways to positively impact society. The management of drought and alleviation of poverty in western India have earned international recognition.

Rajendra Arlekar (Governor, Himachal Pradesh)

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"We have seen the work of Sewa International very closely. I am sure that this HimSamwaad can speed up the development of the Himalayan region."

Can disasters be prevented?

While natural disasters are inevitable, disasters caused by them are not. This can be done through disaster management and risk reduction measures. It is by helping the community to prepare and reducing their risks that they become more resilient. In spite of the available literature in the field, many areas such as disaster risk reduction which comprises knowing, assessing and mitigating the risk; emergency management; disaster response; disaster monitoring and evaluation; disaster recovery; and sustainable development need more research for greater clarity and coherence. Although the extensive amount of research papers published in the last decade suggests a heightened focus on disasters, the topic has yet to be explored comprehensively in national and international forums.

Sewa International while working on more than 40 disasters over the course of the past two decades, we have established several strategic objectives that should be taken into consideration while planning for disaster management and risk reduction. These objectives are as follows:
- Prudent decision-making
- Options for mitigating
- Sustainable development
- Reduction of impacts
- Sustainability of redevelopment
- Green revival
- Focus on environment and living conditions

The following is a list of the components that must be taken in order to have an all-encompassing disaster management programme, as established by 25 years of understanding in the field. These components emerged from interviews and focus group discussions with ground volunteers, our ground partner organisation representatives, and our Sewa karyakartas involved in the coordination of disaster management operations.

Sh. Krishan Kumar, Sr. Accountant, Sewa International Bharat

"Engaged in service work for more than 14 years. 'Disaster Management' has been one of the main activities of Seva International. I have closely seen the work done during the disaster. In those days there used to be a team of 6-7 people. My responsibility in the team was to take care of income and expenditure. Everything had to be monitored. At the same time, I joined the service, there was Kosi flood at that time. In order to provide immediate assistance to the people, the team takes care of the smallest of details, so that immediate assistance can be provided to the people. Today the team of Seva International is recognized for its management of disasters. We are happy that the dreams that our parents had seen regarding service. Together we are trying to make it a reality. This report is a result of that. Service and disaster management are complementary to each other if seen from India's point of view. I think this report will be important whenever there is an assessment on disaster management in future. ....Many congratulations to the Sewa team for preparing this report.

1. Prevent or stop the disaster from taking place; this is referred to as prevention.

2. Mitigation is the process of reducing the impact, the length of time it lasts, and the number of times it occurs.

3. Lessen the impact that it has on individuals, families, and societies by transferring the risk.

4. Being emotionally, physically, and organizationally prepared to respond to a crisis and ensure minimal loss of life, health, property, and the environment is what we mean when we talk about being ready for it, whether or not a crisis really arises.

5. As soon as it is safe to do so, resume your daily activities and begin rehabilitation.

6. Recommence the process of development, which had been halted as a result of the disaster - Reconstruction

7. Make an effort to get ready for the next possible catastrophe, which may occur at any time.

In addition to this, it should additionally focus on the following:

8. When preparing for a disaster, stay calm and avoid feelings of panic, perplexity, stress, and fear.
9. Maintain an orderly, streamlined, focused, and calm demeanour at all times.
10. Make us more sturdy, resilient, and determined.
11. Hone our skills, our instincts, and our knowledge of the world around us.
12. You should get yourself ready for the disaster on all fronts, including mentally, physically, and organizationally.
13. Make thorough plans in advance to protect people's lives, their health, their property, and the environment, and to minimise the amount of damage that will be caused by impending and coming disasters.
14. In order to accomplish the goals, it is important to acquire the required individuals, as well as cash and resources.
15. Maintain your composure and make sure to act in accordance with the strategy and training you were given before the tragedy.

Ashok Goel, Chairman of Sewa International

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"Sewa International has closely worked with local communities in the area of disaster management for more than 25 years. Our continuous efforts in supporting relief and rehabilitation in more than 45 disasters have highlighted the importance of protecting public health, securing people's livelihoods, and reducing economic and infrastructure damages through innovative solutions."

Santosh Gangwar, Former Minister of Labour and Employment of India

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"If we look at the last two years in India, then a lot of people from the civil society came forward and worked for the society in a way that cannot be imagined. It is the inner feeling that inspires people. When we look at our country and the diversity in it, we feel there is a need for everyone's support (in various tasks) and we are working accordingly. Looking at Sewa International, there is a willingness among CSOs to deal with a disaster. "

Maharashtra floods, 2019

"

The conversations are happening in silos. They use different terminology, attend different events and develop parallel frameworks. This results in different priorities being developed; different conclusions being drawn; different areas being perceived as someone else's responsibility.

—*World Disasters Report, 2020*

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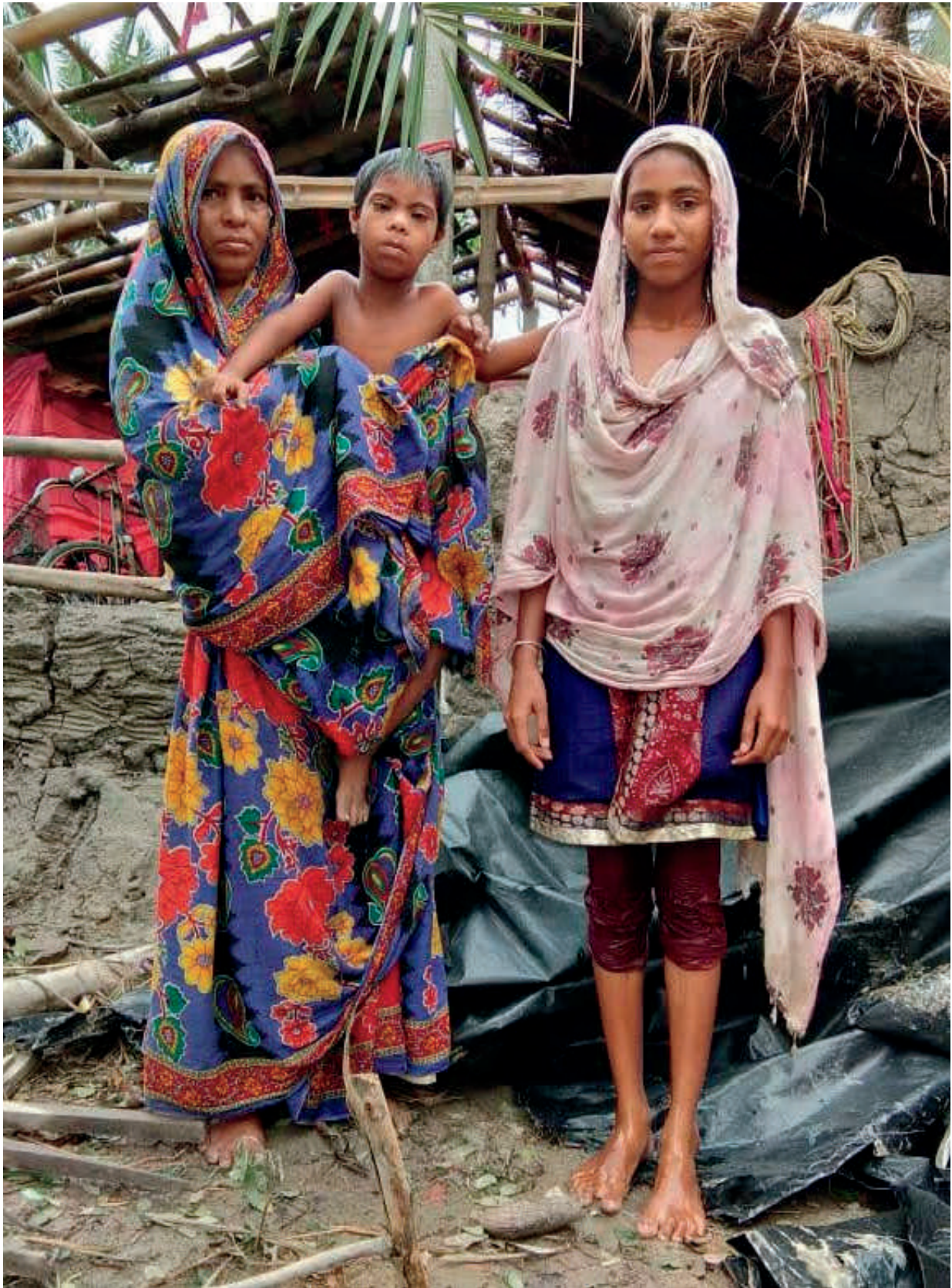
Cyclone Amphan, 2020

Hazards in India: A Profile

A Sketch of India's Vulnerable locations

PREVIEW >>>

INDIA REGIONAL DISASTER PROFILE

Depicts a pattern in occurance of a disaster in regional areas which are more vulnerable and are at risk

INDIA SEASONAL DISASTER PROFILE

Depicts seasonal occurence of disasters in various regions of India

INDIA DISTRICT AND POPULATION DISASTER VULNERABILITY

Presented population vulnerablilty profile of number of districts covering disasters like drought, floods, cyclones, heatwaves, extreme rainfall etc.

India is extremely susceptible to all forms of natural disasters, with the possible exception of volcanic eruptions, regarding which we cannot afford to be complacent. Due to distinct and widely changing meteorological, geographical, and geological factors, natural disasters occur with diverse intensities and in different places. Consequently, the occurrence of natural disasters in India has a major regional and seasonal component. This section of the unit will focus on the regional and seasonal incidence patterns of natural catastrophes in the country.

India Regional Disaster Profile

However, earthquakes stand apart from the others. While they do exhibit a geographical profile, with the Himalayan belt, Kutch, Sundarbans, and Andaman and Nicobar Islands being the most vulnerable and the peninsula being the least, earthquakes do not exhibit a seasonal profile due to the fact that this occurrence is unrelated to climate.

North India, which comprises the Himalayan highland region and the Indo-Gangetic plains, has a landscape that is immensely diverse, with some of the tallest mountains and permanent rivers.

Its northernmost boundary coincides with the collision zone of two major tectonic plates, the Indian plate and the Asian plate. There are numerous geological faults in the region. Additionally, North India is characterised by spells of hot, cold, and rainy weather, and these characteristics can change widely to produce uncommon conditions. The North Indian states (Jammu and Kashmir [J&K], Himachal Pradesh [HP], Punjab, Haryana, Uttaranchal, Delhi, Uttar Pradesh, and Bihar) experience natural disasters in the form of earthquakes, landslides, avalanches, floods, droughts, and heat and cold waves due to their distinctive geographical, climatic, and geological characteristics.

East and North East India (West Bengal, Sikkim, Assam, Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Tripura, and Mizoram) are susceptible to earthquakes, landslides, floods, and droughts due to their location and climate. Additionally, cyclones can affect West Bengal. The central regions of India (Orissa, Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, Gujarat,

Maharashtra, and Goa) feature a rainfall pattern that is very varied in time and location. Floods and droughts are therefore prominent natural disasters in the region. Cyclones wreak havoc in Orissa and Gujarat. Although Goa and Maharashtra are spared the wrath of cyclones, they are subjected to heavy to extremely severe rainfall as a result of the Western Ghats' terrain and the combined influence of depressions. This also causes landslides. Orissa has endured significant heat waves in recent years.

Peninsular India (Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala) suffers from cyclones, floods, and droughts primarily. In addition to floods and droughts, Kerala is also impacted by earthquakes and landslides. Andhra Pradesh's Telangana and Rayalaseema regions are severely rain-deficient and, as a result, frequently experience drought.

Among island groupings, the Andaman and Nicobar Islands are susceptible to earthquakes, high rainfall, and, on occasion, cyclones. The Andaman Islands are also home to two dormant volcanoes (Narcondam and Barren Island), one of which, the Barren Island Volcano, periodically exhibits some minor, short-term activity that has not proven to be dangerous.

Due to the fact that the Lakshadweep Islands are coral islands, they are barely a few centimetres above sea level. They could be endangered in the case of a large rise in sea level due to global warming.

If there is a major rise in sea level over the next few decades (uncertainty prevails), a significant portion of India's extensive coastline could be affected. Some of India's largest cities, such as Kolkata, Chennai, and Mumbai, are commercial centres. The experience of a tsunami in December 2004 has put the entire country's coastline (particularly the east coast) vulnerable to this rare but extremely catastrophic natural disaster.

India Seasonal Disaster Profile

From a climatic standpoint, India experiences the following four distinct seasons:

Winter season (December, January, and February); pre-monsoon or warm weather season (March, April, and May); monsoon season (June to September); and post-monsoon season (October to November) (October and November). Seasonally, the natural disasters that occur in various regions of India are noted. It should be noted, however, that earthquakes and tsunamis are not seasonal and can occur at any time.

- **Season of Winter (December, January, and February)**

During these months, the Himalayan ranges receive enormous amounts of rain and snow, and the weather phenomenon referred to as "western disturbances" also bring strong winds and sometimes severe rain. Consequently, the mountainous regions of northern India are susceptible to snow avalanches and landslides. In the wake of wet spells during this winter season, one or two cold waves are typically experienced. At times persisting for days, dense fog poses a hazard to aviation, while hail damages crops and orchards on the plains of North India.

- **Season of Pre-Monsoon or Hot Weather (March to May)**

Over the Bay of Bengal and the Arabian Sea, cyclones form and proceed west or northwest. Consequently, the eastern shore is more susceptible to cyclones and the resulting storm surges. The cyclones that form in the Arabian Sea migrate west or north-northwest, sparing the west coast, but posing a significant threat to oil exploration vessels in the Arabian Sea. If a cyclone makes a U-turn, it has a negative impact on Gujarat, brings heavy rains to Rajasthan, and sometimes causes flooding.

- Rainy Season (June to September)

In general, this is the flood season for the entire nation, and wherever the monsoon gets more active, flooding occurs. In contrast, regions where the monsoon stays weak are affected by dryness during this season. The mountainous regions of the Himalayas, from J&K to the northeastern states, are prone to landslides. This season also sees landslides in the Western Ghats and the hilly regions of Kerala.

- **After-Monsoon Period (October and November)**

This is another cyclone season, with cyclones forming in the Bay of Bengal and the Arabian Sea and moving in the same general direction as during the pre-monsoon season: west or northwest. In contrast, cyclonic activity is typically more intense in the post-monsoon season than in the pre-monsoon season. This is also the time of year when the southern states of Andhra Pradesh (coastal areas), Karnataka, Tamil Nadu, and Kerala receive heavy rainfall from the northeast monsoon and are hence susceptible to flooding.

**Sandeep Desai,** CEO, HM Patel Centre for Medical Care & Education

"Giving is deeply rooted in our history and grounded in the belief that we all exist for a much higher purpose. We are pleased that we could find Sewa International in times of difficulty for helping us do the right thing when we are dealing with the covid-19 pandemic. We acknowledge the timely process and look forward to working with them on more projects."

India District and Population Disaster Vulnerability Profile

Below is the district and population vulnerability profile based on Climate Hazards and Vulnerability Atlas of India (2020).
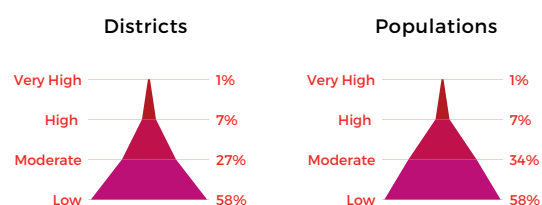
Drought:

93% of people and 87% of districts are moderately to extremely fragile (27 percent of districts and 32 percent of the population are highly vulnerable). Madhya Pradesh (19 districts are high to extremely high), Uttar Pradesh (15 districts), Gujarat (14 districts), and Karnataka (14 districts) are the most sensitive states.

Districts

Very High	4%
High	13%
Moderate	60%
Low	23%

Populations

Very High	4
High	7
Moderate	61
Low	28
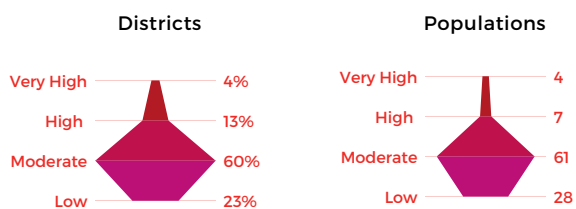
Thunderstorm:

With 42% of districts and 35% of the population moderately to extremely vulnerable (8% severely vulnerable). Assam and Jammu & Kashmir (12 districts each) are most vulnerable, followed by Tripura (8 districts).

Districts

Very High	1%
High	7%
Moderate	27%
Low	58%

Populations

Very High	1%
High	7%
Moderate	34%
Low	58%

Cold Wave:

36% of districts and 40% of the population are moderately to extremely vulnerable; 16% and 24% are seriously vulnerable. Cold waves are worst in Uttar Pradesh (75 districts).

Districts

Very High	7%
High	9%
Moderate	20%
Low	64%

Populations

Very High	9%
High	15%
Moderate	16%
Low	60%
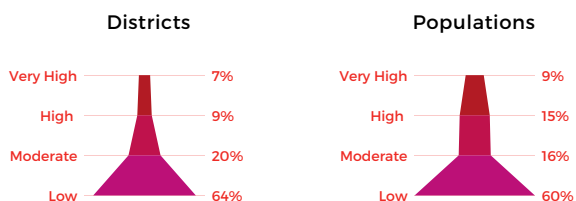
Floods:

30% of districts and 41% of the population are moderately to extremely sensitive to flooding, while 6% are severely vulnerable annually. Assam (23 high-to-extreme districts) is the most flood-prone state.

Districts

Very High	2%
High	4%
Moderate	24%
Low	70%

Populations

Very High	2%
High	4%
Moderate	35%
Low	59%
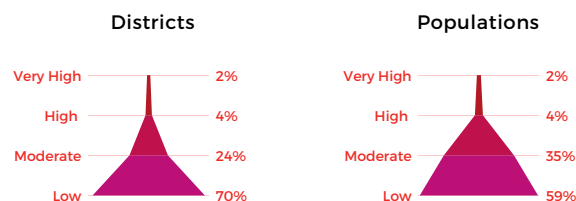
Dust Storm:

15% of districts and 19% of persons are moderately to extremely vulnerable to dust storms, while 2% are severely vulnerable. Uttar Pradesh (3 districts high to extremely high) and Assam are particularly susceptible to dust storms (2 districts are high to very high).

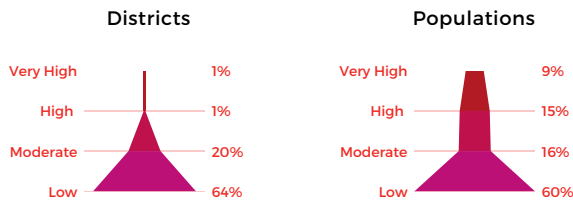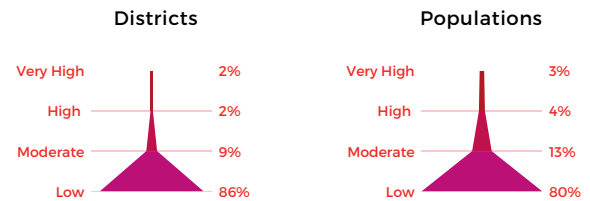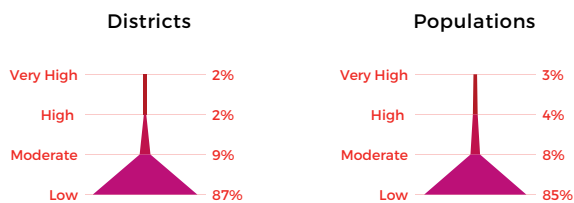| Districts		Populations	
Very High	1%	Very High	9%
High	1%	High	15%
Moderate	20%	Moderate	16%
Low	64%	Low	60%

Cyclone:

14% of districts and 20% of the population are moderately to extremely cyclone-sensitive, while 4% and 7% are severely vulnerable. Cyclones threaten 11 Tamil Nadu, 9 Andhra Pradesh, 6 Odisha, and 3 West Bengal coastal districts.
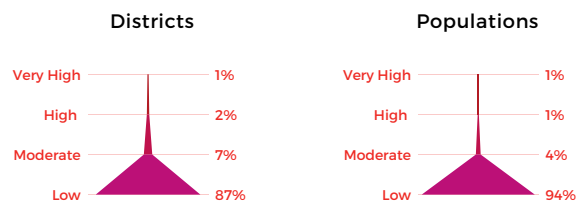
Districts		Populations	
Very High	2%	Very High	3%
High	2%	High	4%
Moderate	9%	Moderate	13%
Low	86%	Low	80%

Heat Wave:

Rajasthan (15 districts) and Andhra Pradesh (15 districts) are the most heat-wave-prone states (13 districts).

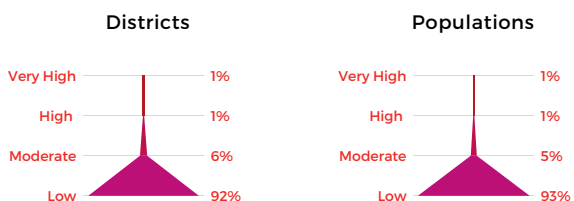| Districts		Populations	
Very High	2%	Very High	3%
High	2%	High	4%
Moderate	9%	Moderate	8%
Low	87%	Low	85%

Hail Storm:

10% of districts and 6% of the population are moderately to extremely vulnerable to hailstorms, while 3% and 2% are severely vulnerable. Hailstorms are worst in Uttarakhand (7 districts) and Jammu & Kashmir (5 districts).

Districts		Populations	
Very High	1%	Very High	1%
High	2%	High	1%
Moderate	7%	Moderate	4%
Low	87%	Low	94%

Fog:

8% of districts and 7% of the population annually, with 2% being particularly sensitive. In December, most Delhi districts and a few Uttar Pradesh districts are most at risk of fog; in January, most Delhi districts, many Uttar Pradesh and Tripura districts, and a few Haryana, West Bengal, and Manipur districts are at risk.

Districts		Populations	
Very High	1%	Very High	1%
High	1%	High	1%
Moderate	6%	Moderate	5%
Low	92%	Low	93%

Lightning:

It makes 6% of districts and 4% of the population moderately to extremely sensitive and 4% and 3% highly vulnerable annually. Odisha (20 districts) had the highest lightning susceptibility.

Districts		Populations	
Very High	2%	Very High	1%
High	2%	High	1%
Moderate	2%	Moderate	2%
Low	94%	Low	96%
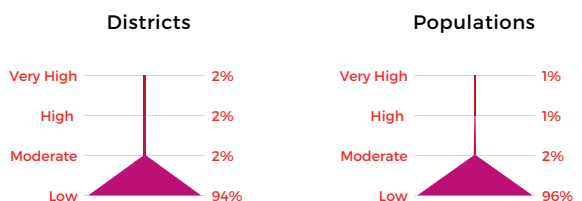
Snowfall:

5% of districts and 3% of the population are moderately to extremely vulnerable to snowfall (4% and 2% are highly vulnerable). Snowfall is very heavy in Jammu and Kashmir and Ladakh (19 districts) and Himachal Pradesh (8 districts)

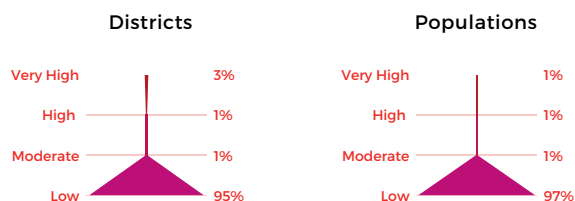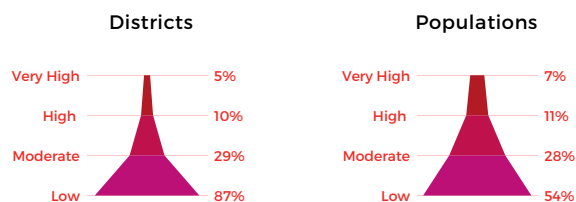| Districts		Populations	
Very High	3%	Very High	1%
High	1%	High	1%
Moderate	1%	Moderate	1%
Low	95%	Low	97%

Wind Hazard:

44% of districts and 46% of the population are moderately to severely vulnerable. Most coastal areas in Odisha, Andhra Pradesh, Tamil Nadu, and a few districts in Bihar, Jharkhand, Rajasthan, Gujarat, and the Northeastern states experience severe wind speeds over 55 metres per second (50 years return period extreme value).

Districts		Populations	
Very High	5%	Very High	7%
High	10%	High	11%
Moderate	29%	Moderate	28%
Low	87%	Low	54%

Extreme Rainfall:

46% of districts and 44% of the population are moderately to extremely vulnerable. Heavy rainfall events have a maximum likely frequency of over 20 days in all western coast districts, most Assam & Meghalaya districts, Tripura, Kerala, and a few districts in Bihar, Jharkhand, West Bengal, Karnataka, Odisha, Maharashtra, and Uttarakhand during the southwest monsoon season.

Districts		Populations	
Very High	2%	Very High	2%
High	8%	High	8%
Moderate	36%	Moderate	34%
Low	54%	Low	56%
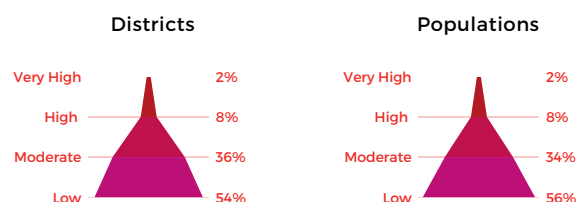
Ravi Arole,
Director of Operations CRHP, Jamkhed

"We are extremely grateful to Sewa International for their timely action, during covid-19 pandemic. We wholeheartedly appreciate the timely delivery of Oxygen Concentrators efficiently, on time and at the location instructed by us. We are looking forward to a very long association with Sewa International in the future too."

Catastrophic flooding that has forced individuals to abandon their homes.

"

With the help of technology, we can take measures in every situation- before the disaster, during the disaster, and after the disaster." - Hari Babu Srivastava, Director General (Technology Management)

—World Disasters Report, 2020

"

Several people have been compelled to leave their homes as a result of the devastation caused by the floods.

Disaster Management Act 2005 and Role of Non-Governmental Organisation

Understanding the law and its implementation

PREVIEW >>>

INSTITUTIONAL FRAMEWORKS IN INDIA

A number of laws and regulations enacted by the government as a prime agency to develop a institutional infrastructure for disaster management.

CONSTITUTIONAL MANDATE FOR NON-GOVERNMENTAL ORGANISATIONS

Provisions laid down in Disaster Management Act 2005 for the NGOs as an active stakeholder in providing support during and aftermath of disaster.

For a long time, India's unique geo-climatic characteristics have made the country particularly susceptible to natural calamities. Natural disasters such as floods, droughts, cyclones, earthquakes, and landslides occur often throughout India. Out of a total geographical area of 3,287,263 sq. km, about 60% is prone to earthquakes of varying intensities, over 40% is prone to floods, about 8% of the total area is prone to cyclones, and 68% is susceptible to droughts, as shown in the Vulnerability Atlas of India (Building Material and Technology Promotion Council, New Delhi, India).

In India, the institutional system for disaster management is in transition. Following the implementation of the National Disaster Management Act of 2005, the new structure is evolving while the former structure persists. Thus, the two structures currently coexist. The NDMA has been established at the national level, and the State Disaster Management Authority (SDMA) and district authorities are gradually being institutionalised at the state and local levels, respectively. In addition, the National Crisis Management Committee, which was established previously, also operates at the national level.

Institutional Frameworks in India

In India, the Government of India bears the primary duty regarding natural disasters. Article 74(1) of the Constitution of India stipulates that a Council of Ministers led by the Prime Minister should assist and advise the president on all major matters. The government has established its ministries, each of which is composed of subordinate departments, in order to deliver the growth process and alleviate problems. The ministries conduct the government's business. In spite of the fact that their number has risen from 18 in 1947 to 43 in 2003, India does not have a separate ministry for disaster management.

During the period of colonial administration, when periodic famines claimed a high number of lives, the beginnings of official organisations to cope with disasters emerged. In 1871, the British established the Department of Revenue, Agriculture, and Commerce. In 1881, on the advice of the Famine Commission, a separate Department of Agriculture was established. In 1947, the latter was promoted to the Ministry of Agriculture. In 1969, the Department of Agriculture assumed responsibility for assessing crop damage and animal losses caused by natural disasters, while the Department of Agriculture took on coordination of relief efforts for drought, scarcity, and famine. In 1974, the Department of Agriculture assumed responsibility for situations involving loss of human life and relief for drought, shortages, or famine, which had previously been the responsibility of the Department of Food. The activities associated with Indian Peoples' Famine Trust was added to the Department of Agriculture in 1975. Thus, by the mid-1970s, the Department of Agriculture had become the central body responsible for flood and drought issues (Andrews, 1935; CBSE, 2003; Chatterjee, 2000; Gupta, 2001; Gupta et. al., 2001; Kapur, 2009; Kapur et. al, 2005).

Initially, attention was focused solely on drought and floods, as they were viewed as recurring occurrences with a direct influence on agriculture, whereas earthquakes and cyclones are random phenomena. These were to be handled with "when they occurred." Other calamities were handled in a piecemeal fashion, with the Ministry of Railways responsible for rail disasters and the Ministry of Civil Aviation for aviation disasters. There was a Ministry of Environment and Forests for chemical disasters and a Ministry of Health for biological catastrophes. Only the Ministry of Atomic Energy was accountable for nuclear accidents. But fragmentation does not end here. The Ministry of Defence, the Ministry of Health, and the Ministry of Civil Supplies, among a dozen others, was forced into action when the number of fatalities and damages was large. By the time ministries organised their services, many persons have already passed away unnoticed. Thus, disasters receive a flexible and ad hoc bureaucratic treatment. This was also obvious in the planning corridors. If all growth plans were founded on strong concepts of sustainability and equality, the likelihood of such frequent and massive tragedies would have been significantly

reduced. Disasters are not merely symptoms, but rather the result of the inability to achieve development in accordance with planned objectives. The Planning Commission of India did not devote much time to addressing the subject of catastrophe prevention and management (D'souza,2002; Kapur et. al, 2005; TCPO, 2001; MoA, 1990, 1992, 2001a, 2001b, 2004; MoR, 2003; MoRD, 1994).

Paradigm Shift

In India, disaster management has undergone a paradigm shift over the past decades, shifting from post-disaster relief and rehabilitation to pre-disaster preparedness, mitigation, and risk reduction. The 10th Five Year Plan document emphasises that "while hazards, both natural and man-made, are inevitable, the disasters that follow need not be, and society can be prepared to deal with them effectively whenever they occur" and calls for a "multi-pronged strategy for total risk management, comprising prevention, preparedness, response, and recovery, on the one hand, and for initiating development efforts aimed at risk reduction and mitigation, on the other." It is argued that only then can "sustainable development" be anticipated. As stated in the Hyogo Framework of Action 2005–15: Building the Resilience of Nations and Communities to Disasters, the nation is likewise committed to integrating DRR into the development planning process at all levels for sustainable development.

In recent years, both the intensity and frequency of natural disasters had increased. The 2004 tsunami, widespread flooding, and the earthquake in Jammu and Kashmir had raised the subject of disaster management in India. The nation demanded a development-focused, long-term approach to disaster risk management. Until recently, the emphasis was on disaster assistance and recovery. Nevertheless, the current understanding places greater focus on mitigation and vulnerability reduction, and it had become imperative to create a balance between mitigation and disaster management. Numerous fatalities and extensive property damage had prompted the government and civic society to contemplate the question, 'Are

we adequately prepared to combat such emergency situations?'. In such a situation, the Indian government made a commendable attempt. During the winter session, the legislature passed The Disaster Management Act of 2005. The purpose of this article was to hone in on the specifics of the act and evaluate its efficacy in addressing the difficulties of disasters and ancillary consequences (Subhradipta and Sarma, 2006).
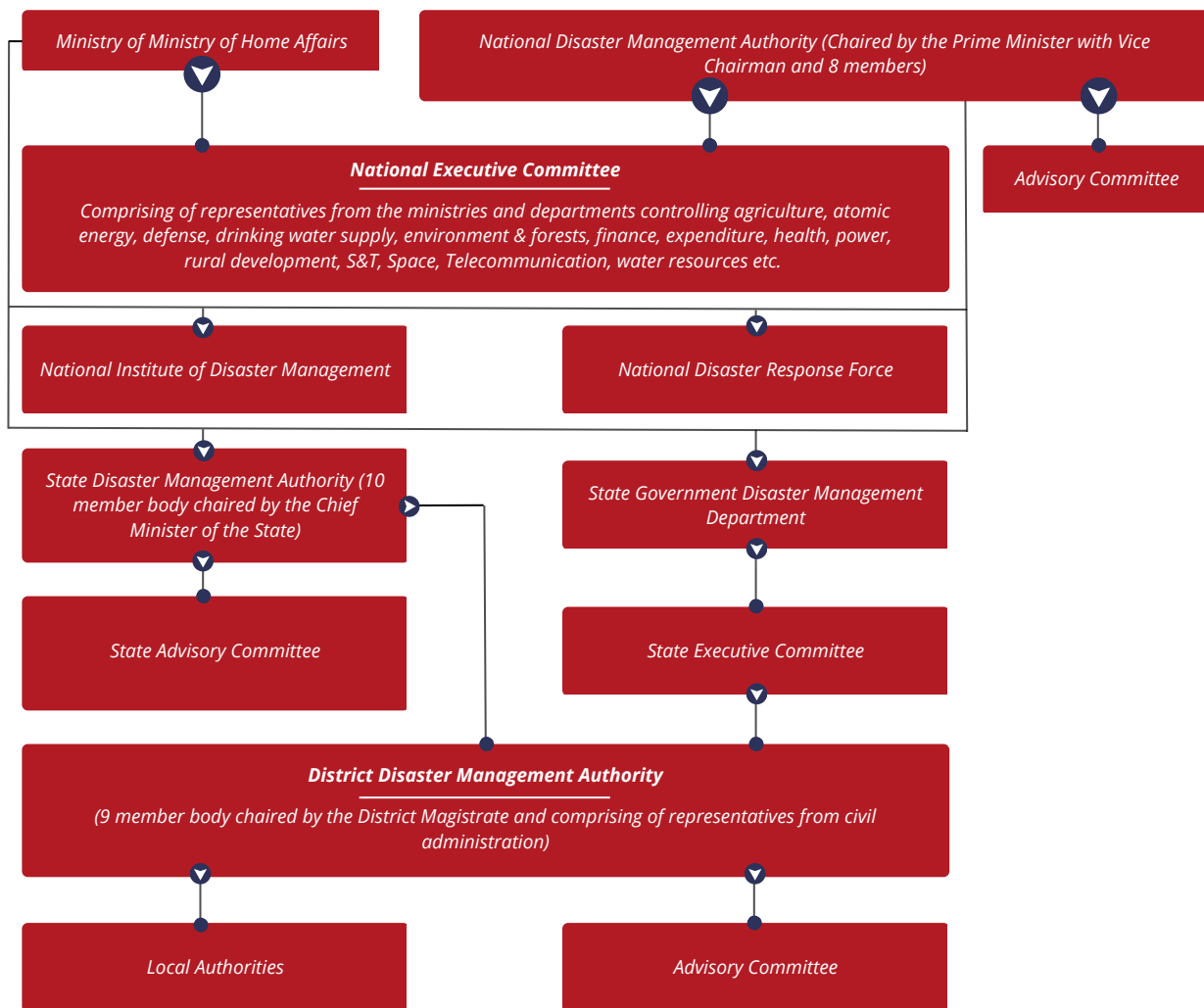
Disaster Management Act 2005

This Act provides for the appropriate handling of disasters, as well as related and incidental problems. It provides institutional tools for drafting and monitoring disaster management implementation. The Act also requires that the various branches of government take measures for the avoidance and mitigation of disasters, as well as for rapid reaction to any disaster crisis.

The Act stipulates the establishment of a National Disaster Management Authority (NDMA) under the leadership of the prime minister, State Disaster Management Authorities (SDMA) under the leadership of the chief ministers, and District Disaster Management Authorities (DDMAs) under the leadership of collectors/district magistrates/deputy commissioners. The Act also stipulates the formation of various executive committees at the national and state levels. The National Institute of Disaster Management (NIDM) for capacity-building and the National Disaster Response Force (NDRF) for response have been established under its auspices. It also requires the relevant ministries and agencies to develop their own plans consistent with the national plan. The Act also provides provisions for disaster management-related financial structures, such as the creation of response funds, the National Disaster Mitigation Fund, and comparable funds at the state and district levels. The Act also provides municipal governments with specific disaster management responsibilities.

Moreover, with the adoption of the 73rd and 74th amendments to the Constitution and the rise of rural and urban local self-government as essential levels of government, the function of local authorities has become increasingly significant. The Disaster Management Act of 2005 also stipulates particular tasks for municipal governments in disaster management.

Institutional Framework for Disaster Management in India

Ministry of Ministry of Home Affairs

National Disaster Management Authority (Chaired by the Prime Minister with Vice Chairman and 8 members)

Advisory Committee

National Executive Committee

Comprising of representatives from the ministries and departments controlling agriculture, atomic energy, defense, drinking water supply, environment & forests, finance, expenditure, health, power, rural development, S&T, Space, Telecommunication, water resources etc.

National Institute of Disaster Management

National Disaster Response Force

State Disaster Management Authority (10 member body chaired by the Chief Minister of the State)

State Government Disaster Management Department

State Advisory Committee

State Executive Committee

District Disaster Management Authority

(9 member body chaired by the District Magistrate and comprising of representatives from civil administration)

Local Authorities

Advisory Committee

Based on DM Act 2005

Disaster Management Authority (NDMA)

In accordance with Section-3(1) of the Disaster Management Act, 2005, the NDMA was formally created on September 27, 2006, with the prime minister as its chairperson and nine additional members, including one vice-chairperson. The NDMA is responsible for setting disaster management policies and guidelines for the government of India and state governments. It must also set criteria for state officials to follow when building up state plans and managing disasters.

National Executive Committee

A National Executive Committee (NEC) is formed under Section 8 of the Disaster Management Act, 2005, to help the national authority accomplish its duties. The NEC is chaired ex-officio by the home secretary and includes secretaries from agriculture, atomic energy, defence, drinking water supply, environment and forest, finance (expenditures), health, power, rural development science and technology, space, telecommunication, urban development, and water resources. Ex-officio, the chief of integrated defence staff is a member.

When needed, NEC may form subcommittees to carry out its duties. NEC is responsible for coordinating and monitoring disaster management, preparing a national strategy, and monitoring policy execution as per Section 10 of the Disaster Management Act.

State Disaster Management Authority (SDMA)

The 2005 Disaster Management Act creates SDMAs and DDMAs in all states and UTs. All states and UTs have formed SDMAs under the 2005 Disaster Management Act, except Gujarat and Daman & Diu. Gujarat's SDMA was formed under the 2003 Gujarat State Disaster Management Act. Daman and Diu also had an SDMA before the 2005 law.

State Executive Committee

Section 20 of the Act establishes State Executive Committees (SEC), to be headed by the state's chief secretary and four other secretaries. Section 22 of the Act requires it to coordinate and supervise the national policy, national plan, and state plan.

District Disaster Management Authority (DDMA)

Section 25 of the 2005 Disaster Management Act creates a DDMA for each state district. In tribal territories, the chief executive member of the District Council of Autonomous District is co-chairperson. In districts with Zila Parishads, their chairperson is DDMA co-chair. This power includes the district's CEO, police chief, chief medical officer, and two state-designated district officials.

The district authority plans, coordinates, and implements disaster management and takes guidelines-mandated steps. The district authority can inspect any construction in the district to enforce safety requirements, as well as coordinate relief measures and respond to disasters.

National Institute of Disaster Management

A national centre for disaster management was created at the Indian Institute for Public Administration (IIPA) in 1995. On Oct. 16, 2003, the facility became NIDM. The 2005 Disaster Management Act made it a formal organisation. Section 42 of Chapter VII of the Disaster Management Act, 2005, entrusts the institute with numerous responsibilities, including developing training modules, conducting research and documentation in disaster management, organising training programmes, organising study courses, conferences, lectures, and seminars to promote and institutionalise disaster management, and publishing journals, research papers, and books. The Institute includes four academic divisions: geohazard, hydromet hazard, policy planning, and response.

National Disaster Response Force

NDRF was formed under Section 44 of the Disaster Management Act, 2005 by upgrading/converting eight standard battalions of the Central paramilitary forces (two battalions each from the BSF, ITBP, CISF, and CRPF) to build them up as a specialist force to respond to disaster or disaster-like situations.

NDRF has 12 battalions, three from BSF, CRPF, CISF, ITBP, and SSB. Each battalion includes 18 self-contained SAR teams with 45 engineers, technicians, electricians, dog squads, and medical/paramedics. Battalions have 1,149 soldiers. All 12 battalions are prepared for natural and man-made disasters. Battalions are trained for CBRN emergencies.

State Disaster Response Force (SDRF)

A MOHA letter dated July 26, 2007, and March 8, 2011, recommended states/UTs to put up their own disaster response force like the NDRF. The government helps train trainers. State governments have been urged to use 10% of their State Disaster Response Fund (SDRF) and Capacity Building Grant on SAR equipment and response force training.

Within the context of this organisational configuration, the NDMA serves as the authority responsible for the formation of policies and guidelines for all disaster management activity carried out within the country. The authorities of the state further establish the rules for the departments of the state and the districts that fall under the jurisdiction of their respective agencies. In a similar fashion, district authorities are in charge of directing the civil administration, departments, and local authorities such as municipalities, police agencies, and the civil administration. The authorities have entrusted the State Executive Committees (SECs) with the responsibility of carrying out the responsibilities that they have envisioned.

Rt Hon. Theresa May, former prime minister of the UK

"I would like to thank everybody who volunteered. I think we have seen fantastic community across the country during this period and of course, it's continuing. Thank you, Sewa for everything that you have done and for providing help and support. Thank you to all the volunteers across the country."

National Disaster Management Institutional Mechanism
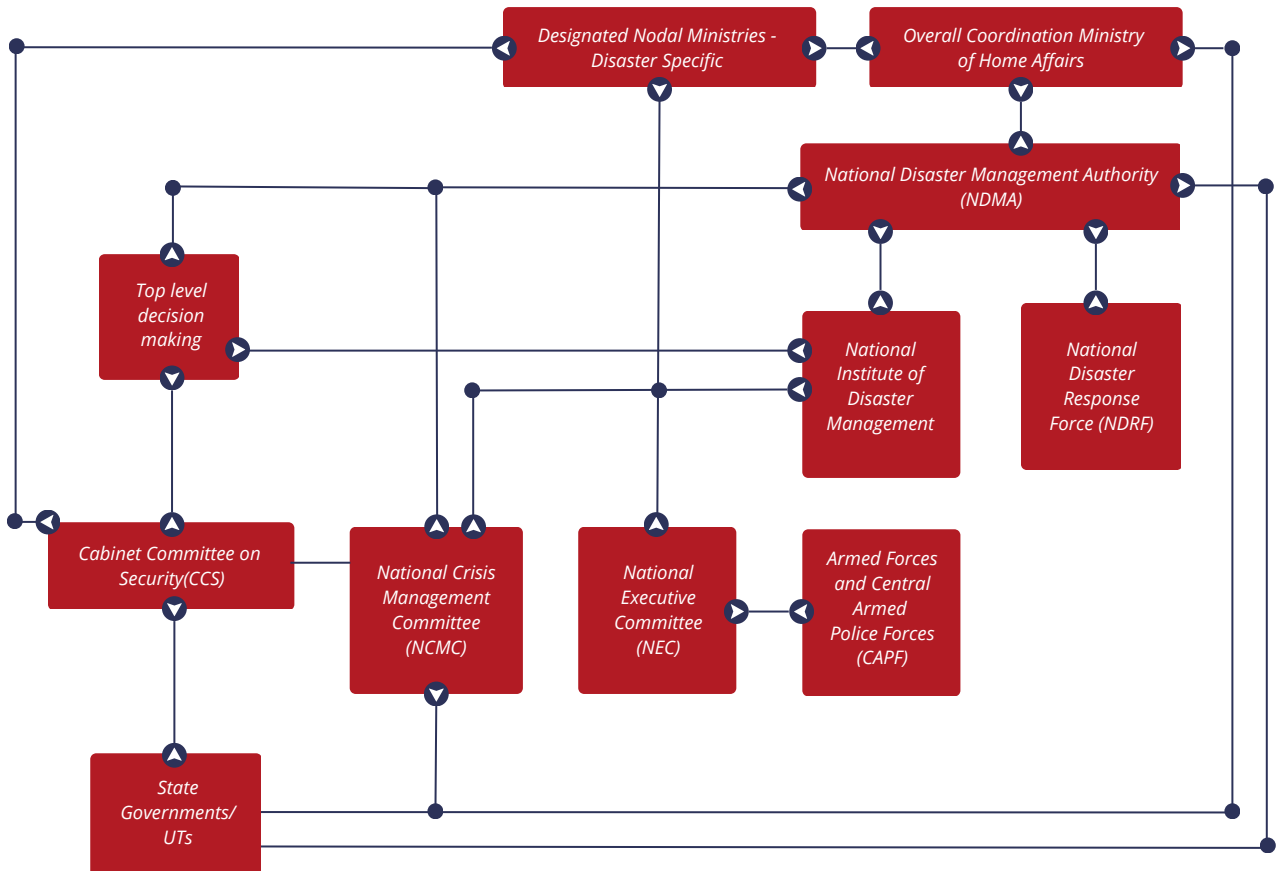
Source: *First Responder Workshop organised by Rashtriya Sewa Bharati in Mumbai 1-2nd October, 2022*

Constitutional Mandate for Non-Governmental Organisations

The NGO is required by Section 24(i) and Section 34(1) of the Disaster Management Act of 2005 to act in an equitable and non-discriminatory manner for the purpose of assisting or protecting the disaster affected community or for the purpose of providing relief to the affected communities or while dealing with any effects of threatening disaster under the command, monitoring, and guidance of the State Executive Committee and the DDMA respectively. This is for the purpose of assisting or protecting the disaster-affected community or providing relief to the affected communities. The coordination of action with non-governmental organizations as defined by Sections 35 and 38 of the DM Act of 2005

Focus Areas for Non-Governmental Organisations

The Disaster Management Act of 2005 and the many inputs gathered from our ground partners, volunteers, and community leaders were used to identify possible priority regions for non-profit organisations. These inputs helped identify possible priority areas.

- Mobilisation of communities that are vulnerable to hazards and/are affected by natural disasters for the purpose of disaster risk reduction.
- Creating ties between the corporate sector and the civil society for the purpose of lowering the likelihood of the occurrence of natural catastrophes.
- Informing the general populace on the threats they are exposed to and the degree to which they are susceptible to harm.
- Increasing the capacity of stakeholder groups to better respond to emergencies, prevent and mitigate the effects of natural disasters, and be prepared for them through the development of their individual skills.
- Finding solutions to the mounting problems that are being caused by the effects of climate change.
- Putting into action innovative tactics that are developed from models that have been successfully put into action in other countries
- Sourcing financial resources from multilateral and bilateral donors with the intention of putting into practise both tried-and-true methods (also known as conventional practises) and forward-thinking strategies for mitigating the effects of catastrophe risk and vulnerability. This will be performed by efficiently integrating and merging the many different government programmes, schemes, and initiatives to provide the required synergy in altering the lives of communities that are vulnerable. This will be done to ensure that this objective is met.

Gender, Risk, and the Non-Governmental Organisations' (NGOs) Role their own and their dependents' lives.

Natural disasters pose a threat to and affect everyone in their vicinity, but those who are already socioeconomically and physically disadvantaged by age (the elderly, infants and children), condition (the disabled, ailing, pregnant or lactating women) and gender are disproportionately affected (Mehta, 2007). This latter category usually includes women and girls. Context and culture can affect outcomes, and men may have greater mortality and morbidity rates (Bradshaw, 2004; Twigg, 2004). Evidence shows that gender relations place women in socially, economically, and politically marginalised positions vis-à-vis men, which limits people's ability to foresee, prepare for, survive, cope with, and recover from disasters. Being a boy, man, girl, or woman often determines whether a person is murdered or survives and, if surviving, what kind of treatment and rehabilitation they receive (Enarson, 2001a, 2001b; IFRC, 2005, 2006; Yoner et al., 2005).

While gender is not always the primary measure of vulnerability, it tends to cross-cut other dimensions of it. For example: (a) infants and the very young are dependent on carers who are

typically women; thus, the precarious situation of mothers has far-reaching and often deadly consequences on their children; (b) in many parts of South Asia, girl children have less access to food, education, and medical attention than their brothers and carry a latent stigma.

Despite the sociocultural diversity in Hindu Kush Himalayas, women have limited access to productive resources and decision-making processes. Asymmetrical access to resources at the home level manifests in poor health, nutrition, literacy, and morbidity/mortality rates relative to males (Gurung, 1999). In certain cultural contexts, widows, female heads of homes, the crippled, girl orphans, and others who don't match conventional ideals of women can be without proper social support; in times of crisis, this can lead to social isolation, destitution, and even death. Culture and religion may impede women's movement and ability to independently participate in decision making around topics that address their needs. In catastrophes, women's limited agency can hinder them from saving their own and their dependents' lives.

Local cultural norms alone don't cause women's vulnerability. Official assumptions, prejudices, biases, and ignorance cause post-disaster discrimination and exploitation of women. Lessons from the field have shown that women's specific health and sanitary needs are not addressed in disaster response efforts (Byrne and Baden, 1997; Chew and Ramdas, 2005; WHO, 2002): their rights as individuals are overlooked, their leadership roles and knowledge are not adequately recognised, and their pressing needs for personal security are ignored (Enarson, 2006; IFRC, 2006).

One example of these difficulties arose in Kashmir earthquake 2005. Many women have limited autonomous access to health care due to a lack of gender-sensitive facilities and personnel in a sociocultural milieu where it is unacceptable for male health practitioners to treat women. Limited mobility made it difficult for widows, single women, and women heads of households to get to relief camps outside their local areas or to deal with male relief workers. Women felt uneasy living in tents that did not provide appropriate protection and were often far from latrines (IUCN, 2006).

Developing Community Resilience

Unique and diverse natural dangers in Hindu Kush Himalayas harm millions of people each year. As a result, communities have had to adapt to seasonal (and often daily) dangers of disasters. The difficulty of being shut off from the outside world for weeks or months is part of living in the mountains (Dekens, 2007a). This fact is very much in evidence as the 2009 monsoon season wreaks havoc throughout South Asia, with mountain areas already suffering a severe toll in lives lost, people displaced, and homes damaged or washed down precarious slopes.

The media underreports the destruction of roads, livestock herds, century-old orchards, and other rural livelihoods. Either the obvious losses are not thought to be significant enough, torrential downpours destroy embankments and block access for the media, or these losses are accepted as inevitable as part of the annual monsoon season, minimising the harm. Rescue and relief efforts are challenging due to the intensity and impact of the majority of mountain natural catastrophes as well as their accessibility issues. Omissions result from a lack of understanding of gender and other factors that contribute to social exclusion. How can we assist?

Strategies that promote and strengthen women's hazard reduction and disaster response capabilities recognise that females, along with men, are crucial social actors in building hazard-resilient communities. In collaboration with civil society organisations, as members of formal and informal groups, local communities and women are 'first responders,' often at the forefront of disaster risk actions (Enarson, 2001b; IFRC, 2004; Twigg, 2004; Yoner et al,. 2005). This is crucial when local and national disaster response efforts are inadequate.

Community-based organisations across the region are coming up with novel approaches to the problem of social exclusion in order to make a positive contribution to the resilience of local populations in the face of potential dangers. The following examples demonstrate how useful it is to provide adults and children with the necessary information and skills so that they can strengthen their individual and household capacity to meet the challenges that emerge in times of crisis, be more resilient in the face of recurring hazards, and possibly even help to ensure that a hazard does not necessarily need to turn into a disaster.

Good Practices Models

Through activities such as classroom discussions, evacuation drills, and workshops on disaster preparedness and mitigation, Sewa International has launched a number of local project initiatives across the state of Uttarakhand with the goal of bolstering the resilience of local residents of all ages and sexes. These initiatives are part of Sewa International's larger mission to improve the lives of people in developing countries. The efforts are focused on attaining a stronger gender balance among both adults and children. This is something that is especially crucial in this socially conservative community, where women are not encouraged to take on public positions.

Because many women struggle with "time poverty," staging shorter demonstrations just for them in their home villages has helped boost the number of women who attend training. This was done through formulated self-help groups of women formed in different villages of the state. This is especially helpful because of the gender disparity in the availability of time. When they are around individuals they know and trust, women are more likely to contribute to the conversation by speaking up, asking questions, and taking part in conversations. Women have been given more freedom to attend the stalls that are particularly interesting to them and to

participate in skills training courses as a result of the provision of childcare and stalls for children at community training events. This has helped to increase the number of women who attend these events. The procedures of school contingency planning, dialogues, and competitions have provided evidence that fundamental techniques to resolving gender issues that do not involve confrontation can be helpful. This has been proved as a result of the evidence that has been presented. "Kishori samhoos" is a programme that requires female students to take on leadership roles and participate actively in campus and community life. As a result, many teenage females are now "coming out of their shells," something that was previously impossible for them to do.

One woman stated that many women held the idea that only men were capable of carrying out the prestigious and difficult position of first responders prior to enrolling in the training in response to the issue of why the first aid classes were so popular (among persons of both sexes). Women, children, and other traditionally socially excluded groups, who are underrepresented or ignored in regular programmes, participated at a high rate during evacuation drills that were geared toward including them. These populations have typically been socially marginalised. Both men and women who took part in the feedback sessions learned how they may increase their level of threat readiness by becoming more coordinated and organised.

Women's organisations (mahila mandal dals) also mobilised their members to assist during the Tapovan cloudburst disaster, when rain fell relentlessly from early evening till late at night. Around 900 women from nearby communities participated in the rescue and relief activities, helping to clear away the mud, collect the bodies, and offer counselling to the most badly affected families. One such group, from an especially hard-hit area, immediately put to work rebuilding village paths, and they laboured for more than two days to create temporary footpaths.

Sachin Chaturvedi, Director General RIS

"I was very impressed in terms of the work that was being done and undertaken. I recognised the humility and major role that was being played by everyone in their context."

Tony Blair, Former Prime Minister of Britain, while delivering his lecture on 'Faith and Globalisation' during The Cardinal's Lectures 2008, Westminster Cathedral, London, on 3rd April 2008.

"We can think of the great humanitarian enterprises which bring relief to those who are suffering - the Red Cross, the Red Crescent or Islamic Relief, CAFOD and Christian Aid, Hindu Aid and Sewa International, World Jewish Relief and Khalsa Aid - all the charities which draw inspiration from the teachings of the different faiths."

Probable Challenges Based on Past Experiences

Disasters are like magnifying glasses that reveal a society's social fault lines, highlighting those with and without the resources and talents to minimise their vulnerabilities and protect themselves (Schwoebel and Menon 2004).

First, disaster risk reduction work that considers the needs and energies of both women and men helps guarantee human and material resources are used as efficiently as feasible. This is crucial in conservative areas. Second, effective involvement requires engaging with local entities (such as village councils, schools, and other institutions) and constructing a community-centered strategy that includes everyone, especially the socially excluded. Third, tradition and culture are not immutable: Some of the most successful disaster preparedness and management work has been done because people were willing to envisage new partnerships and have the confidence to see how they may benefit everyone.

Due to a lack of communication among Disaster Prevention and Mitigation (DP/M) practitioners, individual incidents are often unknown to those who create disaster risk reduction programmes. Insufficient collaboration with government and other authorities leads to one-sided perpective towards measures and tools. Civil society must leverage local energy and expertise to help people survive disasters, prevent risk, and unite DP/M stakeholders. Our practitioners must start thinking outside the boxes that have informed the field: first, that in times of crisis social and cultural vulnerabilities are ill-affordable luxuries; and second, that technical responses must be prioritised over those that combine technologies with social inputs. Mitigation is a social process, not a technical achievement (Fordham 2000).

There are two more difficulties. Class, caste, race, religion, and other social identifiers impact people's abilities, wants, and interests. Second, intrahousehold dynamics alter how sociocultural issues organise resources and life-saving decisions. Civil society must recognise that participative approaches undercut these and include them in projects. Local knowledge and community skills must be recognised in vulnerability assessments (Dekens 2007a, 2007b). Regional and national governments may eventually contribute financial and other aid to afflicted communities, but the most immediate and effective aid comes from inside the community, frequently from women and men who know community people and their needs. NGOs must play key roles here.

Development requires time. The challenge is to scale up best practises and disseminate them to other institutional actors, and to promote ongoing dialogues across different groups, focusing on bringing government and field personnel together to ensure that local-level initiatives and learning experiences find meaningful expression in DP/M policies and actions. Developing novel, adaptive strategies to involve socially marginalised women and men in training programmes and enhance local catastrophe resilience is also vital.

Sh. Nilesh Solanki, Founder, PricewaterhouseCoopers (PwC) Hindu Network
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"Volunteers provided ground intel and supported the transport of Indian students and refugees across the border. Sewa provided 4 key things to the volunteers. Strategy, Logistics, Coordination and collaboration."

A limited and insufficient window of opportunity exists for relief work to be carried out, which is another frequent difficulty. Absence of response in disaster-stricken areas that are geographically remote and difficult to access is another hurdle. It is both natural and tempting to want to get to the epicentre of the disaster as quickly as possible, however, this should be done with coordination of government bodies with caution but swiftly. Inadequate adherence to humanitarian ideals and established best practises in times of crisis. A lack of acceptable levels of transparency and accountability toward the communities and people who have been impacted by the disaster. During the transition in the rehabilitation projects, there is not a well outlined plan for a defined exit strategy. It is necessary to make a more public push for "Build back better" and to ensure that any new development does not cause disaster or make the severity of an existing disaster worse.

Future Course of Action

There are many ways the non-governmental and commercial sectors can help in disaster recovery.

The private sector supports disaster recovery in a number of ways, including by partnering with the public sector to create public-private partnerships, driving innovation and promoting technology use, assisting smaller communities in managing funding influxes, and enhancing federal disbursement procedures. These are crucial because they can improve the effectiveness and efficiency of disaster management. The strategy objective of disaster management organisations may change as a result of partnerships between private actors and public-sector partners and recipients. These can lessen the pressure on the government to deliver certain services and goods right once, allowing the public sector to concentrate on other crucial strategic priorities over time. For-profit companies can offer crucial models that inform the creation of public sector

programmes. Flexible finance methods must be created and implemented with the help of the private sector. It is essential for continuing resilience development as well.

However, when it comes to finance, the private sector has difficulties. The availability of information, monitoring the time and flow of funds, and fundamental issues with the kind of financial support that can be given, notably by businesses, are the causes of these difficulties. NGOs can play a crucial area here, by providing the platform for these information and resource engagement as well as deployment.

Therefore, it is essential to ascertain the full scope of the private sector's contributions to disaster recovery. Analyses of disaster recovery in the private and public sectors should be expanded to include comparisons of the benefits of private sector involvement and evaluations of coordination. Considering programmes that improve resilience that are supported by private sector entities, particularly companies.

Manoj Madhavan, Managing Director, Boston Scientific in India.

"We at Boston Scientific are privileged to partner with Project Niramayah in India, where we got an opportunity to contribute to a noble cause and serve the community. We hope to continue our association and stand with SEWA International in their mission to serve humanity in need."
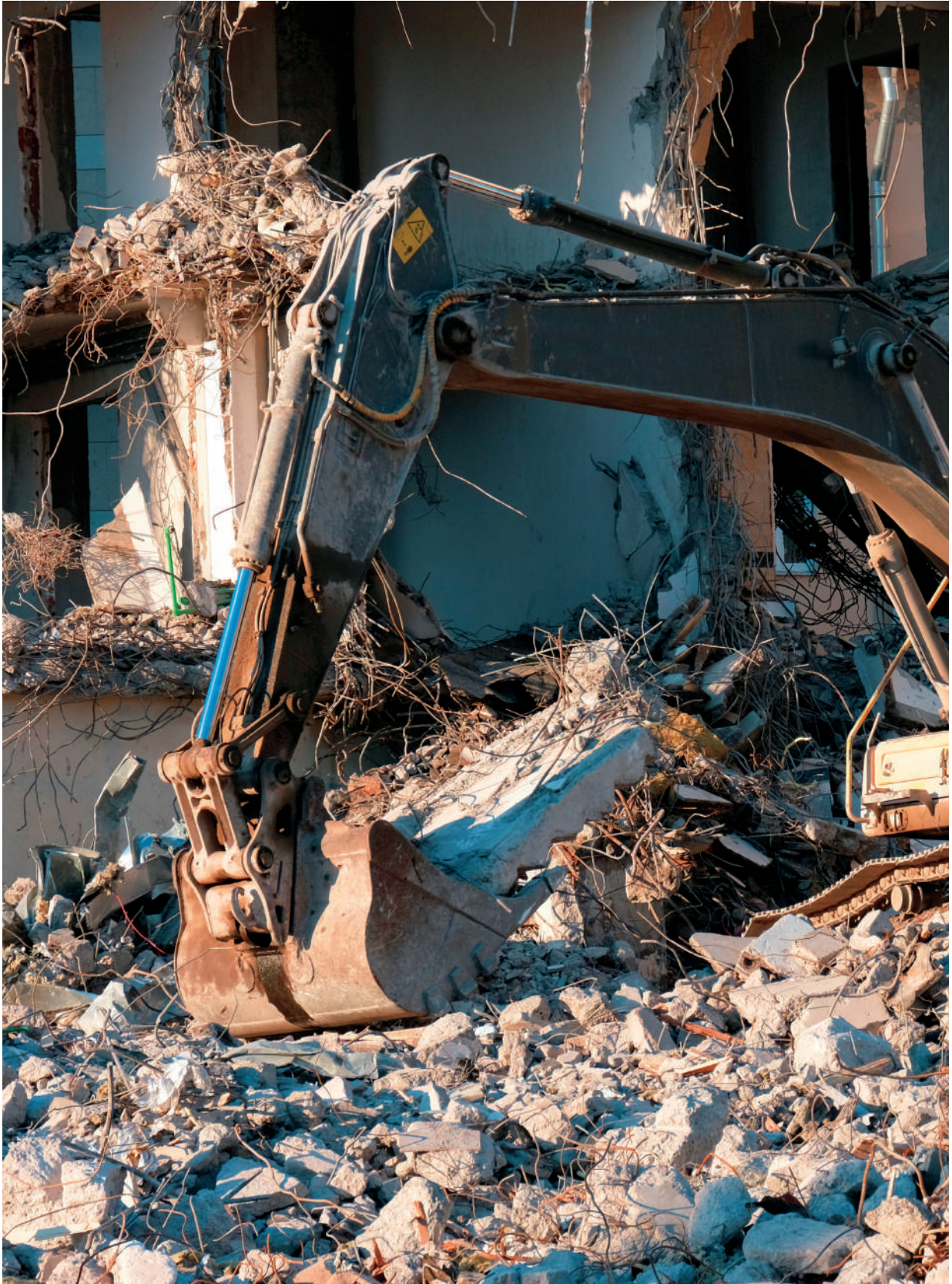
2019 flooding in Karnataka. Houses ruined by floodwaters

" Cooperation and coordination with civic agencies and state authorities are very important during disasters. **"**

–Narendra Bundela, Inspector General, NDRF

Devastation brought on by an earthquake.

Response to Responsibility

PREVIEW >>>

CORE CHALLENGE: COORDINATION

Some of the most difficult aspects of dealing with a disaster are the horizontal and vertical coordination required.

LOOKING FOR THE FUTURE: FINANCING

The availability of resources, especially financial ones, during and after disasters is vital for mitigating risk and restoring normalcy.

SEWA INTERNATIONAL: PLATFORM FOR BRAIN CIRCULATION

Responding to the situation of crisis Sewa International over the last 25 years greatly acted with utmost dedication with the ethos of sense of service and selflessness. With its significant number of experience in this field it establish itself as a platform which innovative new practises and ideate with existing practises for better disaster preparedness

NGOs are made up of a variety of organisations and affiliations, including international organisations, civil society organisations, PVOs, community-based organisations, faith-based organisations, private charities, and private foundations. Their effect could range from being local in some countries to having a strong national presence to having a big global impact. These organisations' scope and method of operation are also highly diverse, ranging from those that concentrate on more specialised subjects to those that provide more general humanitarian relief (such healthcare or trauma counselling for catastrophe victims). Funding for these organisations comes equally from public fundraising initiatives, private foundations, donor nations, and UN organisations. These organisations actively engage in lobbying and advocacy efforts and significantly influence the organisation of international humanitarian financing.

The size and scope of natural and technological disasters have changed, which has affected how they are managed and funded as well as the specific roles of non-governmental organisations and private-sector businesses. Businesses and nonprofit organisations take on an increasing amount of responsibility in the process, contributing vital funds for reconstruction that promotes community recovery as well as vital support in disaster relief efforts. Despite the fact that the private sector is now anticipated to play a large role in promoting community resilience, there are still no set standards or timelines for when and how these businesses should contribute to disaster recovery and reconstruction.

The international relief funding system is voluntary, does not have a set of legally binding, standard norms and laws, and is not governed by any one specific body. This has several advantages, including greater flexibility, quicker answers, and less bureaucracy, but it also has drawbacks, including a lack of accountability mechanisms, disorganised response strategies, and subpar funding. The mechanism for paying international humanitarian relief has significantly improved over time, in part because of the lobbying and advocacy work done by civil society organisations and the rising knowledge of significant actors.

However, there are still important problems and challenges.

The focus on short-term gains rather than long-term issues and the root causes of vulnerability and risk has been one of the major weaknesses and criticisms of humanitarian funding. Many people believe that donors and humanitarian actors should use short-term funds to mobilise resources and strategies that help address the root causes of catastrophes, such as poverty, conflict, inequality, and bad governance. Additionally, resources for long-term development is just as important as providing emergency humanitarian relief in order to save lives. As long as there is no temporal lag between humanitarian funding and development assistance, the advantages of humanitarian intervention, such as boosting local capacities and repairing infrastructure, may be sustained and developed, benefiting local populations over time.

Core Challenge: Coordination

The source of failure in disaster management is coordination; therefore, the significance of it in disaster management has been felt pointedly in the recent analysis, be it a natural disaster or man-made disaster, and particularly its ever-rising effects have been observed in disaster-prone countries in the world (Begum & Momen, 2019). The COVID-19 pandemic public health disaster has been the largest crisis felt by the nation and the world at large, where the "coordination," both horizontally and vertically, was truly put to test.

The integration of efforts to direct the response process and ensure that the vulnerable population is protected from the threat is referred to as coordination. While vertical or intra-organizational coordination occurs within the organisation between the sub-units and personnel, interorganizational coordination deals with managing the activities of several organisations that can be situated on the same line, or horizontally. Numerous empirical studies have

been conducted on the planning and execution of groundwork from an internal organisational perspective (Mintzberg, 1988; Christensen & Laegreid, 2008; Begum & Momen, 2019). According to the extant research, cooperation between public and private organisations at the local, national, and even international levels has emerged as the major difficulty.

Effective Case Model

Disaster management is not the responsibility of a single entity. Effective disaster management, on the other hand, necessitates coordination between all parties involved from the planning stages to the implementation stages, necessitating "full engagement of all institutions to empower local government and communities by providing necessary financial support, and decision-making authority" (Begum & Momen, 2019, p. 24). Only through a knowledge base derived from extensive experience can the question of how good coordination can be maintained during disaster rescue, relief, and restoration procedures be realised. Capabilities, legitimacy, and competence of people in charge of coordination are the three pillars of a successful coordination process (Robinson, Hewitt, & Harriss, 2000).

When we take a look at the past of Sewa International, we can see that it has been successful in bringing together a wide variety of organisations, from community-based organisations to national governments. It has also been successful in creating opportunities for these organisations to collaborate with one another and carry out their individual roles and responsibilities within the context of integrated disaster management practises.

Sewa International's main goal is to aid those in need, either directly or through strong local partners who work tirelessly to support those in need during disasters despite the lack of resources. Due to the fundamental arrangements that the majority of these local NGOs lack (timely reporting, monitoring, language barriers, insufficient capacity, etc.), the majority of the aid ends up going to the major actors while the actual working

organisations struggle to make ends meet. In order for the aid to really reach the intended recipient, Sewa International works to strengthen these local groups that have been recommended.

If it turns out that there aren't any local partners who can carry out the programme successfully, the feasibility of setting up one's own operations to carry out and manage the project is taken into consideration based on the region's development needs and the financial and human resource resources that are available. The Sewa Uttarakhand project, where we built the team and the programme from the ground up with 3800+ women members as part of the 360+ SHGs/Federations leading a life of socioeconomic empowerment in the Rudraprayag and Chamoli districts, is another example of how beneficial this has been.

Geoffrey Onyeama, Foreign Affairs Minister of Nigeria, Ex-Deputy Director General

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"It is heartening to see Sewa's efforts to help the African students have been fruitful and have been evacuated from Sunny. 1/2 A million thanks to the Government of Ukraine for providing the buses, Sewa International Europe, and Sewa International for their amazing facilitation and coordination"

The night of February 20, 2022, was tough. Russia and Ukraine got into a conflict, and suddenly lakhs of the population found themselves in a war zone. The conflict started with fighting between the respective armed forces, but gradually civilians were caught up in the shelling.

Thousands of people got displaced in a matter of days, many of whom scrambled to find shelter while government forces fought each other with the deadliest weapons.

Over 20,000 Indians were in Ukraine at the commencement of war (Indian Express, 2022). Caught in the middle of a war, away from their motherland, struggling with basic amenities, they were terrified for their lives.

Sewa International Europe promptly took the initiative to set up a helpline with volunteers inside Ukraine, and across twelve nations of Europe, to guide, counsel, and support the Indian students (and citizens of five or more other nationalities) in Ukraine to safely find passage out of a war zone.

The team took the initiative to provide food, shelter, and medicines to them at the borders, with active coordination with Indian embassies for safe extraction back to India. Around 270 volunteers across Europe have assisted in #OperationGanga. They have helped in the evacuation of over 35,000 students of different nationalities from Ukraine so far. 2534 requests were received on the Sewa helpline. More than 18 cities were served.

The world indeed is one family.

Looking for the future: Financing

The costs of a disaster are primarily borne by domestic authorities, communities, households, and enterprises facing the hazard risk and its impact. Further, disasters intensify poverty and marginalisation as sufferers take out high-interest loans, sell assets and livestock, or engage in low-risk, low-yield farming, or other ways to earn livelihood to lessen exposure to extreme events. Without a post-disaster infusion of capital for reconstruction, disasters can also aggravate poverty by their long-term adverse effects on economic development (Linnerooth-Bayer et.al, 2007).

The financial capacity to address disaster risks is limited where they are most prevalent, as evidenced by prior disasters. Support from both home and abroad is required. Remittances sometimes grow in the wake of disastrous events, such as environmental dangers and economic crises, partially protecting economies from shocks and lowering vulnerability. Remittances smooth out consumption since they are counter-cyclical, especially in the wake of disasters (e.g. Yang and Choi, 2007; Le De et al., 2013; Duval and Wolff, 2016). When conditions are dire, like during a civil war, migrant households may send significant chunks of their income, making sacrifices and even forgoing their own housing and education costs (Lindley, 2009; Stodolska and Santos, 2006; Hulkenberg, 2015). Such harsh conditions might only last a short while. Disaster management financing consists of two parts: first, investing in measures to adapt to climate change and reduce disaster risk, and second, gathering and allocating formal and/or unofficial donations obtained through campaigns, appeals, and other means for rescue and relief efforts after a disaster.

The first aspect comprises disaster risk reduction (DRR) financing and disaster risk financing. DRR financing refers to funding activities which encourage the objectives and inclusive aims of the Sendai Framework to achieve a significant reduction of disaster risk and losses in lives, livelihoods, and health, and the economic,

physical, social, cultural, and environmental assets. Disaster risk financing pertains to financing arranged before a potential shock, which pays out in certain pre-agreed circumstances to fund a pre-agreed plan (OECD, 2017; World Bank, 2018). The second aspect pertains to humanitarian financing and other development assistance (ODA) where the funding and financing are planned to save lives, relieve suffering, and maintain dignity in the event of a disaster. It includes both emergency response and contributions to disaster preparedness and humanitarian responses. The primary function of ODA is to support recovery from and/or resilience to the disaster impacts of climate change (GHD, 2003).

While climate change adaptation and disaster risk financing mostly fall into the ambit of the government, it is in terms of humanitarian assistance and ODA that the role of CSOs gets highlighted. Aside from international organisations and government aid, contributions from the public internationally are one of the biggest sources of it. In developing countries, households provide most of the financial and other resources for private-sector disaster response — mainly through consumption of available resources or savings (Dannenmann & Warner, 2004).

According to NDA 2005 India allows UN agencies, international NGOs already operating within the country, and domestic NGOs to raise money in the event of a disaster to provide humanitarian assistance to the people in the region affected by the disaster. India will allow UN agencies and international NGOs already operating in the country at the time of the disaster event to continue their humanitarian assistance to people in the affected area in coordination with the relevant Central Ministries/ Departments and the State Government as per applicable norms and protocols.

Sewa International: Platform for Brain Circulation

Charitable donations have developed into a new "development mantra" in the twenty-first century due to the extent of global migration, the propensity of some nations to train workers for migration, aid donor fatigue, uncertainty about private investment, some orientation to "grassroots" development, and some other factors (Kapur, 2005). Capital inflows support welfare needs, particularly for low-income households, and encourage investment in entrepreneurship, health, and education. They promote the desires of migrant workers and their relatives, have the greatest effects in less developed and distant places, reduce risk, and are countercyclical. Charitable donations have permitted some level of poverty alleviation and the empowerment of poorer households throughout time by providing social protection when governments may not have been able to. Even while contributions are subject to outside shocks, their variations have been smaller than those of other national income sources like commodity prices, aid payments, or tourist inflows. As a result, they provide an efficient form of social protection.

The sustainability of remittance-dependent development is particularly significant but unavoidably unpredictable, particularly if migrant numbers decline or remittance flows do not support more autonomous development (Connell and Brown, 2020). It is uncertain how foreign family reunion and increasing migrant integration would affect people's capacity and willingness to remit. The next generation of migrants will need to invest in their human capital, so as long as migrants have strong ties to their hometown communities, they can be counted on to reinforce these through consistent remittance flows and create "nest-eggs" at home in preparation for a potential return (Brown and Poirine, 2005).

Sewa International has been working in the field of disaster management for the past 25 years to counter the amplification of marginalisation and vulnerability. It began its journey as a funding coordination agency for disaster management after the 1993 Latur earthquake in Maharashtra. Understanding the spirit of service towards their dharma bhoomi (homeland) of the Indian diaspora, Sewa uses its channels and networks to raise funds and skills for sewa (service) towards the marginalised and vulnerable sections for post-disaster rescue and relief operations and gradually then for rehabilitation.

Learning from its experience, it better targeted international support to the regions that are most vulnerable to climate change, guaranteeing that it will reach the people at most risk of its effects. The Paris Agreement and the Sustainable Development Goals recognize that national adaptation and risk reduction priorities might leave behind or fail to reflect the priorities of certain groups. Sewa International works by networking with the different chapters of Sewa International across the six continents and other similar organisations internationally to support a diverse portfolio of small-scale programmes or growing new partnerships with local organisations and institutions despite the limited incentives.

Using its network strength across more than 25 countries, which it has built slowly by demonstrating trust and accountability towards the donors as well as recipients, Sewa has been able to deal with the pressure to minimise transaction costs, focusing on the impact that prioritises protecting lives rather than on the number of programmes it offers, and/or scale of investments. There is an international agreement that locally led, inclusive, and participatory approaches are essential as part of an equitable, whole-of-society approach – that is explicit in the Paris Agreement and the Sendai Framework (World Bank, 2018).

S Sewa International USA received USD 2.5 million assistance from Twitter CEO Jack Dorsey.

During the COVID 19 pandemic, we were approached by the Twitter CEO Jack Doresey's charity foundation for providing COVID relief assistance. Start Small Foundation is the name of a philanthropic organisation that Jack Dorsey has established. Via this organisation, he is able to contribute to a number of different causes. The Start Small Foundation got in touch with Sewa International since we were the first non-profit organisation that was able to successfully gather the oxygen-related equipment that was required during the second wave of COVID that occurred in India in March of 2021. Sewa International had been listed as the tenth most popular nonprofit among companies and their employees by Benevity Inc., the leading provider of global corporate purpose software, for the year 2021.

We gave a presentation regarding the impact that Sewa International USA was having by shipping life-saving gadgets to India and their efficient distribution to various underserved communities in India. Our focus was on how Sewa International USA was able to reach out to communities in need. After a day, they got back to us and stated that they were interested in making a donation of $2.5 million. It was made known to the general public by a tweet posted by Jack.

During the course of the last decade, there has been a shift from providing support to short-term disaster relief and rescue activities to more effective long-term rehabilitation and development projects in under-developed areas. These changes have taken place in order to better meet the needs of the communities. The necessity of finding more long-term answers to the underlying socio-economic problems is what motivates the organisation to do the work it does. Sewa International is currently working in the fields of health, education, livelihood generation, environment protection, skilling, community and rural development, women empowerment, and water conservation across the states in India. These fields are being addressed through direct interventions as well as with the assistance of committed grassroot organisations.

Sewa International is still working to give diaspora abroad a basis from which they may actively participate with and connect with their home country while also making a contribution to the host communities. Through its numerous chapters around the world, it has not only facilitated the flow of expertise and resources to India at times of disaster, but has also helped to mobilise aid for disaster in the host communities of the Indian diaspora. The future importance will depend not only on the goals and values of immigrant families, nations, and communities but also on the institutional frameworks that support and surround the movement. Even in a world where there is strong opposition to international migration, they are expected to grow more relevant in the future. As aid stagnates and worldwide migration has increased, the scales have tipped in favour of remittances playing a constructive role.

Sh. V Muraleedharan, Minister of State for External Affairs

"I had the opportunity to meet many of the karyakartas in various countries who were associated with Sewa international as well as the nationalist movement. I also had had the opportunity to know the functioning of the units in various countries...It is heartening to know Sewa international has provided selfless service not only in times of disaster or calamities like the kErala flood in 2018, glacier burst in Uttarakhand, early recovery during Karnataka flood through their Sewa workers but also help to promote traditional art and culture including projects like Sewa Yuva Jyoti and Sewa Mahila Jyoti... I would urge Sewa international to be a part of the global network of voluntary organizations duly respected and recognized by the UN. So that India's voice is heard not only at the official level or government spokesperson but through the voluntary sector also."

Prime Minister Narendra Modi, as then Gujarat's chief minister, inaugurated the SIDDC facility at Jivapar on June 21, 2012

" **Institutions can help in creating champions who could advocate for and improve disaster management strategies.** **"**

–Rejeev Issar, UNDP

Flooding and heavy rains wreaked havoc on local homes.

Twenty- five Years of Sewa International in India

A simple glance back at Sewa International's 25-year history in disaster management

PREVIEW >>>

- **ABOUT THE DISASTER**
- **EFFECTS OF THE DISASTER**
- **SEWA INTERNATIONAL ACTIVITES**
- **OUR PARTNERS**

Sewa International started as a small, loosely knit volunteer movement in 1993 when an earthquake struck in the Latur district of Maharashtra. It was the first loosely knit volunteer work done in disaster management. Working on subsequent disasters, it was realised that working together as a formal organisation, for rescue, relief, and rehabilitation work makes it easier. In India, Sewa International was established in 1997 as a registered non-profit trust, based on the Indian ethos of "Service before Self" and the "World is One Family". Since its inception, Sewa International has relentlessly continued to serve humanity in distress irrespective of caste, creed, colour, religion, race, or region. It has inculcated the value -- "seva hi parmo dharma" (service is our primary duty) -- in its operations.

This chapter comprises the yearly record of all the disaster management work done starting from the 1993 Latur Earthquake when Sewa International was just a sporadic volunteer movement.

Year 1993 Latur Earthquake

About the Disaster:

30 September 1993, at 3:56 a.m., a magnitude 6.4 earthquake shook the Marathwada region of Maharashtra State in Central India (IRP, 2019). The epicentre of the earthquake was in the vicinity of the village of Killari in the Latur District, which had a population of 12,264 and 2,880 dwellings. Thankfully, at that hour, substantial portions of the populace were still awake, celebrating the holy Shiva festival. Nevertheless, the earthquake caused severe destruction and fatalities. It was an intraplate seismic event. The earthquake's epicentre was around 12 kilometres below the surface, inflicting greater damage from shock waves (IRP, 2019). The earthquake largely affected the Latur and Osmanabad districts. The earthquake caused a massive crater near Killari, which was also the epicentre, and it still exists today (India Today, 2015).

Effects of the Disaster:

Killari itself suffered 1,220 fatalities, 1,288 injuries, and the total destruction of 2,847 dwellings (Comfort, 1995). 817 villages out of 936 in the Latur District were affected, along with 374 villages in the neighbouring Osmanabad District (TISS, 1994). The earthquake reportedly resulted in a total of 7,582 fatalities, 21,886 injuries, and the displacement of 30,000 households or 175,000 individuals (GoM, 1993). Damages and losses were 21.513.8 million rupees (IRP, 2019). As a result of the Latur Earthquake, named after the largest city, the National Disaster Management Authority (NDMA) was established (India Today, 2015).

Sewa International Activities:

After the earthquake struck the region, Sewa International, a loosely-knit volunteer network then, recruited more than 500 volunteers and, within 45 minutes, arrived at the disaster site from the Vivekananda Hospital in Latur. The volunteers immediately began working in the rescue operation, assisting in the removal of debris and dead corpses and performing the funeral rites for individuals without surviving family members. It established over forty centres in the two districts to offer food, clothing, and temporary shelter to the survivors. Immediate medical treatment was administered.

Our Partners:

Donor Agencies

We coordinated with Sewa International UK and India Development and Relief Fund (IDRF) for raising funds for rescue and relief operations.

Ground Implementers

Jan Kalyan Samiti coordinated rescue and relief efforts on the ground with our volunteers.

Year 1997 The HPCL Refinery Blast

About the Disaster:

On September 14, 1997, the Hindustan Petroleum Corporation Ltd (HPCL) refinery in Visakhapatnam, India, experienced an LPG leak (Patnaik, 2020).

During the receipt of LPG cargo from a pressurised ship, a leak occurred. Before finding an ignition source, the resulting vapour cloud extended across the refinery tank farm, administrative complex, utility area, and at least one process unit. The investigation team formulated a variety of release hypotheses. However, none of these hypotheses could be supported by the testimony of eyewitnesses, as all individuals directly involved in the tank filling operation had perished (Rodante, 2003).

Effects of the Disaster:

The explosion and ensuing fire destroyed the majority of the facility's administrative buildings, as well as numerous LPG storage tanks, processing facilities, and an adjacent petroleum liquid storage port. The explosion obliterated buildings and storage tanks as far away as the marketing complex, which was severely damaged (Anon., 1997). Everyone within a 500-meter radius of the blast was killed. Sixty individuals were pronounced dead, and twenty were injured. The explosion caused an estimated Rs. 85 crores in direct damages and Rs. 65 crores in indirect damages due to the forced closure of the facility (Anon., 1997; Hindustan Times, 2021).

A FULL VIEW OF THE HPCL PLANT ON FIRE/ EXPRESS

High-level probe ordered into mishap

EXPRESS NEWS SERVICE

Visakhapatnam, Sept 15: A high-level probe will be ordered into the explosion at the Visakha Refinery of Hindustan Petroleum Corporation Limited, Chief Minister N Chandrababu Naidu has said. The probe panel would submit its report in 30 days.

Chandrababu Naidu, who made an aerial survey to take stock of the situation here today, announced that he would request Prime Minister IK Gujral to constitute a high-level team with eminent experts to ensure adequate safety measures required at hazardous industries.

Addressing a gathering of Parliament members, MLAs and senior officials, the Chief Minister did not rule out the possibility of more bodies lying under the debris at the refinery.

He said death roll rose to 28 with 21 persons roasted alive, six succumbing to injuries and vent such mishaps in future.

LOSS: The situation turned panic as the blast at the refinery of globe spheres with LPG and kerosene apart from Rs 10-15

50 crore, including the loss of each family of the deceased to be paid by the HPCL management. The Government would de-

Chief Minister N Chandrababu Naidu inspecting the HPCL mishap site. EXPRESS

Sewa International Activities:

Sewa International coordinated with volunteer groups on the ground. It coordinated with the Sewa Bharati volunteers and arrived at the accident site within two hours to assist the authorities in putting out the fire for four consecutive days. Volunteers retrieved 54 burnt, dismembered, and decayed remains from the wreckage during the rescue operation.

Our Partners:

Ground Implementers

We worked with Sewa Bharatis to assemble volunteers for rescue actions.

Year 1998 Super Cyclone, Gujarat

About the Disaster:

On June 4 and lasting until June 10, 1998, a windstorm of intensity T-5.0 and wind speed of 90 knots (167 km/h) developed (DES, 2021). Jamnagar, Junagadh, Amreli, Bhavnagar, Banaskhanta, Surat, Bharuch, Rajkot, and Valsad were affected.

Effects of the Disaster:

The cyclone's impact was exceedingly severe (DES, 2021). According to government sources, approximately 2,871 people were killed, 893 people were injured, and 46,00,893 people were affected by the hurricane. The projected overall loss was approximately Rs. 23,00,00,000. (ADRC, 2002). Huge grain stocks were devastated (AP Archive, 1998).

Source: OneIndia Hindi 2019
<https://hindi.oneindia.com/news/gandhinagar/cyclone-vayu-gujarat-remembering-now-1998-super-cyclone-511150.html>

Sewa International Activities:

Rescue and Relief Operations

Sewa International donated food, home necessities, and medications. A mobile medical van served victims in more than thirty communities surrounding Jamnagar, the worst-affected district.

Rehabilitation and Recovery Operations

Sewa International constructed infrastructure for seven affected villages, including community centres for each social group, schools for their children, roads, and a crematorium. More than twenty-five houses were built to rehabilitate the villages of Khambadia and Bhatia, which were entirely destroyed by the storm.
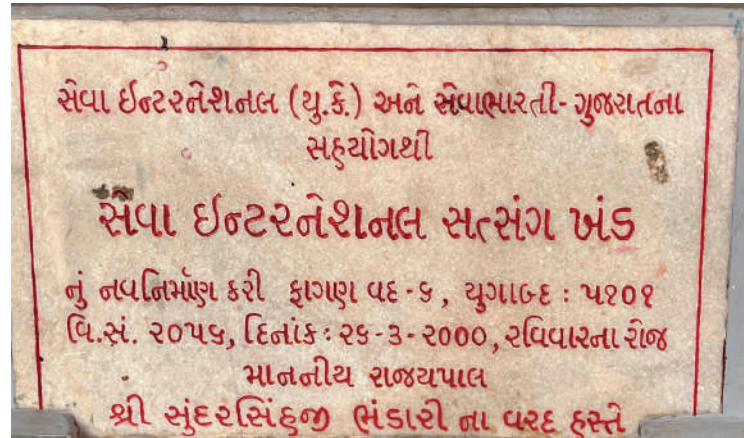
Impact

Through their relief and rehabilitation efforts, Sewa International impacted the lives of around 2,500 people. The greatest accomplishment of the initiative was the formation of a new team of volunteers from the village who worked efficiently on the rehabilitation programme. As a result of witnessing the tireless dedication of the volunteers to their community, the traumatised and despondent villagers also began to engage. The motivated volunteers of the hamlet had succeeded in altering the perspective of the entire community.

Our Partners:

Donor Agencies

Sewa International UK raised funds for the rehabilitation projects.

Ground Implementers

Sewa Bharati, Gujarat was our ground partner.

Year 1999 Paradip Cyclone, Orissa (Now Odisha)

About the Disaster:

In the state of Odisha's recorded cyclone history, the "Super Cyclone" of October 29-30, 1999 was the most intense. Also known as the "Paradip Cyclone," it exhibited "unique characteristics, including quick intensification, a limited radius of eyewall restricting the enormous surge close to the point of landfall, and a relatively extended life following landfall" (Kalsi, 2006, p. 1). For nearly 36 hours, the windstorm had 140 knots and 260-270 kph wind speed (Margherita, et al., 2020). Jagastsinghpur, Kendrapara, Khurda, Puri, Cuttack, Nayagarh, Jajpur, Bhadrak, Keonjhar, Dhenkanal, Balasore, and Mayurbhanj were the 12 impacted areas. Three days of intense precipitation accompanied the cyclone (ADRC, 2002; Hindustan Times, 2013; GVSS, n.d.).

Effects of the Disaster:

As a result of the widespread devastation that it caused in its path of destruction, this cyclone is frequently referred to as a "Black Friday tragedy." It destroyed homes, uprooted around 90 lakh trees, wrecked infrastructure, killed or drowned animals (3,15,886 cattle death; 3,16,372 small animal death; 18,83,468 poultry death), damaged agricultural fields (destroying 1,30,000 hectares of crops, 1,76,000 paddy crops damaged, and 2,57,000 other crops damaged), denuded the environment, put livelihoods at risk, and shattered the economy. The state was cut off from the rest of the world for an entire day. It was unprecedented in its reach and fury, and it resulted in the deaths of 20,000 people and affected 1,262,803,12 residents of the state. Damage was done to approximately 14,900 primary schools and 3,425 schools overall. It was expected that the entire damage would be roughly 750 crores of rupees (ADRC, 2002; Revenue Dept. Govt. of Orissa, 1999 cited in Panigrahi, 2003, p.5; Kapur, 2010; India Today, 2019; Margherita, et al., 2020).

Sewa International Activities:

Rescue and Relief Operations

Within five to six hours following the cyclone's landfall, rescue and relief operations commenced. The local staff had no experience working on a crisis of this magnitude. Nevertheless, based on previous experience with smaller-scale disasters, local representatives were promptly contacted to establish a network of volunteers to reach every village. Primarily served were Astarang, Erasama, and their adjacent district areas. Roads and

networks in the coastal region were severely damaged, making rescue and relief activities a hard challenge. Despite this, our volunteers made it to the devastated communities. Sewa International assisted in assembling a group of 350 volunteers who aided army forces and government officials in the delivery of relief supplies when the entire system was in disarray.

Immediate responsibilities included removing rubble, extricating the injured, retrieving the deceased, supporting hospital authorities with the care of victims, and distributing food, water, and other relief supplies. One of the greatest obstacles faced by the volunteers was gathering and cremating the dead people and animal carcasses. Due to prolonged submersion in salty water, the remains had begun to degrade and body parts were dismembered upon collection. Special emphasis was paid to preventing the spread of water- and vector-borne diseases by monitoring health and hygiene standards and bleaching water continuously to remove contaminants.

Sewa International established around 50 feeding camps in the worst-affected districts of Jagatsinghpur, Cuttack, and Puri, feeding over 10,000 people every day for a month. To give the people with clean drinking water, halogen tablets were promptly acquired and distributed.

Tents were erected to give temporary shelters, and medical camps were organised, with doctors from various regions of the country, including Gujarat, Andhra Pradesh, and Assam, volunteering their services. In addition to providing medical care, the medical professionals educated volunteers to aid in trauma recovery and provide overall comfort to grieving families, including counselling.

Rehabilitation and Recovery Operations

As part of restoration efforts, our volunteers supported the survivors in erecting approximately 3,000 thatched-roof homes. On the basis of a damage assessment report, books were distributed and a residential school was constructed at Gatirautpatna, district of Cuttack, to educate youngsters who were either orphaned or had lost older family members who provided for them.

In addition, efforts were made to remove the ocean dirt and salty water that had inundated the soil and rendered it utterly unusable for agriculture. Farmers from Rajasthan were employed to plough and re-plough the area since they have experience cultivating the soil deeply. Approximately 1,100 tractors were utilised over roughly two years to entirely remove the beach muck from the fields. Damaged agricultural instruments were replaced with new ones. A full harvest cycle's worth of financial and educational assistance was provided to the farmers to aid with their recovery. In addition, hundreds of thousands of palm and coconut saplings were planted.

Impact

We benefited around 15,000 beneficiaries through our disaster management activities.

Our Partners:

Donor Agencies

The relief activity was funded by IDRF, Sewa International Sydney.

Ground Implementers

Our ground partner was Utkal Bipanna Sahayata Samiti (UBSS).

Year 2000- 2002 West Bengal Floods

About the Disaster:

In 2000 and 2002, the authorities declared significant flooding in the state. In addition to flash floods caused by persistent torrential rains, the calamity was also attributed to the opening of dam sluice gates. Approximately 19 districts were affected. Murshidabad, Birbhum, Burdwan Nadia, Hooghly, Jalpaiguri, and Cooch Behar were the districts hardest hit (Bhan & Team, 2001; WBDMCDD, 2020).

Effects of the Disaster:

In the year 2000, around 1,265 individuals perished as a result of the state-wide flood. Nearly fifteen villages were inundated by flash floods. The two floods displaced around 15,000 individuals.

Sewa International Activities:

Rescue and Relief Operations

Sewa International offered relief efforts throughout the state by giving food, clothing, and cooking utensils to the impacted regions. With the aid of a group of physicians, health camps were staged in several districts. In addition, a mobile medical van offering free medical services was dispatched to provide for the health requirements of the impacted people in and around Kolkata, including the slums and neighbouring shantytowns.

Rehabilitation and Recovery Operations

Identifying that children were the most affected by the floods, free educational materials were supplied to kids in the fifth through tenth grades in 19 affected areas.

Impact

Supported the education system by providing school kits to students for five years.

Our Partners:

Ground Implementers

Sewa Bharati, West Bengal was our ground partner for the distribution of relief and rehabilitation materials.

Year 2001 Bhuj Earthquake

About the Disaster:

On January 26, 2001, when India was celebrating its fifty-first Republic Day, a 7.7 magnitude earthquake with its epicentre in Lodai, 20 kilometres north-east of Bhuj, struck the western state of Gujarat (Lahiri, et al., 2001).

Effects of the Disaster:

The earthquake devastated Kachchh, killing 14.7 lakhs and causing major damage in the neighbouring districts of Ahmedabad (57.4 lakhs), Rajkot (30.5 lakhs), Jamnagar (16.9 lakhs), Surendranagar (13.7 lakhs), and Patan (estimated at 12 lakhs). There were almost 20,100 fatalities and 166,000 injuries, including approximately 20,000 serious injuries. These six districts

Source: Dreamcivil, 2022 <https://dreamcivil.com/bhuj-earthquake/>

accounted for 99.25% of all earthquake-related fatalities. More than 20,000 animals perished as a result of the earthquake (Vatsa, 2001; Sen & Chander, 2004; Singh, n.d.).

The infrastructure of the five taluks of Kachchh, namely Bhuj, Bhachau, Rapar, Anjar, and Gandhidham, was severely damaged (Lahiri, et al., 2001). The earthquake destroyed 21 Community Health Centres (CHCs), 48 Primary Health Centres (PHCs), 227 sub-centres, 800 Anganwadis, six Integrated Child Development Scheme (ICDS) godowns, 11 Chief District Project Offices (CDPOs), 96 Ayurveda dispensaries, 21 homoeopathic dispensaries, and one food laboratory. Approximately 13,650 educational institutions were affected (Mishra, 2004). Total property damage was 430 billion rupees (WB and ADB, 2001).

Sewa International Activities:

Rescue and Relief Operations:

Together with a partner organisation, a Sewa International team arrived at the site of the disaster to provide urgent aid to those affected by clearing rubble, recovering dead bodies, and performing final rites for those who did not survive. It set up huge feeding camps and supplied daily necessities such as clothing, lanterns, candles, matchboxes, food, plastic buckets, cups, and tarpaulin sheets.

In collaboration with Dr. Hedgewar Hospital, a temporary hospital was established in Bhuj to serve earthquake casualties. The temporary hospital was staffed by a team of highly qualified physicians from the neighbouring state of Maharashtra. For the treatment of patients in the impacted areas,regular health camps and two mobile medical vans were mobilised. This was done to ensure that the people on their doorstep had access to medical care.
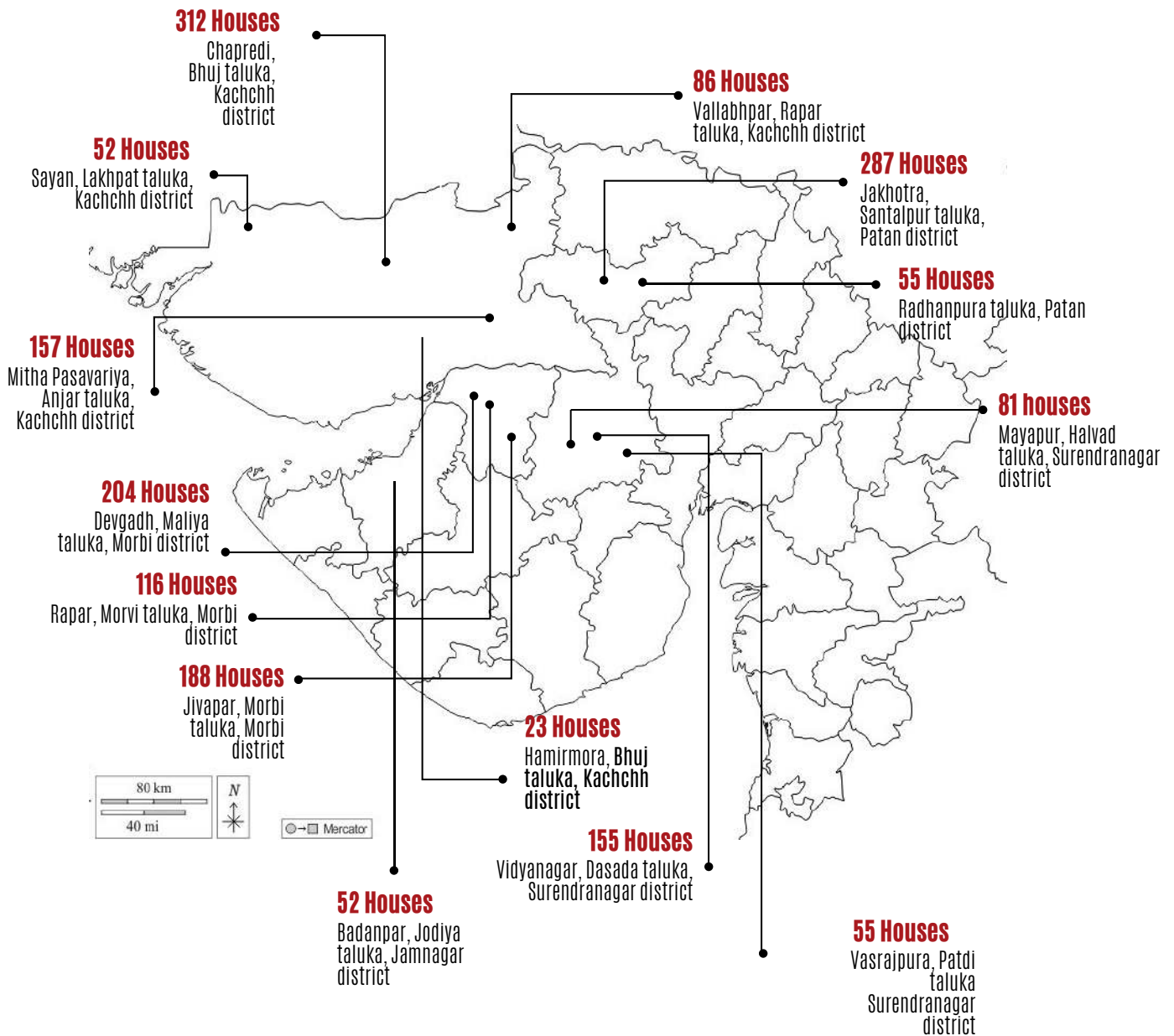
Rehabilitation and Recovery Operations

Recognizing the total collapse of infrastructure in the Kachchh district, it became urgent to provide shelter for the victims. In the Bhuj taluka of Kachchh, more than 200 traditional homes known as bhoongas have been built. In six districts — Kachchh, Jamnagar, Rajkot, Surendranagar, Patan, and Banaskantha — around 1,800 residential houses and 250 schools were built. In addition, 14 villages were completely rehabilitated with victim housing and public infrastructure, including a community centre, health centre, water facility, drainage facility, boundary wall, electrification, main gate, compound wall, cremation ground and chabutra (common area), and Chotra, a bird feeding station. The government designated these settlements for rehabilitation efforts. The number of permanent homes built in each community is listed below:

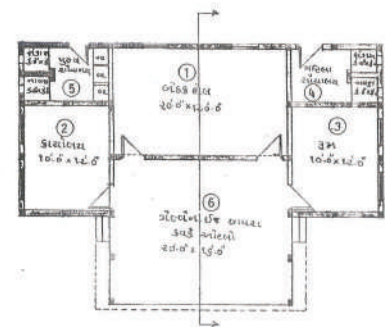# The number of permanent homes built in each community

312 Houses
Chapredi, Bhuj taluka, Kachchh district

86 Houses
Vallabhpar, Rapar taluka, Kachchh district

52 Houses
Sayan, Lakhpat taluka, Kachchh district

287 Houses
Jakhotra, Santalpur taluka, Patan district

55 Houses
Radhanpura taluka, Patan district

157 Houses
Mitha Pasavariya, Anjar taluka, Kachchh district

81 houses
Mayapur, Halvad taluka, Surendranagar district

204 Houses
Devgadh, Maliya taluka, Morbi district

116 Houses
Rapar, Morvi taluka, Morbi district

188 Houses
Jivapar, Morbi taluka, Morbi district

23 Houses
Hamirmora, **Bhuj taluka, Kachchh** district

155 Houses
Vidyanagar, Dasada taluka, Surendranagar district

52 Houses
Badanpar, Jodiya taluka, Jamnagar district
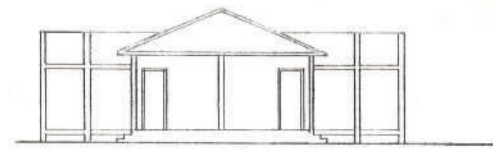
55 Houses
Vasrajpura, Patdi taluka Surendranagar district

80 km
40 mi
N
Mercator

As the Kachchh and neighbouring regions are situated on major seismic fault lines that flow through the Gujarat region, including the main Kachchh fault, the dwellings created were "earthquake proof." Each home was constructed using cement bricks with a hollow interior. Locals were hired to give an immediate source of income and to instil a sense of ownership in the rehabilitation initiatives among the communities. Sewa International managed a brick manufacturing facility to generate more rapid sources of revenue for the local populace. This not only decreased the project's expenses but also gave those who had lost their livelihoods a source of income. In addition, in keeping with the organisation's eco-friendly position, we sourced the sturdy, long-lasting wood from Indian railways auction, utilising it for construction.

Brian Porter Kemp, Governor of the State of Georgia

"On behalf of the state of Georgia, Marty and I Thank you for your efforts in the fight against COVID-19. You exemplify the spirit of service, and the exceptional dedication to your community does not go unnoticed."

These floor plans depict the "earthquake-proof" infrastructure of Sewa International.

TYPE :-
SMASAN GRUH

51,000.00/-
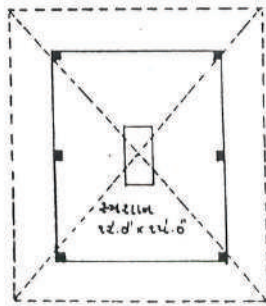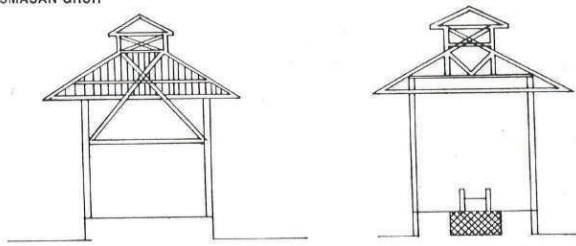
DETAIL :-
1. SHAMASAN 12'-0" X 15'-0",
TOTAL BUILT UP AREA 17 SQ.MT

TYPE :-
DISPENSARY

These building blueprints showcase Sewa International's "earthquake-proof" construction.

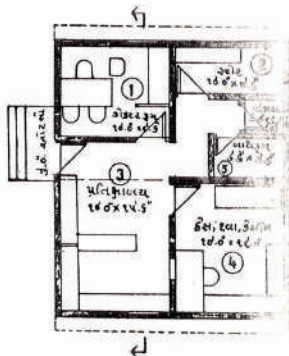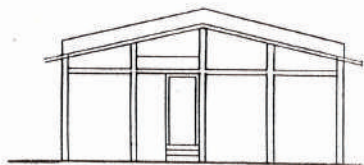*Mr. R (name changed to protect identity), a project beneficiary, spoke with us during our 18-year follow-up visit to Chapredi village about how he and other community members got involved with some duties as part of the shared vision and how it has turned into a sustainable good habit for the people of his/her community. The initial step on the road to recovery and rehabilitation is what this endeavour is all about, he said. He pointed to a large banyan tree and stated that the locals would often meet there to escape the heat and keep an eye on things. They were going through a lot of different emotions as they tried to find out how to get back to the way of life they had known before to January 26, 2001. Despite the fact that the earthquake had shook everyone to their core, many towns were still terrified to return to their pre-tremor routines for fear of another disaster. They weren't opinionless so much as paralysed by concern and hopelessness. It took the villagers some time to become receptive to the concept of accepting help from outsiders in their efforts to repair and improve their town. They would rather be seen as capable individuals than helpless victims, therefore they take matters into their own hands. But their minds were occupied by doubt as they contemplated their next move. After completing the process, participants realised the need of inviting outside experts. Seeing the outside officers, or "avsar," pitch in to help with the building work inspired him to speak up and offer his own ideas and aid, he relates. After that, he asked if he could pitch in on the construction. He says he started out sluggish, but after receiving compensation for his job, he enlisted the support of his friends and they finished the reconstruction projects in record time. More and more locals eventually showed a desire to help out, realising how important it was to rebuild their community after such a catastrophic occurrence, especially considering how much they had relied on one other in the past.*

An analogous story was told by a project officer working on a rehabilitation project to illustrate how they engaged locals. Mr. N (name changed to protect anonymity) told us about how they motivated the locals to band together and find creative solutions to the problem of a lack of available labour so that everyone could prosper. When asked to elaborate, he says, "At first, the residents were apprehensive to take part in the building repair operations that were going in their midst." So, he says with a sheepish grin, we embarked into the construction business. Seeing us at the construction sites delivering bricks, cement mixtures, and so on piqued the attention of the residents in the project. Residents of the area were briefed on the building process and offered opportunities to lend a hand; they then began providing input on the relief housing plan. They helped out with everything from putting up walls to painting to tiling on their own time. Giving people financial incentives for their work had multiple benefits: it keeps the initiative going, it gives locals an opportunity to make some extra money while trying out a new career option, and it keeps the project from becoming a one-off. The family houses were given access to the timber that had been auctioned off during railway relocations so that they could use it to construct their own home.

A map depicting all rehabilitation and sustainable development project locations

Kachchh's economy was largely destroyed after the catastrophe. Clusters of enterprises — household and cottage industries — evaporated, affecting more than 19,000 handicraft artisans and harming the region's rich traditional handicrafts. As a form of interim aid, the craftspeople were given toolkits. However, this was insufficient to revitalise the local economy and reduce levels of poverty. Due to the women of Kachchhi losing their means of subsistence as a result of inadequate infrastructure, access to working capital, and markets, it was necessary for external actors to mediate the development of viable means of subsistence.

Sewa International, with the assistance of local key stakeholders, designed a project to be implemented in three phases — 2005, 2006, and 2007 — after determining the main cause of the problem, its underlying causes, and prospective solutions. In 2005, the effort was known as "Micro Credit to Micro Enterprise Development through Entrepreneurship Development Training" and "Empowering Women Self Help Group to Organise and Manage Sustainable Entrepreneurship and Development Training
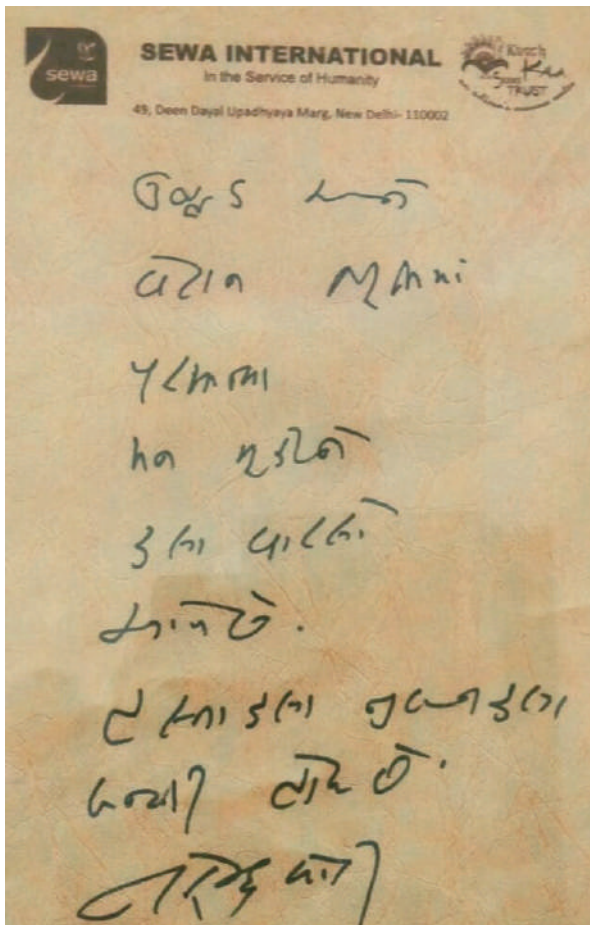
Program" with offices in Bhuj, Lodai, and Jiyapar. The objective of the initiative was to revitalise the local economy and empower marginalised and disadvantaged segments of the population by providing them with technical skills and forward and backward market links. The project was operative in more than 12 distant villages of

Kachchh, selected based on poverty levels and the area's backwardness. During the first year, women artisans organised self-help organisations and received technical instruction. We envisioned that craftswomen in the informal sector would achieve socio economic security and full employment through the coordinated, profitable, and efficient design, production, and marketing of their products and services. In the second year, numerous capacity-building workshops, training programmes, experience visits, and participation in exhibitions and trade fairs were organised to ensure the exposure of artisans as part of ongoing efforts for the resettlement and complete rehabilitation of its
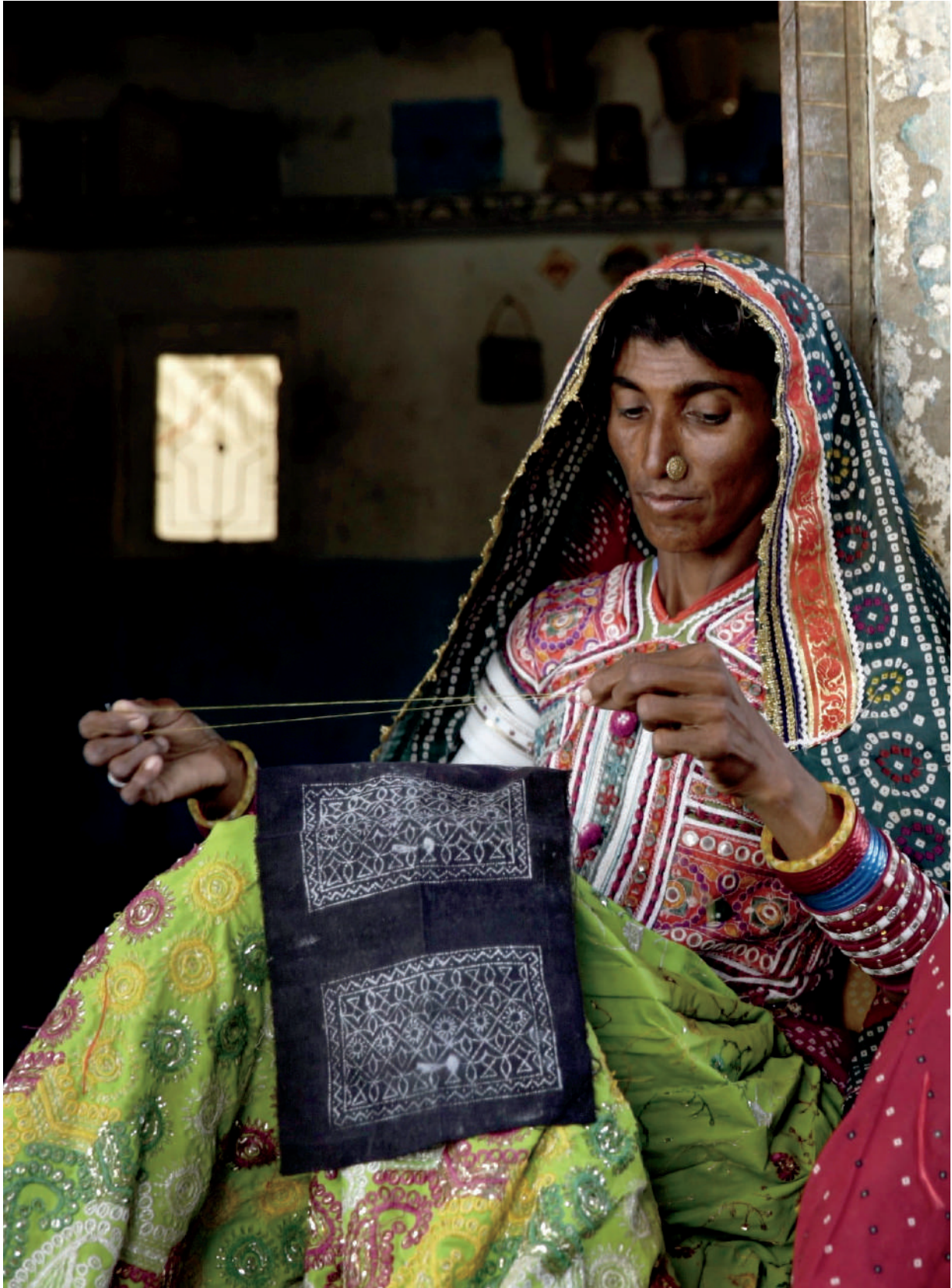
beneficiary artisans and to achieve its vision. It was intended to give financial help by linking them to banks and enabling their access to soft loans in a timely and effective manner. In 2007, after introducing the aspiring female entrepreneurs to the market, they were able to trade independently and profitably.

Eventually, two groups with specialisation in tailoring and embroidery were founded as key production groups. Different communities, such as Jats, Ahirs, Kols, and Rabbadi, founded the SHGs, each specialising in their own art-craft forms. For example, each community has its own colour scheme, design, thread patterns, etc. Eventually, these communities were able to produce Kachchhi-embroidered handbags in a variety of styles and sizes. We reached over 1,200 women members in 92 SHGs covering almost 16 villages of Kachchh district - Kuran, Jhura, Keshav Nagar, Lodai, Dhaneti, Madhapar, Atal Nagar, Jiyapar, Narayan Nagar, Nava Nagar, Nakhatrana, Ashapar, Dayapar, Guneri, Kotada, and Mangwada.

On June 21, 2012, Narendra Modi, the then-chief minister of Gujarat, and now Prime Minister of the nation launched the Sewa International Design & Development Centre (SIDDC) in Jiyapar village, Kachchh, in order to improve handicraft development support. This centre currently provides regular employment to 25 tailors and indirect employment to over 600 women engaged in embroidery/Bandhani work in 16 villages. On January 10, 2014, Sewa Kala Srushti Private Limited (SKSPL) was incorporated in order to provide greater marketing assistance and employment assistance. SKSPL provides efficient coordination of design, production, and market links for the products of handcraft craftsmen.

Impact

We have trained over 2,000 women artisans in Kachchh as part of the Technical Training Program (TTP). Under the Entrepreneurship Development Program, the organisation has also taught 150 women tailoring skills (EDP).

Our master trainer, Garva Nitin Kumar Ramesh Bhai, who has been working at the Sewa International Design & Development Centre since 2014, has trained more than 500 women so far and is also in charge of keeping everything running smoothly at the centre - - from mobilisation to training to connecting our women artisans with the relevant fairs in the region where they can showcase and sell their goods. He stresses the significance of women establishing their own financial independence and seizing entrepreneurial opportunities to expand their operations. He recounts his journey over the last years as well as where he started from, sharing how heartening it was to see young girls and women, batch after batch, complete their training and make products that over time led to greater earnings in turn. His determination to succeed has helped hundreds of women earn a better living wage and he deserves a lot of credit for that. He talks about how pleased he is to have contributed to the area's financial security by facilitating women's access to better livelihoods, which he hopes will eventually lead to improved health care, food security provisioning, and human resource development in the future thanks to a large part to Sewa International Design & Development Centre's assistance. In his experience, it was considerably more difficult in the past to introduce individuals to these kinds of careers. He had heard that we were a self-reliant organisation that helped people in the neighbourhood

improve their financial standing by introducing them to value-added production. The fact that he has been able to help more than a hundred women launch microbusinesses through his involvement with Sewa International Design & Development Centre has made him feel very fortunate to have joined the team.

Since these are all young women who would eventually settle in a different village, he told us that the bonds between the ladies in each batch tend to last for only three years. Women who have settled into local communities tend to spend more time at the centre after marriage. They are provided with fabric and taught the fundamentals of sewing and tailoring. For their education and development, they are taken on field trips and given lectures by professionals. However, we have made an effort to keep in touch with the ladies who have been assigned home-based tasks, collecting their completed assignments and delivering any necessary raw materials. Thus, not only can we set up a long-lasting connection, but these ladies can keep getting paid for their hard work.

Sharing a personal tale, he said, "When people get married, they often leave for the villages of their spouses or his parents if they are away. Whenever Mrs. R [name changed for privacy] would pay a visit to her childhood home after getting married, she would always stop by to see me. She would fill me in on the latest happenings in their lives and how they were generating original ideas without ever leaving their houses. When she started telling people about our courses and how they may help them generate money, people in the area started reaching out to see if they could be trained as well. The villagers' interest in expanding their knowledge was piqued when they realised they might make money from trading such embroidered items. The fact that we were able to help more people was a source of great satisfaction for us.

Mrs. S (name changed on request for anonymity) was among the first group of women to be trained as artisans at the Sewa International Design & Development Centre, where she worked for many years. She picked up a useful new skill at the centre, which will help her and other women in the region's rural areas secure a more secure financial future. She talks about how it was a turning point in her life when they finally found a way to put their centuries-old stitching abilities to use in the modern economy. She explains that all the women had stitching abilities from the start, but they only utilised them to make dowries for their marriages. According to her, the facility's former director, Mr. R (name hidden on request for anonymity), was successful in attracting many female students from the surrounding areas who were interested in studying tailoring and business skills. As she describes it, the Sewa team and her group set off from a modest rental home. "Now look, we are at such a huge centre," she exclaims. The centre helped us achieve our goals by teaching us tailoring, and our traditional needlework talents were put to good use by creating high-quality

goods that met market demands. She says that once people started making money with it, they enthusiastically continued sewing until they couldn't stop. Their neighbours and other people were envious because they saw them learning and earning without investing anything but their time. As word of mouth continued to spread, they eventually enrolled at the centre as well. The Jiyapar centre was formally founded as its strength and impact grew.

Year 2001 Rajasthan Drought

About the Disaster:

Between 2000 and 2002, the Government of Rajasthan proclaimed a severe drought in the state. During the 2000 south-west monsoon, the state of Rajasthan experienced insufficient and inadequate precipitation (-28%), resulting in drought-like conditions in 31 of 32 districts (DMRCDD, 2021).

Effects of the Disaster:

Donor Agencies

IDRF, Centre for Bharatiya Marketing Development (CBMD) and Sewa International UK provided financial support for the rescue, relief and rehabilitation programme.

Ground Implementers

On the ground, Sewa Bharati, Gujarat provided volunteer support.

Effects of the Disaster:

The drought had a significant impact on the state, where 30,583 villages were affected. Approximately 330 million people and nearly 400 million cattle were affected (Patil, 2001). Rajasthan lost approximately half of its livestock (Deutsche Presse Agentur, 2001).

Despite the fact that 46 percent of the land in Rajasthan is cultivated, 80 percent of that cropland is dependent on rainfall. Approximately 89.47 lakh hectares of crops were impacted by insufficient monsoon seasons, which resulted in the loss or significant reduction of harvests for the majority of the agricultural population (USAID, 2001).

The victims noted that this was the most severe drought they have experienced in decades. According to Bonma Ram in the Barmer district, they have been experiencing a persistent drought for three years. Nothing had grown on his dry farmland, there is no water in his hamlet, and neither he nor his boys have any means of subsistence (Deutsche Presse Agentur, 2001).

Sewa International Activities:

Rescue and Relief Operations

In 2001, Sewa International intervened for three months, initiating relief efforts in Jodhpur and the surrounding area, reaching remote communities near the India-Pakistan border and giving medical aid. In addition, veterinary aid was offered. To deliver water to the areas hit by drought, tractors equipped with water tanks were dispatched. In addition, temporary cattle barns were constructed in the affected area to provide forage for the livestock.

Rehabilitation and Recovery Operations

Two hostels for boys were established in Jodhpur district, one in Chauhattan with 28 boys and the other at Lalsagar with 20 boys, in order to provide holistic education to meritorious students from various drought-affected villages along the India-Pakistan border that lacked basic educational infrastructure.

Our Partners:

Donor Agencies

IDRF and Sewa International UK provided financial aid for relief and rehabilitation activities.

Ground Implementers

Sewa Bharati, Rajasthan was our ground partner.

Year 2004 Assam Floods

About the Disaster:

In June-July of 2004, Assam state's 27 districts were devastated by widespread flooding (UNDP, 2004).

Effects of the Disaster:

More than 130 people perished and almost 10 million were affected by the disaster. At the peak of the deluge, roughly 8.826 million people in 10,560 villages were affected. Over eight villages were entirely submerged. 0.637 million hectares of cropland and 12.24 million hectares of the overall area were affected (UNDP, 2004; GoI, 2004).

Sewa International Activities:

Six months were spent operating a flood relief centre by Sewa International. We collected relief supplies, including medicines, baby food, vitamins, food materials, disinfectants, water purifiers, tents, etc., and shipped them by air to our partner organisation for distribution. The "Dhanvantri Swasthya Yatra" medical service consisted of 21 days of medical camps and doctor visits from village to village was organised. In addition, school kits were supplied to guarantee that the floods did not hinder the education of youngsters.

Our Partners:

Ground Implementers

Sewa Bharati, Assam was our ground partner for flood relief.

Year 2004 Bihar Floods

About the Disaster:

In June–July of 2004, Assam state's 27 districts were devastated by widespread flooding (UNDP, 2004). In June and July of 2004, 20 districts were inundated in what is considered one of the worst floods in the history of the state of Bihar. The districts affected were Supaul, Darbhanga, Bhagalpur, West Champaran, Muzaffarpur, Sitamarhi, Khagaria, Sheohar, Madhubani, East Champaran, Araria, Sharsha, Samastipur, Madhepura, Kisanganj, Katihar, Begusarai, Purnea, Vaishali, and Gopalganj (UNDP, 2004a).

Effects of the Disaster:

2,125 crore people and 9,333 villages were impacted by these floods, with three million from the Darbhanga district, two million from Madhubani, and two million from Sitamarhi. The death toll reached 682, and the district of Darbhanga

reported the highest number of fatalities, 203. More than thirteen lakh dwellings and an estimated 26 lakh hectares of agricultural land were severely damaged (UNDP, 2004a; GoI, 2004).

Sewa International Activities:

Rescue and Relief Operations

In 18 districts of Bihar devastated by flooding, we operated 78 relief camps and 50 medical camps. Each relief camp provided between 2,000 and 5,000 food packs daily. More than eight million food packets, 281,000 kilogrammes of food grains, and 27,000 clothing sets were supplied. In addition to food, water and medicine were also provided in these camps. Fifty medical camps were established, serving between 400 and 500 patients every day. Aided by more than 1,200 local volunteers, the "Badh Peedit Sahayata Samiti" was founded to organise relief efforts.

Rehabilitation and Recovery Operations

As the flood waters receded, 400 severely impacted families were identified and each was given a low-cost home covering four districts. Sixty semi-permanent dwellings were developed in the Muzaffarpur district of northern Bihar.

Our Partners:

Ground Implementers

Sewa Bharati, Bihar was our ground partner for the relief and rehabilitation work.

Year 2004 Tsunami

About the Disaster:

On June 26, 2004, a 9.3-magnitude undersea earthquake off the coast of Sumatra in the Indian Ocean caused a 100-foot-tall tsunami/seismic sea wave travelling at over 900 miles per hour. In the nine hours following the earthquake, fourteen aftershocks with magnitudes ranging from 5.7 to 7.3 occurred along an arc extending from Sumatra to Nicobar and the Andaman Islands (AIDR, n.d.; TGGLP, 2009; Chadha, 2016).

It affected the coasts of Tamil Nadu (TN), Kerala, Andhra Pradesh, Pondicherry, and the Andaman and Nicobar Islands of India (Singh, n.d.).

Source: Reuters, 2019
<https://www.ndtv.com/world-news>

Effects of the Disaster:

The disaster's effects were catastrophic. Then, the Secretary-General of the United Nations, Kofi Annan, stated that this calamity spanned continents, cultures, and time zones, and that the fatalities and destruction were "so cruel, so swift, and so extensive" that it is still difficult to completely fathom. The energy released by the Indian Ocean was comparable to 550 million Hiroshima atomic bombs. The entire world vibrated up to one centimetre. The sea then abruptly retreated from the shore and began to surge in waves as tall as three-story buildings, accelerating to more than 600 kilometres per hour and barreling one-fifth of the way around the planet.

More than 2,28,000 individuals perished in 14 countries in Southeast Asia, South Asia, and even Africa; the majority were women (in some places, three times as many as men), the elderly, and children. There were citizens from forty nations among the deceased, and the damage totaled about $10 billion. Approximately 2.5 million people were affected, losing their family, homes, and even meagre means of subsistence. All of these people were already vulnerable, with many of them suffering from chronic poverty, vast inequities within their societies, relocation, environmental problems caused by overfishing and deforestation, breaches of human rights, and protracted armed conflicts. Especially those led by women were pushed deeper into poverty. The tsunami was the most damaging event of its sort in recorded history (TGGLP, 2009).

According to the official tally, 10,136 persons perished in India. However, unofficial estimates indicate that the actual number may have exceeded 18,000 individuals. Most casualties were reported in Tamil Nadu, and the Andaman and Nicobar Islands were the second most impacted region in India, with over 1,300 deaths and over 5,500 missing (Chadha, 2016; The Indian Express, 2019).

This calamity had a particularly profound effect on women. According to government figures, in Nagapattinam, the worst-affected district of Tamil Nadu in South India, 2,406 women died compared to 1,884 men. In Cuddalore, India, there were nearly three times as many female deaths as male deaths, with 391 female deaths compared to 146 male deaths. In the Pachaankuppam community, only females perished. In Cuddalore's Devanampattinam hamlet, for example, 42 women perished compared to 21 men (Oxfam

International, 2005). This was primarily due to the fact that women left behind in the villages were unaware of the issued warnings due to limited connectivity with the outside world. Men, on the other hand, were able to heed the warnings and rescue themselves when they went to work.

In 1,089 villages, a total of 27,92 lakh people were affected. The tsunami damaged more than 2.35 million homes. People also lost their means of subsistence, including 83,788 boats, 39,035 hectares of agricultural land, and 31,755 livestock. In these places, the schools, primary health care facilities, drinking water supply, anganwadi, and other community assets were destroyed. There was extensive damage to the infrastructure, including the maritime industry, especially in the islands, where harbours and piers served as the islands' lifelines. The roads and bridges, as well as the electrical and communication systems, sustained significant damage.

In terms of money, the damage was assessed at INR 11,544.91 billion — INR 342.67 billion in Andhra Pradesh, INR 2371.02 billion in Kerala, INR 4528.66 billion in Tamil Nadu, INR 466 billion in Pondicherry, and INR 3836.56 billion in Andaman & Nicobar Islands (GoI, 2005).

Sewa International Activities:

Rescue and Relief Operations

Sewa International rapidly mobilised a team of 5,824 volunteers, including 5,514 male volunteers and 300 female volunteers. 115 persons were rescued from the jaws of death. They recovered 1,800 of the 3,378 bodies found in Nagapattinam. Over a thousand unidentified bodies were given solemn final rites. For nearly three weeks, fifteen assistance stations ran around-the-clock, feeding 30,000 people every day for fifteen days. We delivered 93 tonnes of rice, 10 tonnes of dal (lentils), 16 tonnes of veggies, and 5,000,000 litres of bottled water. We also gave 26,860 families survival packages containing critical necessities. In addition, 18,000 mats and 10,000 blankets were handed to the sufferers. In addition, medical services were supplied to the

victims by the mobilisation of 75 physicians and five ambulances for medical relief activities. 113 villages were offered trauma recovery-focused counselling, particularly for women and children.

In Tamil Nadu, the worst-affected state, 125 relief camps were established to distribute relief supplies to more than 25,000 families. We organised 68 medical camps in 13 of the state's afflicted regions. Thirty counsellors provided counselling sessions for traumatised victims across the state.

In Andhra Pradesh, where the loss of livelihoods was greater than the loss of human life, 5,000 fishing nets and 300 boats were given as donations. Also granted was financial support for the repair of fishing nets and diesel engines used on boats. For about 3,500 families, temporary shelters were constructed.

More than 5,000 people in Kerala received fishing nets and around 150 boats. Team of twenty physicians were also involved in relief efforts.

teacher and distributing educational materials to the children of those villages. The van visited 18 locations per week, or three locations per day. With the aid of a doctor and a medical assistant, the mobile medical van frequently operated in the Kakinada district, providing medical care to over 30 communities.

In Bakultala, Port Blair, we built a hostel for 100 female students and renovated and rebuilt more than 250 homes in the Andaman and Nicobar Islands.

In an effort to restore fishermen's faith and encourage their return to the sea, a Ganga-Mata Yatra was conducted from Chennai to Kanyakumari. The victims of the devastating tsunami were honoured by the construction of a memorial.

Rehabilitation and Recovery Operations

Recognizing the extensive damage to both public and private infrastructure, as well as the victims' inability to rebuild their homes due to the loss of means of subsistence, we constructed a number of temporary and permanent houses as well as other infrastructure for the tsunami victims and the surrounding community. About 600 homes were constructed in Tamil Nadu, and 100 in Kerala. Another 1,200 temporary housing units were constructed in Tamil Nadu.

We also rebuilt a damaged temple in Poompuhar, an Anbu Illam (a shelter for poor children) in the Tamil Nadu district of Nagapattinam, and vocational training centres in Nagarkoil and Simlivillai. In addition, we began a drinking water project in Edavanna Kadu, Maya Bazar, Kerala. We established a mobile school in the Andhra Pradesh district of Nellore and a mobile medical van in the Kakinada region. The school operated six days per week, travelling to remote hamlets with a

Our Partners

Donor Agencies

Sewa International UK raised funds for the rehabilitation projects.

Ground Implementers

Sewa Bharathi Tamil Nadu, Jan Sankshema Samithi, Vivekanand Kendra, Maneri Sewa Ashram, Vanavasi Kalyan Ashram, and Sewa Bharathi Andhra Pradesh were our ground partners.

extensive property destruction. The earthquake also impacted portions of Punjab and Himachal Pradesh, as well as the majority of North India (Khurana, 2005).

Dr R Balasubramaniam, Member-HR, Capacity Building Commission, Govt of India
Founder & President, Swami Vivekananda Youth Movement

"More than a century ago Swami Vivekananda proclaimed that 'Seva' (Service) and 'Tyaga had to be the National Ideals of India. Sewa International has been pursuing these ideals over the last two decades. Whether it is educating tribal children in remote locations of India or being one of the first responders in a natural disaster, Sewa and their network of partners are a benchmark for civil society organisations around the world. Their professionalism manifests in their program efficiency and we are proud to be working together to build a resurgent India."

Year 2005 Jammu & Kashmir Earthquake

About the Disaster:

On October 8, 2005, a magnitude 7.6 earthquake with an epicentre roughly nine kilometres northeast of the Pakistani city of Muzaffarabad was observed. There were afterwards 38 aftershocks of magnitude greater than 5.0, including two of magnitude 6.0. The most recent aftershock occurred at 23:05 on 11 October 2005 and had a magnitude of 5. Large portions of Jammu & Kashmir were devastated, resulting in fatalities and

Effects of the Disaster:

Adverse meteorological conditions (extensive rainfall/thunderstorms/moderate snowfall) exacerbated the effects of the disaster and hampered rescue and relief efforts. Due to the earthquake, there were approximately 1,309 fatalities and 6,622 injuries reported. In addition to the extensive damage to the infrastructure, 37,607 structures and homes were also affected. Approximately 30,000 families did not have adequate housing (Khurana, 2005a; ADB, et al., 2006).

Sewa International Activities:

Rescue and Relief Operations

As soon as the news of the earthquake was received, Sewa International assembled a team of volunteers. The mission of the team was to assess the loss and the immediate needs of those affected. Sewa International decided to provide shelters (tents), warm clothing, blankets, food, and medicine as soon as possible, as they were the most urgently required. Volunteers from Sewa International worked side by side with military personnel to provide aid to villages in border regions. Nearly 1,500 blankets, utensils, clothes, etc. were distributed to the victims of the earthquake in the most inaccessible areas, where not even government agencies had previously been able to reach. In addition, 95 families received financial aid to repair their damaged homes.

In addition, medical services were initiated for 15 days in the affected areas, with six medical camps treating patients and providing them with free medication. A mobile medical van with a team of qualified doctors and other medical personnel, containing medicines worth INR 50,000 and offering free consultations and medicines, was also launched, covering approximately 37 villages in Titwal and Tangdhar in the Uri sector and Kupwara sector. In a hostile terrain with inadequate transportation, a mobile medical van with a team of expert medical professionals served not only the health needs of the affected areas, but also transported relief supplies there.

Rehabilitation and Recovery Operations

Sewa International built a community hall-rescue centre, a school, and a dispensary at three locations in Poonch, Jammu, and three locations in Kashmir, Kashmir (Uri, Tangdhar, and Kupwara). At Katra, the foothills of the Mata Vaishno Devi shrine, another boys' hostel was constructed to house 50 students from the families of earthquake victims. Sewa International constructed two additional schools in Jammu's Kishtwar District.

Our Partners:

Donor Agencies

IDRF provided the financial support.

Ground Implementers

Sewa Bharati, Jammu and Kashmir was our ground partner.

Year 2006 Surat Floods

About the Disaster:

In August 2006, a number of rivers exceeded their danger levels as a result of persistent rainfall. Tapti River surpassed the Highest Flood Level (HFL) mark and seven Gujarat districts were flooded as a result of heavy rains, with Surat being the worst affected district (UNDP, 2006; UNDP, 2006a).

John Cornyn, Texas Senator USA

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"Sewa means selfless service and I think that is very important. I am so appreciative of Sea international USA organizing and serving the people of Alief and all others coming in."

Effects of the Disaster:

The flood was the largest in thirty-four years. In the Surat division, all communication channels were severed due to the flood situation. In the Surat district, approximately 100 villages and close to 30,000,000 people were impacted. More than 60 percent of the city of Surat was submerged, and more than 20 lakh people were trapped in their own or neighbouring homes for four days and nights without food, water, milk, electricity, or communication with the outside world. About 150 people were killed and the vibrant city's economy was paralysed for nearly a month, resulting in a loss of more than Rs 21,000 crores (UNDP, 2006; UNDP, 2006a; Ramesh, 2006; PCGF , 2007).

Sewa International Activities:

Sewa International responded to the catastrophe by amassing relief supplies to meet the needs of those affected. Four relief centres were immediately established in Surat to meet the needs of the victims. Our volunteers distributed approximately 80,000 food packets, 4,500 milk sachets, and 1,111,000 water sachets to approximately 5,225 people in flood-affected areas. A temporary shelter was established for those affected at Sishu Mandir School, Vrindavan Hall, and Uma Bhawan.

We established 50 centres to prepare food packets for distribution in Ahmedabad, where 10,000 water sachets, 100 kilogrammes of pickles, 900 packets of candles, 600 packets of matchboxes, and 165 bundles of rope were used to make relief kits.

Our Partners:

Ground Implementers

Sewa Bharati, Gujarat was our ground partner.

Year 2006 Maharashtra Flash Floods

About the Disaster:

Due to extremely heavy rainfall in August 2006, 29 districts of Maharashtra were flooded. Heavy precipitation fell on the Konkan and Vidarbha regions, and the Godavari river surpassed its danger level (UNDP, 2006; UNDP, 2006b).

Effects of the Disaster:

The death toll in Maharashtra reached 255, and heavy rains affected 9,650 villages, 13 cities, 209 tehsils, and 29 districts. Only six districts in Maharashtra were untouched by the heavy downpours. Around 150,000 individuals were displaced (UNDP, 2006b; Ramesh, 2006a; The Economic Times, 2006).

Sewa International Activities:

We coordinated rescue and relief efforts at multiple locations throughout the flood-ravaged state. Thousands of affected individuals in Mumbai were supplied with water bottles, food packets, food grains, and medicine. During floods in Nanded, a city located on the banks of the river Godavari, residents of four neighbourhoods (Ganga chawl, Degav chawl, Nallagutta, and Gol chawl) were relocated to government schools, where our volunteers distributed food and water. After the water receded, these areas were all cleaned and disinfected.

 In addition, health camps were organised in twenty-one villages. Two medical vans on wheels were pressed into service. The distribution of necessities such as utensils, clothing, and bedding, etc.

Our Partners:

Ground Implementers

Jankalyan Samiti, Maharashtra was our ground partner.

Year 2006 Godavari Floods

About the Disaster:

August 2006 was marked by persistent heavy rains, which caused the river Godavari at Bhadrachalam to reach its highest flood level in twenty years (EFICOR, 2006). The amount of water discharged into the sea on August 7 was 28,50,664 cusecs (The Hans India, 2019). Rains and floods affected sixteen districts, including Khammam, Srikakulam, Vizianagaram, Visakhapatnam, East and West Godavari, Hyderabad, Chandrapur, Adilabad, Karimnagar, Warangal, the Vidarbha region, and Bhadrachalam (DFO, 2006; Outlook, 2006; EPTRI, 2012).

Effects of the Disaster:

More than 31 million people in 6,333 villages across 16 districts in Andhra Pradesh were impacted. It was responsible for 165 deaths. Over 5,433,000 individuals were displaced. Women, children, and tribal people whose thatched homes were destroyed were the hardest hit.

Hundreds of villages in the districts of East Godavari, West Godavari, and Khammam remained cut off, and food and water packets were dropped from helicopters. Nearly 11,300,000 people were evacuated from low-lying areas in Andhra Pradesh and housed in 435 relief camps located throughout the state. The state suffered losses of 20,530 animals, 2,76,567 structures, and 2,19,897 hectares of crops. The loss was estimated to be worth INR 3,455,23 crores (DFO, 2006; Outlook, 2006; Action Aid, 2006; EPTRI, 2012).

Sewa International Activities:

Volunteers rushed to the affected villages and distributed, via boats, 25 quintals of rice, 2 quintals of dal, 5,000 food packets, 5,000 milk packets, 6,000 bread packets, and 10,000 drinking water sachets over the course of three days.

For eight days, Sewa organised a relief camp for 2,000 victims. In the Chintoor and VR Puram Mandals of the Khammam District, approximately 1,600 patients were treated.

Our Partners:

Ground Implementers

Sewa Bharti, Bharatiya Kisan Sangh, and Bharat Vikas Parishad were our ground partners.

Sewa International Activities:

Sewa volunteers began operating relief centres in six different neighbourhoods of Darbhanga town on July 31, after conducting an assessment of the extent of damage and loss that had occurred. A considerable number of people who had been forced to leave their homes made their way to the relief centres, where they were given food, clothing, a place to stay temporarily, and medicines that had been gathered as part of a campaign that went door to door. To combat the spread of disease, mobile medical clinics were set up at regular intervals in the areas that were impacted.

Our Partners:

Ground Implementers:

Sewa Bharti, Bihar was our ground supporter.

Year 2007 Bihar Floods

About the Disaster:

Even though Bihar is the most flood-prone state in India, the flooding that occurred between July and September 2007 was unprecedented in its intensity, unpredictability, un-seasonality in its timing, its spatial coverage, its successive spells, and its extended duration. It affected twenty districts out of thirty-six districts, 225 blocks, and 9,939 villages (Kumar, et al., 2013).

Effects of the Disaster:

Approximately two billion humans and eleven million animals were affected, according to reports. Approximately 510 humans and 559 animals perished in the floods. Approximately 5.12 lakh homes were damaged, resulting in a loss of Rs. 558.51 crores. The inundated water exacerbated public health risks throughout the entire region, and people lacked access to medical care. Subsequently, an epidemic of diarrhoea, jaundice, and influenza engulfed the entirety of Bihar's flood-affected areas (Kumar, et al., 2013).

Year 2008 Kosi Floods

About the Disaster:

Supaul, Saharsa, Madhepura, Araria, and Purnia were the five districts that were significantly impacted by the flood that occurred in August of 2008. (Government of Bihar, et al., 2010).

Effects of the Disaster:

There were 33 million people affected. Close to 3,700 square kilometres were submerged, affecting 412 panchayats and 993 villages. After the disaster, approximately 493 people perished and 3,500 were reported missing. The flood prompted one of the largest evacuation efforts, with more than a million people evacuated and around 4,600,000 people housed in 360 relief camps. Homes, schools, highways, and hospitals were all destroyed. In the five affected districts, a total of 2,36,632 dwellings were either completely or partially destroyed in rural blocks. There were reports of significant damage to infrastructure, including rural roads, culverts, and bridges, with about 1,800 kilometres of rural roads and 1,100 bridges and culverts affected. All types of routes, including major highways and rural roads, were affected. Numerous bridges have collapsed, rendering them impassable. Due to silt deposition and the loss of cattle, farm working capital, and other farm assets (e.g. tube wells, farm equipment, etc.), the floods caused a considerable drop in agricultural production (Government of Bihar, et al., 2010).

Sewa International Activities:

Rescue and Relief Operations

Our volunteers began giving immediate aid by establishing seven major rescue and relief centres and twenty-one sub-centres in various flood-affected districts and feeding over 30,000 people on a regular basis through mass feeding camps. Except for a few government agencies, Sewa International was the sole organisation to run its

Source: Bihartimes, 2016. <http://www.bihartimes.in/Newsbihar

assistance facilities for forty days until the situation returned to normal. In December 2008, Sewa purchased a mobile medical van to provide flood victims with health services and to bring a team of doctors and paramedics to their doorsteps.

Rehabilitation and Recovery Operations

Sewa International identified 600 families in the districts of Supaul, Madhepura, Saharsa, and Araria with the intention of rehabilitating the most severely impacted families, and delivered a family package consisting of everyday utility items, food grains, and clothing. In addition, artisans of the village were provided tools and equipment to provide a means of subsistence during the unjust situation.

Sewa International built a boarding school in the Madhepura District community of Bihariganj. The project was a collaboration between Sewa International and Bharti Shiksha Samiti, Bihar, with Sewa International tasked with educating boys and girls affected by the flood and providing a residential facility for those who were either orphaned or had lost their family breadwinners as a result of the flood. We also constructed a hospital with six beds and a shrine on the school's grounds.

Impact:

A number of children benefited from the project's provision of free educational and living opportunities. People were given a glimmer of hope by the construction of a school, hospital, and temple on the same property. The temple in particular served as a communal centre in which people could congregate.

Our Partners:

Ground Implementers

Bharti Shiksha Samiti, Bihar and Sewa Bharati, Bihar were our ground partners.

Year 2009 Andhra Pradesh Floods

About the Disaster:

In October 2009, the catastrophic flooding of the Krishna River wrought havoc in the Andhra Pradesh districts of Kurnool, Krishna, Guntur, and Nalgonda as enormous quantities of water were released from the Nagarjunasagar dam and Vijayawada's Prakasam Barrage, affecting five districts (UNCT India, 2009; Sphere India, 2009).

Effects of the Disaster:

The sudden floods swamped around 400 villages, including every settlement on an island. In five districts of Andhra Pradesh, almost 13 lakh people were affected by record flooding in the Krishna river basin, which killed over sixty-five deaths. Officials indicate that 6,295 animals killed in the five impacted districts, with 6,189 cattle perish in the worst-hit Kurnool district alone. 478 communities in 87 "mandals" were severely affected by the worst flood in more than a century (UNCT India, 2009; Sphere India, 2009).

Sewa International Activities:

Rescue and Relief Operations:

Local volunteers responded immediately to the emergency and began evacuating individuals to safer locations before giving them with food and water. Until the water retreated, Sewa International funded five mass food camps serving over 10,000 people for over a week. After evacuating the afflicted population to safer locations, Sewa International provided approximately 12 truckloads of humanitarian supplies.

Rehabilitation and Recovery Operations

Sewa International constructed five community development centres in five villages in the district of Kurnool for the benefit of 15,700 flood-affected residents. Sewa operated a health centre in the morning, a women's empowerment programme in the afternoon, and a study centre in the evening at each community centre.

Sewa International has picked 32 communities servicing 59,500 flood victims in the district of Mahboobnagar. 17 of the 32 villages lacked access

to public health facilities, with the nearest facility located 10 kilometres distant. In response, Sewa International constructed two mobile dispensaries to serve the health needs of the affected residents in these 17 towns. In addition, seven community development centres were erected to function as health centres, women's empowerment centres, and study centres for the region's children.

Dr. Marcus R. Glass Pastor, New Seasons Church in Albany

"Kudos to the entire Sewa International team for making excellent efforts at the time of Covid-19."

Impact

Through its efforts in rehabilitation, Sewa International provided flood victims with vocational training and other means of subsistence as part of its assistance to the victims of the disaster.

Our Partners:

Ground Implementers

Sangha Mitra Seva Samithi in the Kurnool district and Grama Bharathi in the Mehboobnagar district, and Sewa Bharati, Andhra Pradesh were our ground partners.

Year 2009 Karnataka Floods

About the Disaster:

In October 2009, flooding affected 15 districts in Karnataka. For the first time in sixty years, the prolonged presence of cyclonic winds over the Bay of Bengal and their progression towards the Deccan Plateau caused torrential downpours in the persistently drought-prone areas of North Karnataka. The discharge of water from three dams on the Krishna and Tungabhadra rivers in Karnataka flooded a number of villages and cities in the neighbouring states. Parts of the Bijapur, Gulbarga, and Raichur districts of Karnataka were hit the hardest by the downpour and flooding (UNCT India, 2009).

Effects of the Disaster:

From September 29 to October 2, heavy rains induced by a depression in the Bay of Bengal and low pressure from the Arabian Sea killed 161 people and affected two million in North Karnataka. For the first time in sixty years, the prolonged presence of cyclonic winds over the Bay of Bengal and their progression towards the Deccan Plateau caused torrential downpours in the region's perennially drought-prone areas.

Sewa International Activities:

Local volunteers responded instantly and began rescuing and transporting individuals to safe locations. In addition, they established huge feeding camps and distributed humanitarian supplies. Over the course of a week, Sewa International supported five mass feeding camps and fed over 10,000 individuals.

Our Partners:

Ground Implementers

Sewa Bharati, Karnataka was our ground partner.

Year 2010 Haryana Floods

About the Disaster:

Ambala, Kurukshetra, and Kaithal districts were the most badly affected by the state's flash floods between July and September 2010. (Hindustan Times, 2010).

Effects of the Disaster:

The flooding in the Indian state of Haryana affected over four lakh people in over six hundred villages. The majority of individuals impacted resided in Ambala, Kurukshetra, Kaithal, Sangrur, Fatehabad, and Sirsa districts. Three hundred thousand hectares of agricultural land were damaged by flooding in the region (The Hindu, 2010; Saini & Kaushik, 2012).

Source: IndiaTV 2010. <https://www.indiatvnews.com/photos/haryana-punjab-floods-155.153>

Sewa International Activities:

Volunteers from Sewa International entered inaccessible and completely inundated areas to deliver relief supplies like as drinking water, food packages, medicines, etc. to those in need. Temporary shelter was m ade available till the water level decreased. Gita Rangam Sangh

Karyalaya in Kurukshetra remained the relief's primary nucleus. Not only did the volunteers cook food for the victims, but they also visited several communities to gather necessities for the flood victims.

Our Partners:

Ground Implementers

Gita Rangam Sangh Karyalaya, Kurukshetra was our ground partner.

Year 2010 Leh Cloudburst

About the Disaster:

The Leh district in the Ladakh region of northwestern India had a natural disaster on August 5, 2010, when a cloudburst caused debris flows. The region's topography consists of granites and loose sediments that are easily eroded by heavy precipitation, causing mudslides and sand floods (Mueller, et al., 2019).

Effects of the Disaster:

In two hours, fourteen inches of rain fell, killing more than 115 people, injuring more than 500, wrecking homes, and causing damage to crops, the hospital, communication infrastructure, the bus station, and important roadways. Leh's municipal hospital was rendered completely inoperable (Mueller, et al., 2019; Sharma, 2018; Gupta, et al., 2012).

Sewa International Activities:

Our volunteers launched full-scale rescue and relief operations, creating a relief camp in Leh to house the devastated population. Some cash donations were moved promptly from Jammu to the group of volunteers operating in Leh as an emergency measure. They purchased whatever relief supplies

were available in adjacent markets and began distributing them. On the disaster site, 2,000 blankets, a set of cooking utensils for 500 people, 2,000 articles of clothing, and 500 pairs of shoes were distributed.

Our Partners:

Ground Implementers

Sewa Bharati, Ladakh Aapada Sahayata Samiti, Akhil Bharatiya Vidyarathi Parishad (ABVP) and the Vanvasi Kalyan Ashram were our ground partners.

Congressman Al Green, Representative for Texas's 9th congressional district, USA

"Sewa means selfless service and I think that is very important. I am so appreciative of Sewa International USA organizing and serving the people of Alief and all others coming in."

Year 2011 Jammu & Kashmir Floods

About the Disaster:

Jammu and Kashmir was impacted by severe rainfall, high-velocity winds, and a flash flood in August and September 2011.

Effects of the Disaster:

The floods severely damaged the roads and uprooted the trees, leading to the collapse of several homes and the flooding of numerous low-lying areas. The power supply was interrupted for a few hours due to numerous downed power poles (Watts, 2011).

Sewa International Activities:

Sewa International distributed more than 13,000 blankets, 250 solar lamps, 20,000 food packets, 1,200 utensils, 5,200 kilos of rice, 16 bundles of instant noodles, 20 quintals of flour, 2,280 tarpaulins, six bundles of medicines, thousands of bottles of mineral water, milk & juice in eight

districts of the Jammu and Kashmir region, including Anantnag, Vidhi, Srinagar, Baramula, Naag. We held 128 medical camps in 84 villages around the Kashmir region. 200 families received a total of 3,100 rupees each family as financial aid for the reconstruction of their homes.

Our Partners:

Ground Implementers

Jammu Kashmir Sahayata Samiti, Sewa Bharati Jammu and Kashmir, and Jammu and Kashmir Peace Foundation were our ground partners.

Year 2011 Sikkim Earthquake

About the Disaster:

On September 18, 2011, a magnitude 6.9 earthquake was followed by three aftershocks of magnitude greater than 4.2. Affected were the four districts of Sikkim as well as the Kalimpong and Siliguri divisions of the Darjeeling district of West Bengal. The majority of effects were felt in North Sikkim (Dutta, et al., 2012; DMMC, 2012).

Effects of the Disaster:

More than 34,000 structures, 7,500 hectares of agricultural land, and more than 400 landslides were damaged. The anticipated overall loss amounted to around $1.7 billion U.S. Nearly 710 were hurt, 60 were killed, and 525 cattle and 808 other animals perished (Ghosh & Parkash, 2012).

Sewa International Activities:

There were somewhere around 60 volunteers who made it to Sikkim with the requisite relief supplies. A base camp was built at Singtam for the casualties. A donation of $10,000 in the form of emergency relief has been made by Sewa International USA.

Our Partners:

`Donor Agencies`

Sewa International USA supported us in raising financial aid.

`Ground Implementers`

Sewa Bharti, Sikkim was our ground partner.

Year 2011 Uttar Pradesh Floods

About the Disaster:

The state of Uttar Pradesh experienced flooding in 25 of its districts between July 2011 and September 2011 as a result of severe rainfall. The districts of Fatehgarh, Faizabad, Moradabad, Shahjahanpur, Bareilly, Dilibhit, Bahraich, Gonda, Barabanki, Lakhimpur Kheri, and Balrampur were the ones that were impacted the most severely by the floods (TOI, 2011).

Effects of the Disaster:

More than two thousand villages were wiped out, approximately sixteen lakh people were impacted, and one hundred people were killed when floods hit (TOI, 2011).

Sewa International Activities:

Our group of seven medical professionals worked nonstop in 12 different towns and provided care to 12,000 flood victims who were housed in rescue camps. The people who were affected by the flood were given mosquito nets, woollen blankets, buckets, plastic mats, torches or flash lights, candles, matchboxes, sarees, shirts, pants, mosquito coils, and sugar.

Our Partners:

`Ground Implementers`

Sewa Bharati, Lakhimpur partnered with us.

Year 2011 Cyclone Thane

About the Disaster:

In the Bay of Bengal on the 30th of December in 2011, a windstorm with maximum sustained winds of 65 knots (120 kilometres per hour) and gusts up to 80 knots (150 kilometres per hour) developed (NASA GSFC, 2011). Villupuram, Cuddalore, Kanchipuram, Thiruvallur, Chennai, Nagapattinam, Thiruvarur, and Thanjavur, as well as Puducherry, and the districts of Chittoor and south coastal Andhra in the Rayalaseema region were among the regions that were impacted (Punithavathi, et al., 2012).

Effects of the Disaster:

Due to the fact that hundreds of uprooted trees blocked highways and the power supply was completely disrupted, the Puducherry region was cut off from the neighbouring districts of Tamil Nadu until the evening. The situation was particularly dire in the Cuddalore area of Tamil Nadu. Across the coastal regions of Tamil Nadu and Puducherry, the high-speed wind damaged standing crops and uprooted hundreds of trees, electric poles, traffic signal poles, and mobile

phone towers. It also brought down power poles and traffic signal poles. A total of forty-six individuals and almost sixty thousand animals were killed. Damage was done to nearly 3,49,217 different towns (Nair, 2016).

Sewa International Activities:

Because of the damage to the roadways, the emergency services had a difficult time getting to the impacted communities. Volunteers from our organisation cleaned away the fallen trees and electric poles, which made it easier for power and electricity workers to get to the affected areas of Puducherry town and rapidly restore electricity

Source: TheWorld, 2011 <https://theworld.org/stories/2011-12-30/cyclone-thane-hits-indias-southeast-coast>

service. Matchboxes, candles, mosquito coils, bread packets, and water packets were given out to a total of 1,000 homes in the villages surrounding Puducherry's Villiyanur, Thirukannur, and Kalapattu Panchayats. In the town of Puducherry itself, mosquito coils were given out to 600 homes in five different locations. In the district of Cuddalore, kits containing three kilogrammes of rice were given out to 1,200 households in the villages of Vandipalayam and Pudupallayam. These

kits also included candles, matchboxes, mosquito coils, and other items. Food was supplied in the form of packets in North Chennai to the five fishing hamlets that were hit the worst. Each food packet served one hundred people over the course of two days.

Our Partners:

Ground Implementers

Sewa Bharati, Tamil Nadu was the partner for relief work.

Sh. K.G. (Shyam) Parande, General Secretary, Sewa International

"Sewa International is based on the principle of 'sewa hi parmo dharma', which means 'service is the highest religion'. As we commemorate 25 years of our service, our presence is felt in more than 25 countries. Started with disaster management, Sewa International expanded to address every aspect of relief and rehabilitation, including healthcare, agriculture, livelihood, education, and the environment.

Future generations will remember that countries with sophisticated medical equipment and world class medical facilities were short on ventilators, medicines, doctors, and hospitals, when a deadly pandemic hit. We have served with humility and dedication during and after the pandemic to create a world with a vision of healthcare for all. "

Year 2013 Uttarakhand Floods

About the Disaster:

A multi-day downpour (cloudbursts and heavy rainfall) brought early and torrential rainfall to much of the mountainous region on June 17, 2013, which triggered the collapse of a glacial lake dam and caused heavy flooding and landslides, resulting in the country's worst disaster since the 2004 tsunami. This disaster occurred as a result of the country's worst disaster since the 2004 tsunami (World Bank and GFDRR, 2014). Twelve out of the state's thirteen districts were impacted by it (Indian Red Cross, 2013). Bageshwar, Chamoli, Pithoragarh, and Rudraprayag were some of the districts that were hit the hardest by this natural calamity. Uttarkashi was also among the hardest hit. Flooded rivers carrying large amounts of debris and sediment that made their way downstream caused more destruction in the lower districts of Uttarakhand, albeit to a lesser extent as compared to the upper Himalayan districts of the state (Dani & Motwani, 2013).

Effects of the Disaster:

The floods occurred during the peak tourist and pilgrimage season, which greatly increased the number of casualties, the missing, and the population affected by the calamity. The calamity had a significant impact on the state's northern area. There were claims that entire villages and communities, such as Gaurikund and the market town of Rambara, a transition point to Kedarnath, were obliterated, while the market town of Sonprayag sustained severe damage and fatalities. Although the Kedarnath Temple itself was not harmed, its base was swamped with water, mud, and rocks as a result of landslides, causing extensive damage. Numerous hotels, inns, and shops in the vicinity of the temple in Kedarnath township were destroyed (Dani & Motwani, 2013).

It took over 4,000 lives and impacted roughly a million individuals (World Bank and GFDRR, 2014). The analysis revealed the degree of sector-specific damage caused by the flooding, including an anticipated INR 10 billion loss in tourism earnings for the year and more than INR 380 billion in total economic losses by the end of the recovery period (Dani & Motwani, 2013).

According to the Government of Uttarakhand, 3,077 government buildings in urban and rural areas were damaged. In addition, there were losses of personal property, which have not been estimated due to a lack of available data (Satendra, et al., 2015). Mules are the most efficient mode of moving people and goods in the Himalayan Mountains. Before the disasters, about 12,000 mules owned by 8,000 owners served the area. The floods caused the death of about 9,000 mules. Due to this loss in these steep regions, the problem of transportation has become a major challenge.

Sewa International Activities:

Rescue and Relief Operations

As soon as we were made aware of the severity of the situation, Sewa International and Uttaranchal Daivi Apada Peedit Sahayata Samiti began providing immediate relief and rescue services. These services included food distribution camps, medical camps, rescue assistance, and other similar initiatives. Despite the fact that an alarm

was issued, no one believed that the situation could actually get that serious. As a result of the natural disaster, communication was lost with the other areas of the state and the rest of the country. The senior volunteers of Sewa immediately began conducting helicopter surveys upon hearing the news of the accident in order to determine the scope of the catastrophe as soon as the entire region lost network access. Operation Surya was the name given to this endeavour.

Volunteers immediately began making plans for rescue and relief operations in the Kedarnath region as soon as it was determined how extensive the destruction was. First and foremost on the agenda was the task of rescuing persons who were trapped in various regions. The primary focus shifted to making sure that the victims had access to medical care, shelter, and food. There were around 5,000 volunteers who worked diligently in a variety of regions, including the lower valleys and valleys that had been impacted by flooding. Volunteers moved residents and tourists who had been left without shelter as a result of the flood to safer locations or temporary shelters. The flood ravaged the area. Food 'langars,' also known as distribution centres, were established so that victims who had been famished before to the rescue operation could get food that had been cooked. In addition, clothing was prepared for the victims, particularly for the mothers and children who had been affected. Casualties that required emergency medical attention were transported to Dehradun from the area where they were rescued. Together, members of the military and volunteers with Sewa tried to rescue persons who had become stuck. Volunteers from Sewa not only guaranteed that there was an adequate supply of meals and other critical goods, but they also offered essential rescue information to the members of the army when it was discovered that officials from the local administration were gone.

In the aftermath of this calamity, it was a difficult chore to collect the remains and keep track of their identities. Our volunteers worked tirelessly throughout the day and night to assist in bringing closure to a time that was exceptionally trying for individuals who had lost family members and loved ones. They didn't lose sight of the fact that time

was of the essence, and they worked really hard to complete the mission. They came across several dead bodies that were in a decomposed state as they travelled through the bush in an effort to deliver food to the Rudraprayag district. These individuals had either starved to death owing to a lack of water and food or had drowned in the water. Volunteers were aware that the abandoned forests had many more dead remains; nonetheless, it was difficult to recover the bodies. Keeping their emotional composure while gathering dead bodies was a difficult duty that the volunteers of Sewa did with a considerable measure of sincerity and integrity.

Volunteers dispersed items such as dried beans, rice, sugar, tea, spices, clothing, blankets, milk powder, water bottles, medicines, biscuits, and other material and civil supplies. The volunteers, in addition to supplying drugs, also led classes in acupressure, yoga, and meditation as a part of the counselling they provided.

Because of our robust presence on the ground and our capacity to collect data from all of the affected regions, we were able to offer each community with the necessary resources to assist them in regaining their footing and getting back on their feet. We were the first people on the scene of the crisis, so we had access to the knowledge and the human resources necessary to function as mediators for the distribution of aid between the communities and the various organisations.

Around 10,000 individuals received consistent access to food and medical care in the town of Chamba. In the community of Joshiyada, over seventy homes were obliterated, leading to a large number of fatalities. We gave a total of 35 tents to the impacted households. In the area of Gupta Kashi, volunteers located various families impacted by the flood in the surrounding villages and provided them with first aid, medications, counselling, and relief supplies. Of these families, 24 were located in the village of Lohanda, 18 were located in the village of Tilanga, and six were located in the village of Dhanashu. Volunteers at the Narayana Koti, Rudraprayag relief camp found 27 children between the ages of six months and four years old who were either orphaned as a result of the floods or were left with their lone mother or grandparents. These children ranged in age from six months to four years. After then, the appropriate steps were taken to rehabilitate them. Even though the 91 kilometres of road that led from Maneri to Gangotri washed away, leaving no trace of the previous road, volunteers worked nonstop in Maneri to supply food for at least 1,000 pilgrims every day. From June 21st to June 24th, roughly 8,200 yatris and pilgrims were transported from Uttarkashi and Chinyali Saudh to Rishikesh using the vehicles that were available.

The floods had a significant impact on educational institutions like dorms and schools. The water destroyed one of our most important projects,
Sewashramis, a school with residential amenities that was located in Maneri (14 kilometres from Uttarkashi). Construction on this project began following the earthquake that occurred in 1991. The portion of the hostel that was already

standing was repurposed as a relief camp for those in need, which included the provision of food, medications, and shelter, among other things. This camp was the one that was closest to the Gangotri area, and soon after the floods people started flowing into it. Over 7,500 pilgrims as well as soldiers from the Indian Army were given with food around the clock for a period of seven days. Maneri Sewa Ashram Camp has had active participation from the inmates of Bhubaneshwari Ashram ever since the establishment of the camp. These inmates have assisted the camp in the preparation of meals.

Our volunteers encountered a wide range of challenges including the following:

1. As a result of the malfunction of the communication system, there was no provision made for alternative ways of communication. This resulted in a great deal of difficulty in communicating with the various volunteer teams and in spreading information.
2. A lack of knowledge and awareness about geography: the susceptible local populace was also uninformed of the geographical aspects of the area, which exacerbated their vulnerability to the danger of disaster.
3. The failure to develop a warning system resulted in the yatra continuing as planned despite an alarm having been issued due to heavy rainfall.
4. Inability to regulate the throng resulted in the creation of additional obstacles that made it more difficult to carry out the rescue and relief activities.

As a result of the disaster, the victims were in a state of high vulnerability, so psychological counselling was necessary. The volunteers were required to offer comfort to the victims, which made them emotionally vulnerable themselves. This prevented the volunteers from being of any assistance to the victims, who required a significant amount of care following their tragedy. Things did not begin to improve in this area until we had a conversation with a licenced psychologist who was able to instruct Sewa's volunteers on the most effective ways to deal with scenarios of this nature.

Women farmers from SHGs in the Uttarakhand community farm project work together to gather the produce.

Rehabilitation and Recovery Operations

Following the natural disaster that occurred in Uttarakhand, Sewa International conducted research in the local villages that were impacted by the event. One of our partner colleges in Mulya Gaon, which is located close to Rudraprayag, took in around two hundred students for a period of two years. It was determined that there was a significant population of college students and graduates who had not been successful in taking advantage of the opportunities that were made available to them as a result of their level of educational attainment. These young people had good intentions, but either lacked necessary abilities or had no idea what to do with their degree once they finished from high school. Both of these factors contributed to their unfortunate circumstances. As a consequence of this, Sewa International has made the decision to assist these individuals in improving their computer literacy, level of self-confidence, and the skills necessary to positively contribute to both their household and their community. A number of different rehabilitation initiatives were initiated in the state in order to establish long-term employment opportunities. A number of different skill training centres have been established, with some focusing on computer training, some on agricultural training, others on knitting and tailoring, and so on.

On January 14, 2014, our very first centre, which was located in Ukhimath and was given the name "Sewa Path," opened its doors to the community in the district of Rudraprayag. The purpose of the entire setup was to not only empower young people by increasing their level of education but also to support local business ventures. This was accomplished by obtaining all of the necessities, such as computer supplies, furniture, and so on, from the surrounding areas and from these local businesses.

AIG (Retd.) Kalyan Timsina

"In times of calamity, Sewa International and its partner organizations are actively engaged in bringing relief, in whatsoever measures, required for our fellow brethren and it is supported by International humanitarian organizations from Sewa USA and Sewa India."

Allison Carlock, Section Chief, Voluntary Agency Coordination, FEMA

"Sewa alone supported with over 800 volunteers across the country for vaccination efforts and through their efforts volunteers facilitated over 200,000 vaccinations throughout the nation, this is a shining example of the US coming together, united to tackle our challenges."

As part of Uttarakhand's model migrant village initiative, local skill development is being implemented.

The year 2014 saw the beginning of Sewa International's expansion of its rehabilitation activities into the districts of Rudraprayag and Chamoli. The concept of establishing communal farms was brought up during the course of conducting focus group conversations with the women of the village. Sewa International began concentrating its efforts on women's empowerment and the provision of chances for livelihood within the communities after seeing the potential of the idea. In order to start community farms, we started by organising the women into Self-Help Groups, also known as SGHs. These groups met in each village or between two and three villages to share information and explore ways to solve problems. The "Women Empowerment through Agriculture Program" was launched by Sewa International on April 18, 2014 in Chandrapuri, Rudraprayag. Since then, the programme has steadily expanded to other districts in the state of Uttarakhand. The plan was for these women to get free seeds, which they could use to grow a range of crops without making any initial financial investment. After the harvest, the women are able to sell the crops, at which point they are able to not only recoup their initial investment but also make a modest profit. These women are given the opportunity to participate in training, during which they are instructed by professionals and agricultural scientists. Because of the project's enormous level of success, it has evolved towards the establishment of a seed bank centre as well as demo centres. Up to this point, Sewa has been successful in forming 503 SHGs, which have together involved around 5,000 women.

In addition, the women receive training on how to maximise their earnings and increase their savings by participating in the SHGs' micro-financing programmes. Especially for enterprises with small workforces who frequently struggle due to a lack of cash or emergency demands, these SHGs can make sustainable financial planning and lending money a lot easier. This is especially true for businesses that have a limited number of employees. The options for marketing and selling produce are made available through additional market linkages made available by HIMSAMPADA, which is a farmer producer company. The community that

was mobilised received additional types of training for livelihoods, such as training in knitting and tailoring, among other things.

The full spectrum of rehabilitation work has been designed in its entirety on the basis of an in-depth analysis of the economic, social, and environmental problems that plague rural communities. The Sewa Kaushal Vikas Kendras (SKVK), which include six specialised units that deal with various domains, became the centre of the organisation. Sewa Sahas (Village Tourism and Disaster Management), Sewa Yuva Jyoti (Digital Literacy), Swasthya Sahyogi Sewa (Healthcare), Sewa Mahila Jyoti (Non-farm based livelihood), Sewa Krishi (Farm based livelihood), and Sewa Srujan (Volunteer Management) were the six areas that were highlighted (CBOs, institution building and livelihood). These six domains are intrinsic to the fundamental issues and concepts that underlie Sewa International's intervention; these concepts relate both to the rationale of rural development and the manner in which it is actualized. Sewa International's mission is to improve the lives of people living in rural areas.

Sewa International is of the opinion that rural development can only be successfully pursued at the local level, and that none of these other types of development are more important than local development, which involves making use of the full range of human and material resources that are available locally in order to address issues that have been identified. In other words, rural development should be carried out on a local level because the people living in the area are the ones who have the best understanding of the specific challenges and requirements that face them. Furthermore, rural development is realisable through efforts made at the local level and can be augmented with funding from a variety of sources in order to accomplish the objectives and problems that have been outlined. There is no one strategy or combination of strategies that are incorporated inside a development approach that could be scaled appropriately to all locations without taking into consideration the dynamics of the local environment.

SEWA SRUJAN

For the numerous farm and allied sector livelihood development operations and programmes, the primary goal of this department is to organise the local populace and create new institutions that are based on ways of making a living, respectively.

Its purpose is to expand the range of possibilities available to women in terms of how they can make a living while also expanding the range of revenue prospects available to them through self-employed women's groups. At this time, there are around 5,000 people signed up, with 21 different groups having open accounts.
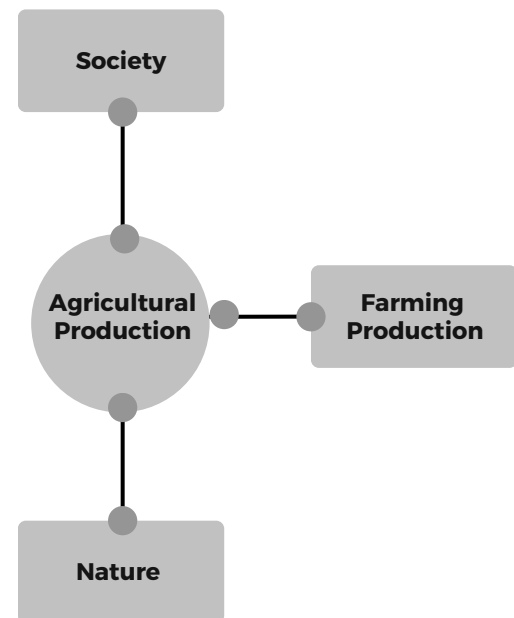

SEWA KRISHI

The problem that agriculture is facing is one that has persisted and has many facets. This issue is not just the result of forces coming from the outside world; it is also the result of "internal" interactions that are increasingly interacting with and reinforcing the impact of pressures coming from the outside world that are placed on agriculture. Because of the underlying interdependencies, policy actions that try to alleviate at least some of the symptoms of the crisis often have unintended implications in other areas, either within the same time-space location or in other time-space locations altogether.

Sewa International works to address problems that are need of the hour, and one of these problems is a lack of long-term sustainability livelihood options in contrast to options which focus on by short-term profit. This problem is one of the problems that Sewa International works to address. However, like many other developing regions in India, agriculture in Uttarakhand may be a risky business, despite the state's varied natural landscapes and rich biodiversity of flora and wildlife. Erosion, severe winters, and unpredictability of rainfall are all factors that are detrimental to farming. We are familiar with the challenges that arise when the market experiences swings or when demand is lower than anticipated; we also know that being a successful farmer needs a great deal of patience. Certain aspects of the practise itself encourage stressful behaviour and exacerbate environmental stresses that are imposed on the villagers by outside forces. These factors include a lack of access to credit and good seeds, poor technical knowhow, unsustainable cultivation practise, small land holdings, and issues related to water management. Sewa International's goal in this area is to improve agricultural production by concentrating on elements that recognise the ingrained nature of farming and aiming to improve those factors.

Activities carried out by Sewa International include the distribution of seeds by means of its seed banks, the provision of access to modern tools, agricultural inputs, and extension services via its Sewa Krishi Sansadhan Kendras and demonstration centres, and the promotion of sustainable agriculture. Members of the community are also given training and the ability to build their capacity in areas where it encompasses agricultural production as an activity that is aligned, both materially and symbolically, with nature, society, and the interests and prospects of those directly involved in agriculture and food production.

While the primary targets of Sewa International's labour are examples of "living nature," the organization's primary focus is on enhancing the usage of local and regional ecosystems (Sevilla Guzman and Gonzalez, 1990; Toledo, 1992). The initiative began in one village in the district of Rudraprayag with the goal of empowering women farmers by encouraging them to organise themselves into self-help groups (SHGs) and providing them with ginger, turmeric, French beans, ladyfinger, peas, onion, marigold, chamomile, garlic, cauliflower, and other seeds, saplings, vegetables, fruits, and herbs to grow. They are educated in organic community farming, which, in comparison to conventional farming practises, is more environmentally friendly. While also enabling farmers to increase their harvests, practises that are gentler on the planet contribute to the preservation of the natural ecosystem in the surrounding area. Microfinancing and other actions that benefit the community are also the responsibility of SHGs.

In addition to providing microfinancing, SHGs are accountable for a variety of other community activities. These trained farmers have the opportunity to sell any excess produce they have with the assistance of HIMSAMPADA, which is a company that produces goods specifically for farmers. SHG members are considered to have stakeholder status in the corporation, which is administered by Sewa International. The members of the SHG confer with one another in order to reach a consensus on the price at which they wish to sell their produce to HIMSAMPADA. Because HIMSAMPADA handles a significant portion of the distribution process, this helps alleviate concerns

about how to get their products out into the market. The best thing is that they get the price that they have already agreed upon, which eliminates any fears about getting short-changed or being duped in the event that the goods does not fetch enough when it is sold in town.

The project has now reached more than 70 villages and more than 3,600 trainees. This was accomplished by advocating a concept of community organic farming that is transformative. In the districts of Rudraprayag, Chamoli, and Dehradun, demonstration farms have been established. The earnings from the farms have increased by 35%, which has also contributed to an increased sense of communal cohesion. There is greater harmony and less contention as a result of the benefits that come from working together to find solutions to problems. As a result, agriculture, in order to be a fruitful activity, not only needs to be adapted to the particularities of these ecosystems and the natural resources that they imply, but it also needs to reproduce those resources on a constant basis. Agricultural production is simultaneously adapting to fulfil a wide variety of evolving and growing societal demands at the same time (Cork Declaration, 1996; Depoele, 1996; Fischler, 1996, 1998; Countryside Council, 1997; Scottish Office, 1998).

This necessary alignment presupposes a continual and active process of cooperation between

individuals, social groups, and other community organisations in order to accomplish a common goal of having a shared vision. If such coordination is not achieved, sooner or later there will probably be major consequences, either in terms of the natural or social environment, for society as a whole. This may happen as a result of massive ecological degradation or as a rise to the social upheaval that rejects current agricultural practises and demands more or less radical measures to improve environmental conditions, animal welfare, food quality, and protect landscapes and natural values. Both of these outcomes are possible.

SEWA MAHILA JYOTI

If the resources that are available to us are not put to good use, then their existence is meaningless. On the one hand, one can define a resource as anything that can be used to support oneself in some kind or another, but on the other hand, a resource is of no use unless it is being utilised in some way. Therefore, one other way to define the term "resources" is as something that not only exists but is also utilised by somebody else. In each instance, Sewa International works to ensure that a local resource that was previously thought to have little or no value in terms of economics becomes a real player in the process of sustainable development. The term "sustainable" is an important one to use in this context because it refers to the fact that the resource's exploitation takes place in a way that does not destroy future options for its deployment.

Therefore, Sewa International is aware of the concept of value addition, which may be explained as follows: "value is defined as the benefit derived from a good or service in monetary terms that enhances the intrinsic worth of a good or service, that is utility and/or capability." In other words, it is the sustainable exploitation of a locally available resource that has not been utilised to its full potential up until this point in order to produce wealth and employment opportunities in the region. As a result, the idea is extremely similar to the concept of "improving an area's territorial competitiveness." At its core, it can be understood as the process of drawing out the potential that is already present in something.

The Chandrapuri location of the Sewa International office received a shipment of 10 knitting machines in the month of January. As part of the Sewa's Path Skill Development Project, this location featured volunteer efforts directed towards the establishment of a knitwear training centre. Sewa USA provided assistance for the center's official opening ceremony, which took place on January 31, 2015. Individuals and their communities are nourished to grow and thrive based on a network of mutual assistance when local rural women's talents are strengthened, and they are mobilised through SHGs.

This non-farm-based livelihood initiative's goal is to establish businesses in rural areas that can help bring in livelihood activities such as the sale of local art and craft, by improving existing practises like bamboo raft making, and by growing that practise amongst others. Some examples of these activities include selling local art and craft; improving existing practises; and growing new practises. Additionally, training for the development of skills as well as capacity building so that artists can increase the efficiency with which they market their handcrafted items and broaden their reach into international markets. In point of fact, by the end of 2018 alone, 1,516 beneficiaries had been trained, eight knitting and production centres had been established, and craftsmen had earned a total of Rs. 2,41,250.

SEWA YUVA JYOTI

Rural areas are home to a disproportionate number of the nation's poor. These kinds of regions are not in any way, shape, or form an exceptional occurrence because they are located all over the world (World Bank, 2000). Our lives have become much faster as a direct result of globalisation, and even now, the interconnectedness of the world's economies appears to be becoming more obvious. When one examines the local economies that exist within a country, this becomes very clear.

Strong economic networks with boundaries that extend beyond national borders have been developed as a result of transnational linkages existing between the rural poor of one country and the rural and urban poor of another country, in this case India. As a result, economic migrants, guest workers, and refugees traverse borders with and without the required papers to provide low-cost labour to both rural and urban sectors as part of the accelerating transnational flow of capital, goods, and labour. This is a consequence of globalisation. The attempt to flee from poverty, injustice, or a lack of opportunities in one region frequently culminates in finding new manifestations in another site, and the two locations are connected in an inextricable way. Sewa International makes an effort to take action on this issue by providing kids from rural areas of Uttarakhand with training in order to improve their chances of finding better

jobs within the same region.

A proficiency at a specific activity is considered to be skill, and proficiency is typically obtained through training and practise. The goal is to increase digital literacy among young people, develop personality and improve soft skills, and offer career opportunities for inhabitants in the area. The data from 2018 indicate that in two districts of Uttarakhand, a total of ten computer training centres have been established. These centres teach fundamental computer skills such as typing in English and Hindi, as well as MS Office products such as PowerPoint, Basic HTML, Photoshop, Publisher, and others. A number of bright students who are interested in working in the information technology industry have benefited from Sewa International's assistance in their pursuit of more advanced education. We have approximately 1,500 kids under our instruction at the moment.

We want to provide people the chance to display their skills in a variety of facets of information technology so that we may make more doors of opportunity available to them. Students who take these training courses make life easier not only for themselves as they acquire more skills but also for other people who are less experienced by teaching them a skill that can help them save time and effort on projects or reports and find good jobs. This benefit is twofold. First, the students make life easier for themselves as they become more skilled.

SEWA SAAHAS

The tourist industry in Uttarakhand has a lot of promise. In order to take advantage of the opportunities that exist in the tourism industry in the area, Sewa International has devised a strategy that involves providing people with the skills they need to manage their own enterprises and promoting the state as a popular tourist destination. The "Sewa Saahas" programme is an excellent example of volunteering that involves locals in community development efforts. These efforts not only contribute to the growth of Uttarakhand's tourism industry, but they also provide visitors with the opportunity to have an authentic cultural experience while they are in the region. This approach is meant to supplement the important infrastructure development that Uttarakhand is working on, with the end goal of making it easier to move within this region.
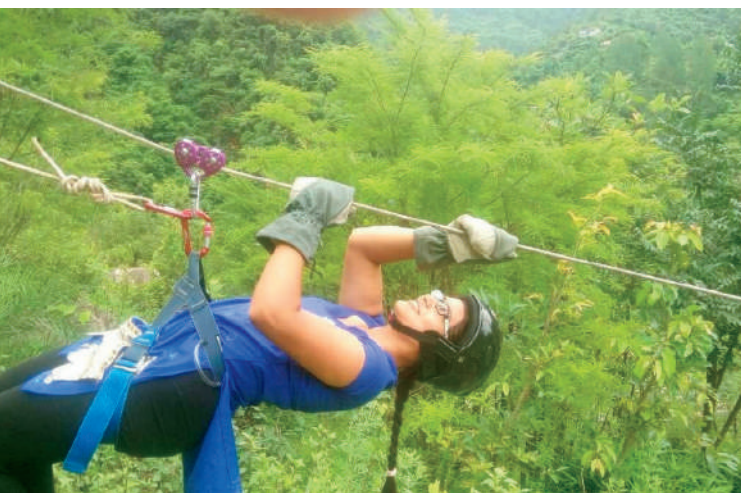
We are currently providing training for young people on how to become tour guides. It has been kept in mind that we aim to assist locals in becoming self-sufficient in their means of subsistence by placing a premium on natural heritage while simultaneously providing tourists with a high-quality experience that they will not forget. In addition, as part of this campaign, our project has created and geotagged 27 different treks, and we are striving to create even more of them so that locals can benefit economically from them as well. Karchhu, Byunkhi, and Vaan are three villages that are currently being developed as eco-tourism destinations. Efforts to educate the general population about the need of maintaining a clean environment are frequently organised and carried out. It is estimated that approximately 35 homestays and new youth groups have been formed among the villages. Training is offered in a variety of fields, some of which include extreme sports like mountain climbing and valley crossing, as well as other adventure sports. These events have been beneficial for around five hundred young men and women.

SWASTHYA SAHYOGI SEWA

This initiative's goals are to create health awareness among adolescents, pregnant women, and nursing mothers; provide affordable healthcare; build last-mile connectivity in the health sector; and build a society that is healthy and hygienic through the provision of medical care that is accessible to all. Under the umbrella of this project are many different activities. A few of the many initiatives and programmes that fall under this initiative include holding health camps that are open to everyone, organising groups of adolescent girls called kishori samuhs for the purpose of spreading health awareness and running campaigns, and establishing mobile medical units that provide consultations with doctors, X-rays, blood tests, generic medicines, and electrocardiograms in order to provide last-mile delivery of healthcare in the Himalayas. Throughout the COVID-19 epidemic, efforts to mobilise the population and raise awareness were carried out at several health camps. Over the course of more than 270 different camps in Uttarakhand, we provided medical care to more than 30,000 different patients.

Our Partners:

Donor Agencies

Sewa International USA, Government of Goa, ONGC, Oracle Financial Software Services, Rotary Club and Azim Premji Foundation supported us in the rescue, relief and rehabilitation projects.

Ground Implementers

Uttaranchal Daivi Apada Peedit Sahayata Samiti, and Bhuvaneshwari Ashram were our ground partners in rescue and relief operations.

Year 2014 Hudhud Cyclone

About the Disaster:

On October 12, 2014, Tropical Cyclone Hudhud made landfall on the coast of Andhra Pradesh, India, close to the city of Visakhapatnam. Hudhud was a Category 3 storm when it arrived on the scene. It brought winds of up to 205 kilometres per hour. Heavier than normal rainfall was a direct result of it in Andhra Pradesh and south Odisha (BBC, 2014; IFRC, 2014).

Effects of the Disaster:

About 92 lakh people in over 7,285 villages across four coastal districts in Andhra Pradesh were impacted, and 61 people lost their lives as a direct result of the disaster. In spite of the relatively low number of human casualties, there was a significant loss of means of subsistence in the regions that were impacted. In the coastal sections of Vishakhapatnam district alone, there were approximately 1,12,850 dwellings that sustained partial or complete damage. More than 7,52,540 households that were dependent on agriculture, horticulture, cattle, fisheries, and handlooms were severely impacted by the disaster. Crops grown for agriculture and horticulture sustained significant damage as a result of cyclones and floods caused by excessive precipitation. According to the findings of a World Bank team that does fast damage needs assessments, the overall amount of damage is around Rs. 13,263 Crores (NIDA, 2015).

Sewa International Activities:

After the cyclone made landfall, Sewa International and its partner organisation, Kshatriya Seva Samiti, wasted no time in getting to work to provide their support to the relief and rescue efforts that were underway. In order to determine what the people in the impacted communities required most, our scout team conducted a damage assessment and spoke with residents of those communities. We discovered that people required supplies such as tarpaulin sheets, rope, and blankets in order to make repairs to their homes and protect themselves from the cold weather. Because of this, we gave 550 families in need in six different towns relief packs that were specifically prepared for them and contained the items listed above.

Our Partners:

Ground Implementers

Kshatriya Sewa Samiti was our ground partner.

Year 2015 Andhra Pradesh and Tamil Nadu Floods

About the Disaster:

In November and December of 2015, flooding affected the Coromandel Coast region of South India, which includes the states of Tamil Nadu and Andhra Pradesh. Tiruvannamalai, Viluppuram, Chennai, Chengalpattu, Kanchipuram, Tiruvallur, Nilgiris, Coimbatore, Tiruppur, Dindigul, Salem, Kallakuruchi, Tirupattur, Vellore, and Ranipet were some of the districts in Tamil Nadu that were impacted by the floods (News18, 2021). The areas surrounding Chennai, including Cuddalore, Kanchipuram, and Tiruvallur, were badly impacted and sustained considerable damage as a result of the typhoon (NIDA, 2016).

Effects of the Disaster:

Flooding caused 269 deaths in the state of Tamil Nadu, 54 deaths in the state of Andhra Pradesh, and two deaths in Pondicherry/Puducherry (The Indian Express, 2015). It led to a loss of around 14,602 billion rupees in property and business, not counting the approximately 5,005 billion rupees that was insured against those losses. According to a worldwide insurance research agency, the number of insured people and properties in India that were affected by the floods is anticipated to be the most in the country. Claims can be made for both types of losses (The Indian Express , 2016).

Sewa International Activities:

Volunteers from our organisation gathered and purchased various products, such as food, clothing, cutlery, groceries, bedding, furniture, school supplies, and other necessities, and then organised them in preparation for distribution. Within the city of Chennai, it was dispersed in the neighbourhoods of Thiruneermalai,

Maduravoyal, TB Hospital, Tambaram, Chromepet, Choolaipalam, Dr. Kanu Nagar, Chetpet, and Mylapore. On average, 1,700 food packages, 100 packs of biscuits, and 400 packets of water were supplied in each impacted neighbourhood. The price of each kit was 4,000 rupees, which included the cost of transportation. In addition to this, we gave them a mobile medical van that was fully stocked with the most up-to-date equipment. This mobile van was supposed to deliver services in and around Chennai, for a total of 12 villages, with a particular focus on places that are lacking in basic medical clinics and other medical facilities.

Our Partners:

Ground Implementers

Vanvasi Seva Kendram was our ground partner.

Year 2017 Ockhi Cyclone

About the Disaster:

Ockhi was a tropical cyclone that formed on November 29 and lasted until December 6, 2017, near the south-western coast of Sri Lanka. It then

 travelled very close to the southernmost tip of the Indian mainland, along the coasts of Tamil Nadu and Kerala, in the direction of the Lakshadweep Islands, where it was at its most powerful. At its peak, Ockhi had wind speeds that ranged between 155 and 165 kilometres per hour, bringing it close to the upper boundary of the category known as "very severe cyclonic storm" (Sinha, 2021).

Effects of the Disaster:

According to the classifications that are employed by the India Meteorological Department, Ockhi was ranked as a storm that belonged to the third strongest category (IMD). Over 350 individuals lost their lives in the southern regions of Tamil Nadu and Kerala (Hindustan Times, 2018).

Sewa International Activities:

Together with official rescue personnel, our volunteers assisted in the search and rescue efforts. The efforts of the volunteers saved the lives of thousands of people, and they also distributed relief supplies such as 1,050 plastic mats, candles, food packets, water, biscuits, milk, and mosquito repellents.

Our Partners:

Ground Implementers

Sewa Bharati, Tamil Nadu and Kerala were our ground partners.

Year 2018 Kerala and Karnataka Floods

About the Disaster:

In the months of May through August, the states of Kerala and Karnataka were affected by devastating floods. According to the Department of Revenue and DM (2018), the areas of Malnad and the coastal parts of Karnataka that were damaged. According to the Hydrology (S) Directorate's 2018 report, thirteen of Kerala's fourteen districts were affected by flooding. The district of Kodagu in the state of Karnataka was severely impacted.

Effects of the Disaster:

According to the statistics provided by the Indian Meteorological Department, the state of Kerala was hit with an abnormally high amount of rainfall during the period beginning June 1 and ending August 19. According to the Hydrology (S) Directorate (2018), this rainfall was approximately 42% higher than average. Estimated total loss of Rs. 3705.87 crores in Karnataka and Rs. 40,000 crores in Kerala, despite the fact that the damage to

the ecosystem was not amenable to an accurate estimate (RGIDS, 2018; Pradhan, 2018; Department of Revenue (DM), 2018). 483 persons lost their lives as a result of the flooding in Kerala (The Indian Express, 2018). The agriculture industry suffered exorbitant losses as a direct result of the extraordinary storms, floods, and severe rainfall. In the districts of Alappuzha, Ernakulam, Kottayam, Pathanamthitta, Thrissur, and Wayanad, floods destroyed a total of 6,92,848 homes in rural regions and 1,11,356 homes in urban areas (State Relief Commissioner, 2018).

Sewa International Activities:

Rescue and Relief Operations

Kerala

Sewa International had begun an immediate relief and rescue operation, as well as provided medical helpline numbers that were available 24 hours a day, seven days a week, in addition to a dedicated WhatsApp group. More than 14,100 people took part in the actual operations of the rescue efforts. The operation encompassed a total of 350 boats, 75 ambulances, and 300 transport trucks, all of which were used to transport patients to government hospitals located throughout the state of Kerala. Volunteers with Sewa were hard at work delivering around 2,155 tonnes of food grain and other necessities for households to a total of 105,000 households. There were approximately 210 catering warehouses and sub-centers that were operating for the temporary shelters that accommodated thousands of victims from all over Kerala who had lost their homes as a result of the storm. These victims had been displaced as a result of the storm.

Animals that were infected received medical treatment as well as additional prevention measures from veterinarian experts. Over 650 medical professionals attended to 94,540 patients, thereby facilitating the delivery of necessary medical care. A total of 27,600 dwellings, 210 religious institutions, and 400 schools and offices were cleaned of the debris, silt, and other damage that was caused by the storms. Cleaning efforts were begun.

Karnataka

Volunteers from Sewa International assisted individuals whose residences and places of business were swept away by the floods. We helped those in need by establishing free communal dinners and shelters, distributing 1,200 sanitary napkins and other essential items to women, as well as shorts, t-shirts, and personal care items to men. During this challenging time, the volunteers from Sewa International distributed food and medical kits to hundreds of individuals who had nowhere else to turn for assistance.

Ankur Nihawan, CEO, Axa France Vie India

"Sewa International has done exceptional work during covid19, and we felt the need to join hands with them with their expertise with the community and Service. The innovations the team put in to ensure the telehealth solution reaches the ground were inspiring."

Rehabilitation and Recovery Operations

Kerala

Flood victims in the Alappuzha area received 24 brand new houses built by Sewa International after their previous homes had been entirely obliterated by the flood. Sewa International was involved in both the construction and restoration of these homes. In addition, Sewa International provided assistance to 270 schools. The structures of these schools, particularly those located in flood-prone locations, had sustained significant damage and required quick restoration. The installation of tin roofing on these school buildings was one of the ways that we provided assistance and support. Schools such as Sree Krishna Vidyapeedham School in Ambalapuzha and Saraswathy Vidya Mandiram in Thuravoor were among those that were entirely immersed in water and suffered significant structural damage as a result. These were brought back to their former glory.

The crisis led to the establishment of a total of 14 counselling centres, which were dispersed over nine different districts in Kerala. These districts were affected by the crisis. The primary purpose of our ground partner Sevabharathi Punarjanani, consisted of providing counselling centres to offer assistance in the areas of mental health and trauma counselling, psycho-social support, and general growth and development to those segments of Kerala's society who have been adversely affected. Throughout the districts of Malappuram, Thrissur, Palakkad, Kozhikode, Ernakulam, Aluapoha, and Pathanamthitta, Sevabharathi Punarjani has contributed to the provision of psychiatric care and to organisational activities.

Legend:
- No. of activities
- No. of Participants
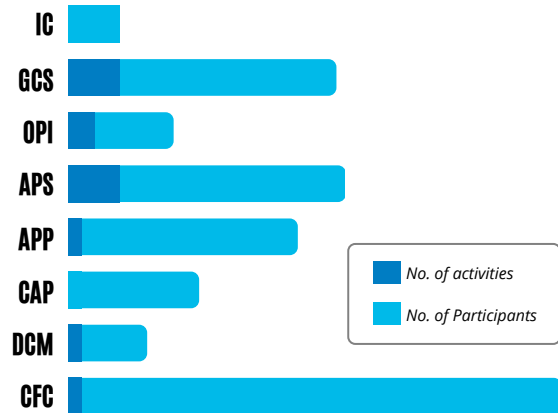
IC: *Individual Counselling*
GCS: *Group Counselling of Schools*
OPI: *Orientation program for Inmates*
APS: *Awareness program for school students*
APP: *Awareness program for parents*
CAP: *Community Awareness Program*
DCM: *Development Committee Meeting*
CFC: *Community Flood Camp*

In the Kuttanad region, Sewa International completed the installation of three water purification units that utilise the reverse osmosis (RO) process. RO stands for reverse osmosis and is a method of water purification that removes impurities from drinking water. The modules addressed hazardous chemicals such as lead, mercury, fluoride, arsenic, and chlorine in order to provide protection against a variety of diseases and ailments, including coronary artery disease and digestive issues. In order to assist with the

commissioning and management of the system, persuasive members of the village such as the Sarpanch, Sewa Coordinator, village elders, and others were recruited to serve on the Community Water Management Committee (CWMC) or Beneficiary Executive Committee that was formed for each individual unit. This committee included at least one woman member.

These committees now have a significant amount of responsibility for ensuring the continuous and trouble-free operation of their individual plants. The combined capacity of these three plants is 5000 litres, and they provide service to close to 2,000 villages in three different sites. The RO plant that was erected has some modern characteristics, such as a technique of collecting water modelled after an ATM. It is built with two water-collecting tanks and two high-horsepower (HP) pumps, which are used to pump and purify the raw water, respectively. Beneficiaries are able to collect as much water as they require so long as they pay a price that is sufficient to cover the costs of maintaining the plant's operational capacity.

Karnataka

Schools that had suffered damage to their educational resources as a result of heavy rain received aid from Sewa International in the form of instructional supplies and the establishment of computer laboratories. In the district of Kodagu, we also offered training programmes that assisted students in securing employment or in starting their own businesses. In addition, volunteers from Sewa assisted in the rebuilding of destroyed homes and other structures in the Kodava village. Kits focusing on STEM subjects (science, technology, engineering, and mathematics) were donated to four public schools: GHS Hakkatur (Government High school), GHS Ankanahalli, GJC Ponnampet, and GHS Channanakote. The teachers at these schools also received the necessary training. The training was provided at the Coorg Institute of Technology, and there were a total of 21 students who took part.

Members of the rural and tribal communities were given the opportunity to participate in vocational

House damage situation after flood.

House constructed for the beneficiaries as part of the rehabilitation efforts.

training programmes in order to improve their means of subsistence. The goal of the programmewas to educate young people,

empower them with the required life skills, and make them self-sufficient. Training was provided in a variety of fields, including plumbing, hospitality administration, and tailoring.

Impact

Training in life skills was provided to around 1,000 children, and networking opportunities were offered to approximately 150 instructors. There are 5,296 people who will directly benefit, and 16,005 people will indirectly benefit. A little under two thousand people went through the screening process for psychological counselling, and around one thousand people received counselling directly.

Our Partners:

Ground Implementers:

Sewa Bharati, Tamil Nadu and Kerala were our ground partners.

Kumarrakajee, 2018. https://commons.wikimedia.org/wiki/File:NDRF_rescue_operation_in_Karnataka.JPG

Year 2019 Cyclone Fani

About the Disaster:

On May 3, 2019, a cyclone that had a sustained wind speed of 175–180 kilometres per hour (kmph) and gusted up to 205 kmph impacted 14 districts in the Indian state of Odisha (Govt. of Odisha, et. al, 2019).

Effects of the Disaster:

Since Phailin in 2013, the exceptionally powerful cyclonic storm known as "Fani," also known as the "Hood of the Snake," was the most powerful tropical cyclone to hit Odisha. The entire damage and loss was estimated to be INR 29,315 crore, but this estimate does not take into account private damage losses. There were sixty-four persons who lost their lives, and the storm had an impact on around 16.5 million people throughout roughly 18,388 villages and fourteen of the state's thirty districts. Damage was done to a total of 3.62 lakh homes, of which 2.96 lakh were located in rural areas and 66,040 in urban areas. In terms of the impact on urban regions, around 95 percent of it was felt in Puri, Khurda, and Cuttack respectively. People living in rural areas, urban slums, and communities along the coast who lived in kutcha or semi pucca dwellings, which have a low resistance to cyclonic winds, were the ones that suffered the most from the disaster (Govt. of Odisha, et. al, 2019).

Sewa International Activities:

Rescue and Relief Operations

More than 8,000 victims were provided with freshly cooked meals by Sewa International as the organisation worked to integrate itself into the local community in Odisha. We provided flood victims in the Puri, Bhubaneswar, and Cuttack districts with critical garment kits that included sarees, lungis, and gamcha among other items.

Rehabilitation and Recovery Operations

A local chapter of Youth for Sewa was established by Sewa International with the intention of giving young people access to sustainable livelihood opportunities. We provided local farmers with ways to develop sustainable livelihoods by giving them coconut seedlings as a way to assist them in getting back on their feet after experiencing hardships. More than 20,000 seedlings were distributed over the course of a period of four months.

Impact

During the aftermath of Cyclone Fani, the populace that had been impacted by the tragedy benefited greatly from the cloth distribution efforts that were carried out. There were around 600 farmers who profited from the distribution of saplings.

Our Partners:

Ground Implementers

Utkal Bipanna Sahayatha Samithi (UBSS) and Youth for Sewa were our ground partners.

Year 2019 Maharashtra Floods

About the Disaster:

The following 22 districts in Maharashtra were severely impacted by the floods: Sangli, Kolhapur, Nagpur, Latur, Nashik, Wardha, Yavatmal, Aurangabad, Bhandara, Gondia, Gadhchiroli, Palghar, Nandurbar, Buldhana, Amaravati, Dhule, Ratnagiri, Pune, Raigad, Hingoli, Ahmednagar, and Thane. The floods began on (National Emergency Response Centre, 2019).

Effects of the Disaster:

Flooding caused damage to around 6,04 lakh hectares of land, claimed the lives of 426 people, and injured 385 others. There were a total of 269 animals who perished as a result of the flood. Because of this, over 769 communities were impacted, and 7,73,299 individuals are considered to be severely or partially affected by the floods (National Emergency Response Centre, 2019). Following the floods, the villages were covered in filth, and the residents were put at risk for several diseases that are transmitted by water.

Sewa International Activities:

Rescue and Relief Operations

In an effort to provide aid to persons suffering from water-borne ailments and viral infections, medical camps were set up in a total of thirteen villages located in close proximity to Kolhapur. The total number of participants was 1,902, and each one of them was given a prescription as well as a consultation with a qualified medical professional. Children from 20 different schools in the neighbouring villages of Dhanoli, Umalwad, Chipati, and Dattawad received one of the 1,500 school kits that we donated.

Rehabilitation and Recovery Operations

Seven schools were hit by the flood in Kolhapur, which caused damage to the paint work, walls, flooring, bathrooms, furniture, and other amenities in those institutions. After being flooded to a depth of at least six feet, these educational facilities have been brought back to their previous state.

In collaboration with the organisation "Being Volunteer," 380 galvanised iron (GI) sheets were given out to flood-affected families in western Maharashtra's Sangli, Satara, and Kolhapur districts in order to assist those families in the process of repairing the damage to their homes caused by the floods.

Impact

There were a total of sixty households that were helped by the provision of GI sheets for the purpose of restoring flood-damaged homes. When taking into account the fact that the typical Indian family consists of four people, the provision of safe roofing helped a total of 240 individuals directly.

Our Partners:

Ground Implementers

Being Volunteer Foundation was our partner.

Year 2019 Uttarakhand Cloudburst

About the Disaster:

In the months of June through September of 2019, the districts of Chamoli, Rudraprayag, Almora, Uttarkashi, Pauri, Tehri, Bageshwar, and Pithoragarh in Uttarakhand were affected by flash floods.

Effects of the Disaster:

Rawat (2019) reports that amid the flash floods, 31 persons lost their lives.

Sewa International Activities:

Sewa International distributed blankets to the victims.

Our Partners:

We have been actively involved on the ground after the Uttarakhand floods of 2013 and all interventions made are done directly.

Year 2019 Karnataka Floods

About the Disaster:

In the month of August 2019, North Interior Karnataka, Malnad, and the coastline region were all affected by heavy flooding. Between the dates of August 3 and August 10, the state got 224 millimetres of rainfall, which resulted in an overall departure of (+) 279%. This level of precipitation was the heaviest that Karnataka has seen in the past 118 years for the same time period. During the era, certain districts had a divergence from normal that was greater than 700%. (Department of Revenue — Disaster Management, 2019).

Effects of the Disaster:

There were 91 people who lost their lives as a result of the floods and landslides. There were around 2.47 lakh houses that were affected, with approximately 1.79 lakh houses being seriously or completely devastated. Because of the shift in the river's flow and the flooding, approximately 9.70 lakh hectares of agricultural, horticultural, and plantation crops were destroyed, and a significant portion of the fields were extensively contaminated with silt. Multiple landslides and mudslides in a number of different sites were responsible for the total destruction of around 13663.51 hectares of agricultural and horticultural land. The damage to crops caused by floods and landslides was projected to amount to Rs. 15,230 crores (Department of Revenue — Disaster Management, 2019).

Sewa International Activities:

Sewa International completed the process of repairing three damaged schools in the Gokak and Ankalgi districts. These schools were damaged as a result of the flooding. The construction was done in order to give the children a safe place to live and to meet a number of other requirements that would make it simpler for them to attend school. The initiatives were carried out in conjunction with the neighbourhood communities, with the goals of preserving transparency and quality throughout all three of the areas.

New flooring or tiles were placed in the Adibetti Badawane School in Gokak. In addition, the plumbing was completely renovated, and a brand new urinal was set up. Repairs to the protective walls at Urdu HPS School in Ankalgi included masonry work as well as the application of new paint.

Our Partners:

Donor Agencies

Sewa International USA raised funds for the rehabilitation projects.

Ground Implementers

United Way Mumbai was our partner organisation.

Year 2020 and 2021 COVID Pandemic

About the Disaster:

Coronavirus Disease 2019, or COVID-19 for short, was given its name after the newly discovered coronavirus that was initially discovered in Wuhan, China. Previously, we referred to it as the "2019 novel coronavirus" or the "2019-nCoV." COVID-19 is a novel virus that comes from the same family as Severe Acute Respiratory Syndrome (SARS) and certain strains of the common cold. The virus is typically spread through the airborne droplets that an infected person exhales into the air when they cough or sneeze. It can also spread by contact with surfaces that already have the virus on them, despite the fact that the virus does not survive for very long on surfaces. Using common disinfectants is all that is required to eradicate the virus (WHO, 2020b).

Since the disease first began to spread in December 2019, India began to have COVID positive cases in the month of March 2020. The virus was discovered in India's state of Kerala, in a student who had recently returned from studying at Wuhan University in China. In less than a week, two other cases were discovered in Kerala, both of which were people who had recently returned from Wuhan. The illness started to spread across the country and make more people sick. After implementing a "Janata Curfew" for two days beginning on March 24, 2020, the Government of India said on March 24, 2020 that a statewide lockdown would be in effect until April 14, 2020 (Andrews et.al., 2020).

Effects of the Disaster:

Up until the Janata Curfew, India had reported a total of 360 instances and had tested a total of 16,021 individuals for the disease. As of the 12th of April, the Ministry of Health and Family Welfare (MoHFW) reported that a total of 8,447 cases of COVID-19 had been documented across 31 states and union territories. There were 273 deaths and

COVID Sewa

- 🔵 Concentrators
- 🟢 Ventilators
- 🔺 O2 Plants

Covid-19 Response
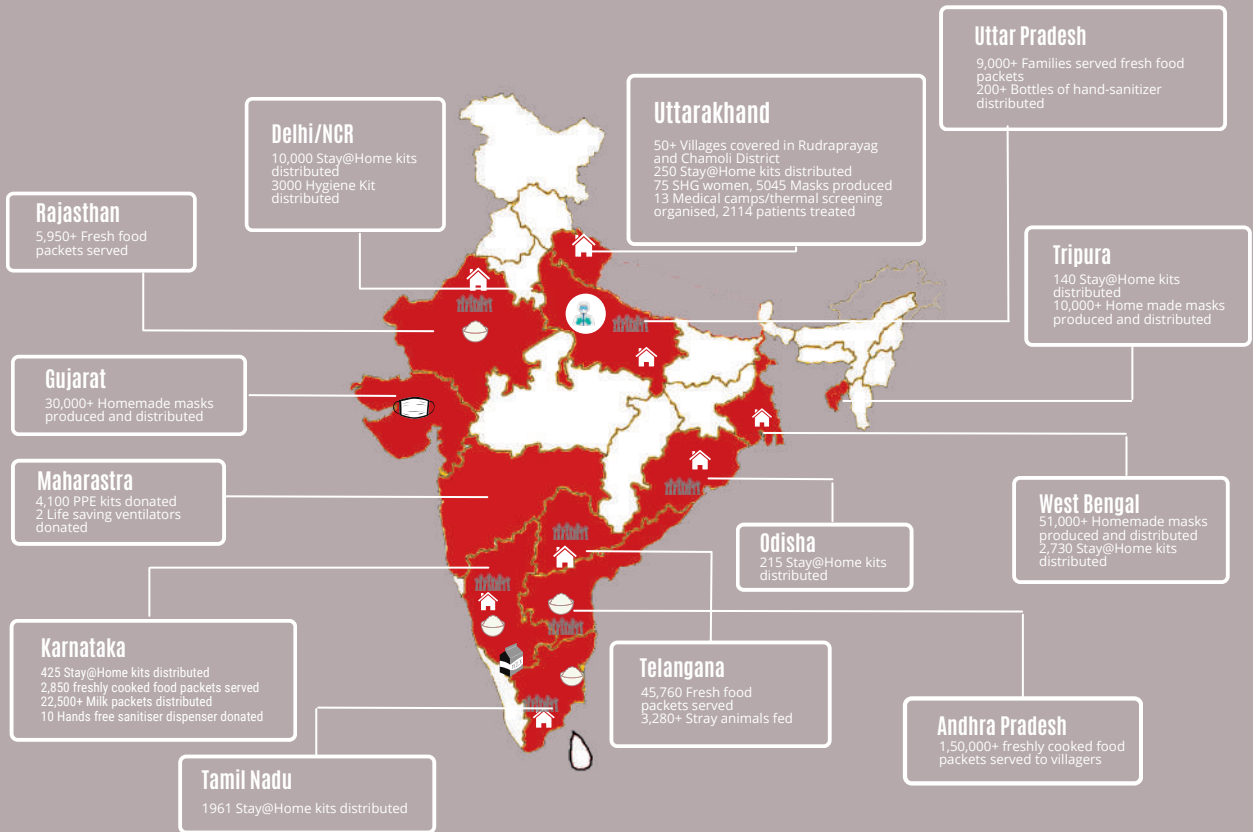

Delhi/NCR

10,000 Stay@Home kits distributed
3000 Hygiene Kit distributed

Uttarakhand

50+ Villages covered in Rudraprayag and Chamoli District
250 Stay@Home kits distributed
75 SHG women, 5045 Masks produced
13 Medical camps/thermal screening organised, 2114 patients treated

Uttar Pradesh

9,000+ Families served fresh food packets
200+ Bottles of hand-sanitizer distributed

Rajasthan

5,950+ Fresh food packets served

Tripura

140 Stay@Home kits distributed
10,000+ Home made masks produced and distributed

Gujarat

30,000+ Homemade masks produced and distributed

Maharastra

4,100 PPE kits donated
2 Life saving ventilators donated

West Bengal

51,000+ Homemade masks produced and distributed
2,730 Stay@Home kits distributed

Odisha

215 Stay@Home kits distributed

Karnataka

425 Stay@Home kits distributed
2,850 freshly cooked food packets served
22,500+ Milk packets distributed
10 Hands free sanitiser dispenser donated

Telangana

45,760 Fresh food packets served
3,280+ Stray animals fed

Andhra Pradesh

1,50,000+ freshly cooked food packets served to villagers

Tamil Nadu

1961 Stay@Home kits distributed

765 people who were treated, dismissed, or moved on as a result of this (WHO, 2020). The statewide lockdown will remain in effect until May 31, and India has passed China in terms of the overall number of cases that have been reported (WHO, 2020a). More than five lakh persons were infected during the COVID-19 outbreak that occurred in India in less than five months. The outbreak extended to all states and union territories.

Sewa International Activities:

Rescue and Relief Operations

Sewa International and Rashtriya Sewa Bharati, one of our partner organisations, had joined forces to launch a number of programmes that will assist those who are in need. These activities included the following:
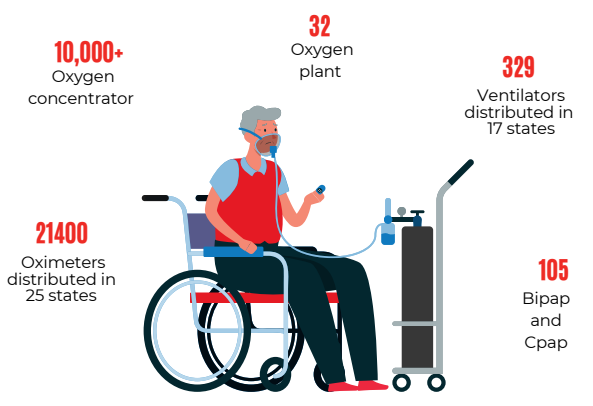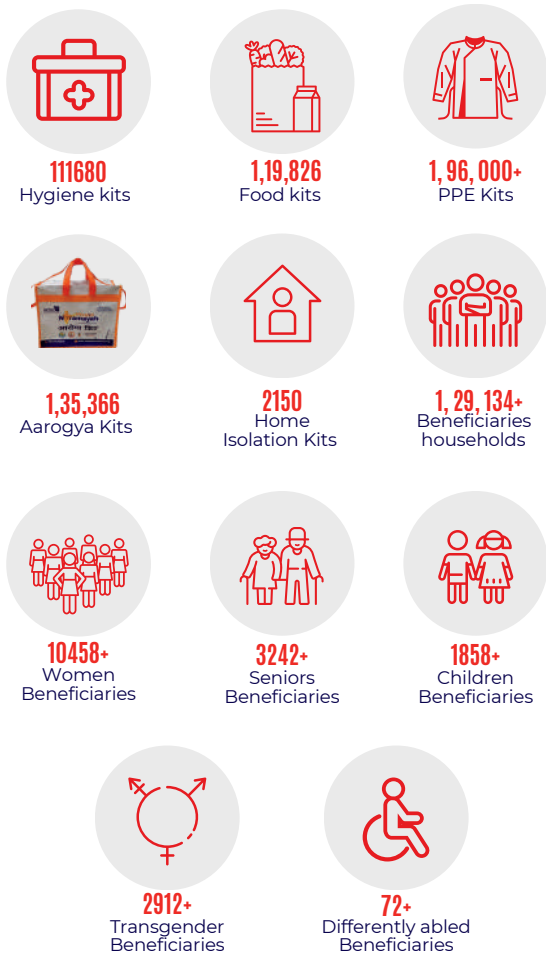

Home Kit and PPE Distribution

The announcement of the nationwide lockdown caused the prices of several goods, including food, to increase significantly. Because of this, economically disadvantaged parts of the society were put at a disadvantage because they were unable to afford to stockpile or purchase the commodities in question.

The provision of the necessities of life to individuals who were struggling to make ends meet was intended to be the outcome of this programme. The volunteers of Sewa International dispersed a variety of kits, such as medical kits, ration kits, and home isolation kits, among other kinds of kits. The dissemination of these kits was done with the intention of educating people on the means by which COVID can be avoided as well as identified.

The fundamentals, such as dry ration (rice, wheat, lentils, sugar, etc.), a basic medical kit, and a hygiene kit are all included in our kits. Our kits were intended to meet military specifications. Our targeted strategy to giving these kits to vulnerable families across a variety of states was in accordance with a programme that the government had established to offer food and other critical commodities to migrant labourers and low-income families. We dispersed hygiene and health kits across twenty-eight states, along with personal protective equipment kits and food kits in eighteen states.

111680
Hygiene kits

1,19,826
Food kits

1, 96, 000+
PPE Kits

1,35,366
Aarogya Kits

2150
Home
Isolation Kits

1, 29, 134+
Beneficiaries
households

10458+
Women
Beneficiaries

3242+
Seniors
Beneficiaries

1858+
Children
Beneficiaries

2912+
Transgender
Beneficiaries

72+
Differently abled
Beneficiaries

10,000+
Oxygen
concentrator

32
Oxygen
plant

329
Ventilators
distributed in
17 states

21400
Oximeters
distributed in
25 states

105
Bipap
and
Cpap

Oxygenation

The second wave of coronavirus demonstrated how unprepared we were as a nation for dealing with the situation. Sewa International rose up to the challenge and applied for and was awarded money from the Western Australian Government in July 2021 to assist with COVID relief efforts as well as COVID preventative initiatives. One of the programmes that was initiated by Sewa International in order to deliver oxygen cylinders, concentrators, ventilators, and other essential pieces of medical equipment to those who were in need of it was called the "Oxygenation campaign."

Mr. Dipu Konwar, 35, and his family are residents of Dolbagoan, Charaideo, Assam.
On July 26, 2021, he had been tested for COVID using RT PCR and had come out positive. He still felt feverish and achy all over.

His condition deteriorated rapidly, and he was taken to the Assam Medical College and Hospital in Dibrugarh, the closest centre for the treatment of chronic obstructive pulmonary disease (COPD). At first, he didn't have any breathing problems and could be sent home without oxygen.
Later on, as his condition deteriorated, he had to have oxygen therapy. He contacted Sewa International in need of a five-litre external oxygen concentrator.

He was aware of Sewa International and its efforts to give away oxygen concentrators to those in need at no cost to them. His experience in acquiring an oxygen concentrator and the device itself both exceeded his expectations.

Mr. Dipu Kumar became emotional while recounting his experience. He felt that his life had been spared thanks to Sewa International, and he was really grateful.


Sewa Auto

Those elderly people who lived alone or who were unable to receive assistance from their children during the lockdown experienced extremely difficult circumstances. They were at a greater risk of contracting the virus, thus they were unable to leave the house. In order to provide assistance to these individuals, Sewa International launched the "Sewa Auto" project. A large number of older folks who do not have a support system at home were given assistance by our volunteers so that they could get registered and vaccinated. The slogan "No One Should Be Left Behind for Vaccination" served as the driving force behind the project. There were about 100 people that benefited from sewa auto.

Vaccination

During the phase of the immunisations, Sewa International volunteered their assistance to aid in the vaccination process. We established camps in order to provide assistance to individuals who were most at risk from the virus. This included people who lived in slums, members of the LGBTQ community, and people who were afraid to get vaccinated. The camps were a tremendous success and assisted a great number of people in obtaining the necessary protection against the virus.

2
States

1805+
People vaccinated
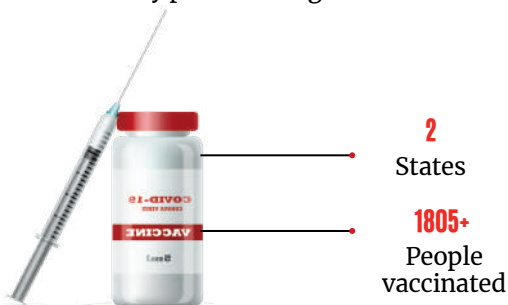
Blood Donation

A blood donation camp was organised by Sewa International in collaboration with twenty other organisations as an effective means of preventing unnecessary deaths. By coordinating 4 blood drives with a total of 20 volunteer participants, we were successful in collecting 174 units of blood. In the grand scheme of things, this was just a little step towards assisting people who are in need.
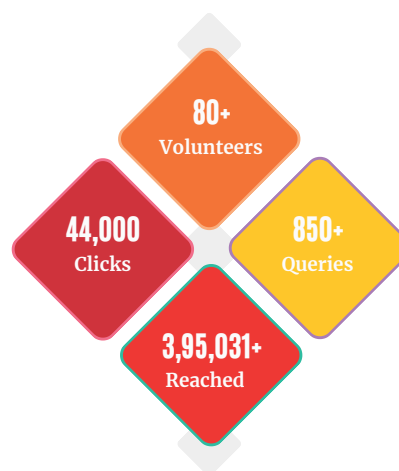

Digital Sewa

e-Sewa

In these times of tremendous need, a major information resource that has been available to people is the internet. Platforms such as social media and search engines such as Google proved to be of great assistance. Recognizing the importance of online information, Sewa International and Primathon Technologies collaborated to develop covidsewa.com, an online portal that enables users to quickly access reliable information on all possible resources that may be required while dealing with a COVID infection from the convenience and security of their own homes.

On the portal, we provided the following facilities:

- Dedicated portal for doctors and patients
- A team of volunteers to check the reliability of the information and contact details
- Only verified information was uploaded on the portal for public use
- The portal provided district-wise information for:

  1. Hospitals with beds
  2. Oxygen suppliers
  3. Medicine supplier
  4. Other services like home ICU, ambulance, food services

- A chatbot was introduced at covidsewa.com
- Users can live chat 24*7 with volunteers
- Special assistance for mental health

80+ Volunteers
44,000 Clicks
850+ Queries
3,95,031+ Reached

Other digital services provided were:

Digital Help Desk

When the second wave of the epidemic hit, Sewa International launched a digital desk to aid the public. The number of questions about COVID infection approached or above 850. A 24-hour hotline was staffed by 386+ volunteers with the cooperation of 185 different groups.

eGlobal Doctors

The American Association of Physicians of Indian Origin (AAPI) and Sewa International have teamed with E Global Doctors to give medical guidance for COVID-19 patients in India via teleconsultation, easing the burden on the Indian healthcare system caused by the increase in coronavirus cases. Through this website, patients could have confidential conversations with doctors and nurses who volunteered their time to provide emotional support.

Counselling Services

Many people experienced anxiety, mental stress, or trauma as a result of the fear, worry, and concern that COVID-19 caused. The victims were counselled by a team from Sewa International and 'ASK' Bangalore. The National Institute of Mental Health provided training for the counsellors. All citizens of India had access to this service because it was offered online.
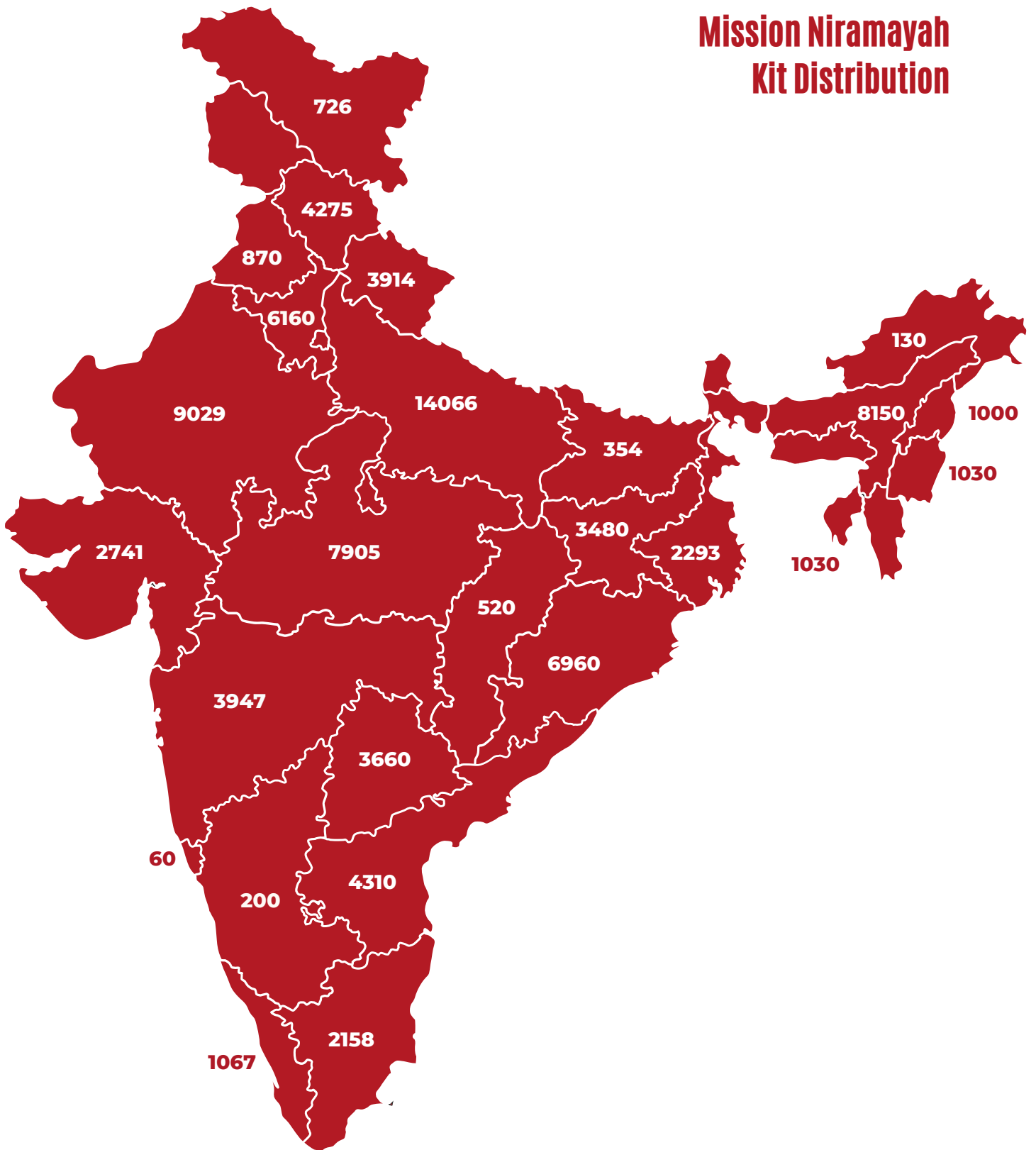

COVID Care Centre

During an outbreak of Covid-19, the lack of available beds resulted in patient misery. With the assistance of donations from Sewa International Australia, we were able to assist the poor by providing beds cum stretchers.

Mission Niramayah Kit Distribution

726

4275

870

3914

6160

14066

9029

130

8150

1000

354

1030

2741

7905

3480

2293

1030

520

6960

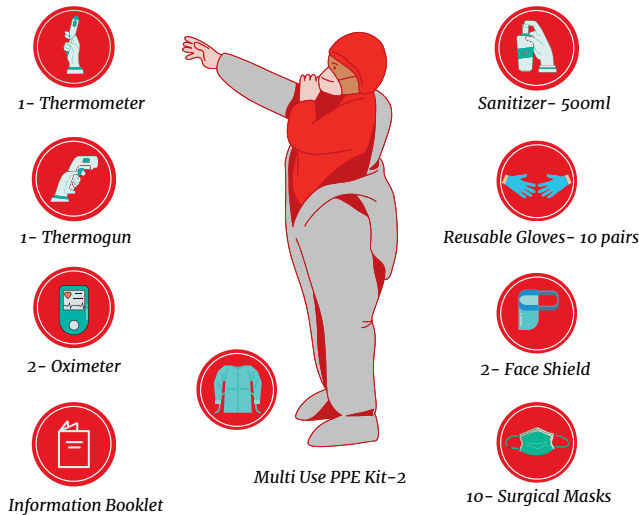3947

3660

60

200

4310

1067

2158

Mission Niramayah

The project was initiated to improve access to healthcare resources for COVID 19 prevention, treatment, and detection for rural communities in India. The purpose of this mission is to help the rural healthcare system by enhancing health infrastructure, human resources, and awareness.

Objectives of the Mission

- Strengthening the understanding of precautions, symptoms, means of diagnosis, and treatment-related to COVID 19 in Rural India.
- Reducing the number of deaths during the upcoming wave of COVID 19.
- Building long-term health resilience in the nation, with a team of dedicated and voluntary 'Arogya Preraks', across rural India.
- Saving the lives by early detection of COVID 19, providing them isolation and referring them to the best medication facility.
- Bursting the myths arising due to false information that is being circulated among the rural population.

111,000+
Health and Hygiene kits

2,33,000+
Pulse Oximeteres

95,000+
Aaryog Preraks

1,00,000+
Volunteers

17, 96, 37, 960+
Awareness generated about covid

96, 30, 851+
Beneficiaries

300+
Districts

28
States

Rehabilitation and Recovery Operations

The outbreak of Covid-19 profoundly altered life, and the recovery process has been extremely challenging for many individuals. Unemployment has been rampant, and more people than ever before are living in poverty. Sewa International is aiming to assist individuals in becoming self-sufficient by providing them with sustainable revenue opportunities.

SAATH- Supportive Action Across Telemedicine and Health Care

Sewa International launched a public health effort to provide free access to top-tier healthcare via telephone and videoconferencing. In August of 2020, the programme was launched in cooperation with AXA. The purpose was to alter the healthcare industry in India, and the programme offered a variety of treatments, including video and audio consultation, follow-up, use of robust technology, and so on. Additionally, consultations for allopathic medicine, Ayurveda, and nutrition are provided.
The initiative works on three principles:

1- Thermometer

1- Thermogun

2- Oximeter

Information Booklet

Multi Use PPE Kit-2

Sanitizer- 500ml

Reusable Gloves- 10 pairs

2- Face Shield

10- Surgical Masks

To accomplish the mission, people will be given an "Arogya kit" the kit will be used for the detection, prevention, treatment, and protection from COVID-19. The kit contains diagnostic equipment, protective equipment, and an information book. Details are mentioned below

- Access: Ensure free of cost access to an inclusive telemedicine solution
- Awareness: Build awareness of telemedicine
- Acceptance: Accelerate the acceptance of telemedicine

53,992
Call received

27,134
Patients

7,903
Doctor's visit

25
States

SHE-CAF [Sanitisation, Health and Empowerment]

The second wave of COVID-19 was particularly severe in India, causing 367,097 deaths. 64 percent of these were men and 40 percent were women between the ages of 21 and 40, indicating that they were likely the sole providers for their families. This has rendered a substantial number of women not only emotionally traumatised but also financially immobilised and impotent. In fact, 47% of employed women lost their jobs as a result of the pandemic.

The objective was to increase the self-sufficiency and financial independence of women in our society by creating community-based livelihood models that combine the talents, potential interventions, and ambitions of diverse stakeholders. In this initiative, we instruct women in tailoring, computer skills, beauty, and health. Sewa International Bharat and Sewa International USA have identified 3,000 beneficiaries, of whom 736 have finished the course and 304 are currently in training.

Impact

Through its many programmes, Sewa International has helped over 97,89,694 individuals and families in need. We went over each and every state in the country. The total number of hours contributed by volunteers amounted to 10,560,000. More than 1,00,486 individuals participated in the event as volunteers. The initiatives did not discriminate on the basis of gender, religion, or economic standing, and everyone was welcome to participate in them.

Our Partners:

Donor Agencies

AXA, Sewa International USA, Sewa International Australia, Boston Scientific, Reliance Foundation, and Western Australian Government were our partners for the different activities and initiatives done under COVID.

Ground Implementers

Sewa Bharatis of all the states, Rashtriya Sewa Bharati, 'ASK' Bangalore, National Institute of Mental Health, American Association of Physicians of Indian Origin, Primathon Technologies were our ground supporters.

Year 2020 Cyclone Amphan

About the Disaster:

On the 20th of May, 2020, Cyclone Amphan traversed the northern section of India before heading towards the state of West Bengal. It was blowing at 185 km/h, making it one of the most intense storms in recorded history. Odisha and West Bengal were among the states affected by this storm (IFRC, 2020).

Effects of the Disaster:

Super Cyclonic Storm Amphan was a potent tropical cyclone that wreaked havoc on the coastal districts of Odisha and West Bengal in India and Bangladesh. Since the 1999 Odisha Super Cyclone, this was the most powerful tropical cyclone to strike the Ganges Delta. West Bengal, which suffered the most extensive devastation from Amphan's impact, sustained INR 1.02 trillion in property damage and 70 percent of the state's population was directly affected. The storm was one of the most powerful to strike the region in over a decade (IFRC, 2020).

The neighbouring state of Odisha was severely damaged by the cyclone, which brought wind speeds of up to 106 kilometres per hour and rainfall of up to 300 millimetres. This resulted in 320 crores of damage to Odisha's electrical grid and affected around 4.4 million people in ten districts. 500 residences were destroyed and 15,000 others were damaged. The region of the cyclone's strongest impact was in the northeast, where it devastated five districts and killed approximately 4,000 poultry. The constraints imposed by COVID-19 impeded emergency and relief activities. It was a possible Covid-19 hotspot due to flooding in numerous locations and the drainage of trash, especially medical waste, into ponds, which added to the agony (IFRC, 2020).

Sewa International Activities:

Sewa International teamed forces with local volunteers at Mathurapur's Pradhan Mantri Kaushal Kendra (PMKK). Together, they gave 2,080 ration packs, containing essentials like as rice and cooking oil, and 2,000 tarpaulin sheets to the storm's homeless victims. In addition, they distributed 10,000 face masks for the prevention of pneumonia. These kits were provided in the West Bengal districts of Mathurapur, North 24 Parganas, Purba Medinipur, Hooghly, and Howrah to provide urgent aid.

Impact

Sewa International's operations provided immediate aid to 10,000 people from socially and economically disadvantaged communities in the target region.

Our Partners:

Donor Agencies

Sewa International USA was our financial partne

Year 2020 Cyclone Nisarga

About the Disaster:

Between 1 and 4 June, a cyclone named Nisarga slammed the coast of Maharashtra. The cyclone began as a "Mild Tropical Storm" and continued as such until June 3, when it intensified into a "Severe Tropical Storm" with winds of 100 to 110 kilometres per hour (km/h) and gusts of 1200 km/h. The storm's strength decreased from "severe" to "depression" on June 4, with winds of 30 to 40 kilometres per hour and gusts of 50 kilometres per hour. In Maharashtra, the affected regions included Mumbai, Alibaug, Palghar, Thane, Raigad, Ratnagiri, and Sindhudurg (TOI, 2020; Waghmode, 2020).

Effects of the Disaster:

Since 1891, Nisarga was the strongest tropical storm to impact the Indian state of Maharashtra in June. Cyclone Nisarga ravaged Raigad, Pune, and Nasik, destroying everything in its path. It led to six fatalities and sixteen injuries in the state. More than 5,033 hectares (12,440 acres) of land were harmed (TOI, 2020; Waghmode, 2020).

Sewa International Activities:

The "Being Volunteer Foundation" and Sewa International formed a partnership to carry out their shared vision of delivering care after a survey showed that residents of the Raigad district in India required assistance in finding a place to live. Sewa International, whose mission is to improve the living situations of families, made a donation of 950 metal sheets and around 45 tarps to 92 tribal people who had nowhere else to turn and were in desperate need of assistance. In the month of July 2020, crews of construction workers were dispatched to the Ratnagiri district in order to repair and reorganise the four schools that had been damaged.

Our Partners:

Donor Agencies

Sewa International USA funded the project.

Ground Implementers

Being Volunteer Foundation was our ground partner for this initiative.

Shivraj Singh Chouhan, Chief Minister of Madhya Pradesh

I would like to applaud the Sewa International team for their outstanding efforts during Covid-19 in distributing oxygen concentrators."

Year 2020 Cyclone Nivar

About the Disaster:

The coastline of Tamil Nadu and Puducherry was hit by the extremely powerful storm known as "Cyclone Nivar" between November 23 and November 27. Over the southwestern part of the Bay of Bengal, the cyclone had a gale wind speed that reached 115-125 kilometres per hour and gusted to 140 kilometres per hour. When it made landfall, the cyclone had a wind speed of 120-130 kilometres per hour with gusts of 145 kilometres per hour (Janardhanan, 2020).

Effects of the Disaster:

The cyclone and the rainfalls had a considerable impact on the districts of Chittoor, Prakasam, Kadapa, and Nellore. These districts saw a total of 12,000 persons impacted, 2,294 houses/huts and 6,133 residences damaged, and 2,618 small animals, 88 large animals, and 8,130 chicken birds reported dead. Waterlogging occurred in various areas of Chennai city as a direct result of persistent rainfall, particularly the densely populated areas of Velacherry and Nanganallur (Janardhanan, 2020).

Sewa International Activities:

Several huts sustained damage as a result of a cyclone and the severe rainfall that followed it in the districts of Thiruvallur and Chengalpattu in the Indian state of Tamil Nadu. It was impossible for the inhabitants to live in their broken homes, but Sewa came to their rescue by delivering a kit to 752 households that included a sleeping mat, bedsheets, and a tarpaulin that measured 15 feet by 18 feet. The kit cost Rs 1800.

Our Partners:

Ground Implementers

Vanvasi Sewa Kendram was our partner for the relief work.

Dr. V. K. Paul, Member, NITI Aayog

"I complement Sewa International for the remarkable voluntary efforts with the use of technology, establishing the ground for a new normal in the future of public health"

Year 2020 Maharashtra Floods

About the Disaster:

In Maharashtra, heavy rains that culminated in flooding happened around the 23rd to the 27th of November. Sangli and Kolhapur were the districts in the state that were most severely hit. At least 28 districts in the state have been reported to be affected by the heavy rainfall that has occurred in the region. These districts include Pune, Satara, Solapur, Nashik, Jalgaon, Ahmednagar, Beed, Latur, Washim, Yavatmal, Dhule, Jalna, Akola, Bhandara, Buldhana, Nagpur, Nandurbar, Mumbai Sub, Palghar, Thane, Nanded, Amravati (ANI, 2022).

Effects of the Disaster:

Heavy rainfall caused several districts in Maharashtra to be cut off from the rest of the state, which led to the deaths of over 55 people and resulted in the isolation of numerous more districts. Several kharif crops including sugarcane were among those that were ruined by the severe rains that hit the Sangli, Satara, and Kolhapur districts of western Maharashtra. According to the available data, almost 40,000 hectares of cropland had been entirely destroyed in just the Satara district (ANI, 2022)

Sewa International Activities:

Our volunteers collaborated with the organisation that we work with to carry out search-and-rescue missions. In the villages of Sangli and Kolhapur that were affected by flooding, the following relief strategies were implemented: our ground volunteers worked diligently to clean debris and distribute food to those who were affected by the flooding. In areas where there had been a significant uprooting of trees, trained volunteers cleared the pathways and roadways. In cases where it was essential, they offered first-aid services while also giving dry goods and safe drinking water

to families who were forced away from their houses as a result of the homes being uninhabitable.

Our Partners:

Ground Implementers

Being Volunteer Foundation was our ground partner for this initiative.

Year 2020 Karnataka Floods

About the Disaster:

During the months of August and October, the state of Karnataka saw devastating flooding in a total of 23 districts; among these, the Malenadu region and all of the districts of Coastal Karnataka were designated as flood zones. In the northern portion of the state, districts such as Belagavi, Kalburgi, Raichur, and Bagalkot experienced rainfall that came close to reaching the highest of 21 centimetres, when in normal years the rainfall there is less than 10 centimetres. In the year 2020, areas of Malenadu such as Bhagamandala and Aiyamageri experienced an average of 647 millimetres (or 64.7 centimetres) of rainfall

(Mohammed, 2020; The Indian Express, 2022).

Effects of the Disaster:

According to the statistics made public by the Karnataka State Natural Disaster Monitoring Centre, a total of 61 people died as a result of flood-related incidents throughout the state's 22 districts, and 15 individuals are still missing as a result of those occurrences (KSNDMC). More than 40,000 homes were destroyed or severely damaged as a result of the floods, and more than 2,000 settlements were impacted. Districts in the north, along the coast, and in Malenadu were hit the hardest (Mohammed, 2020; The Indian Express, 2022).

Sewa International Activities:

Sewa International was able to successfully carry out a programme to rebuild and refurbish educational institutions that had been damaged by flooding. We constructed new kitchen units, installed toilet seats inside both latrines as well as in girls' washrooms, built walls around school classrooms and playgrounds, built soak pits that would allow water to penetrate down into the ground rather than sitting in stagnant puddles, and carried out a number of other improvements as well. The tiles that we used for the flooring were a non-slip version of the Kadappa tiles.

Our Partners:

Ground Implementers:

United Way was our ground partner.

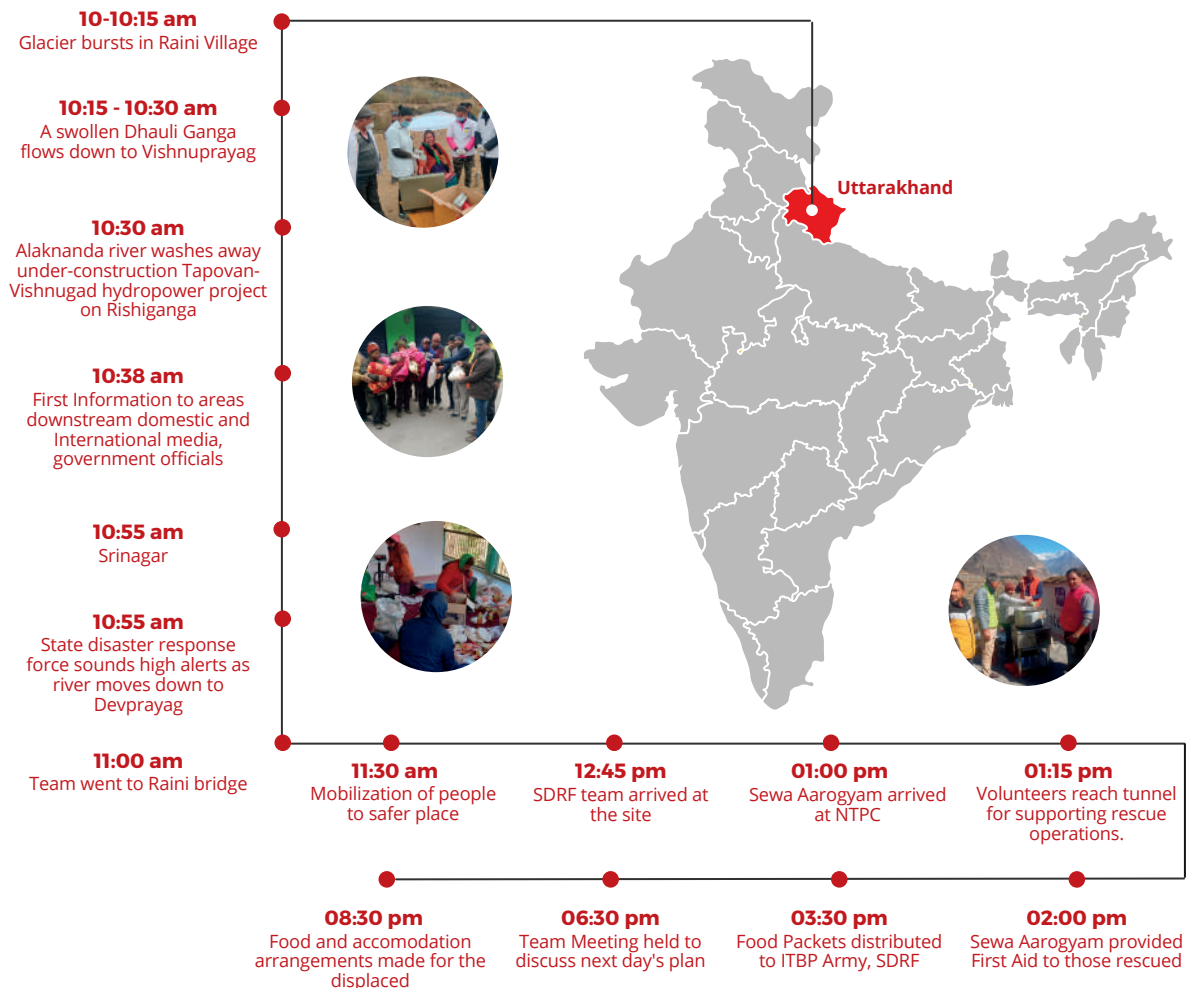# Year 2021 Uttarakhand Glacier Burst

About the Disaster:

A terrible collision occurred in the Chamoli district of Uttarakhand on February 7, 2021. An abrupt breach on the Nanda Devi Glacier led to the avalanche and flood that caused the disaster. The breach was the source of the disaster. In high mountain locations, it caused widespread terror and destruction on a massive scale, and it had an impact on a number of the area's villages as well as the communities that were located nearby.

Effects of the Disaster:

The deluge caused flooding that was both catastrophic and widespread, and it was a direct outcome of the flooding. NTPC's Tapovan–Vishnugad Hydel Project and the Rishi Ganga Hydel Project both sustained significant damage, and dozens of workers were stranded in tunnels when floodwaters began to enter the complexes. More than thirty people's lives were lost, which had an effect on more than six hundred people's livelihoods, and more than three hundred fifty people from fifteen different villages were missing. At least 200 families, possibly even more, were impacted (The Hindu, 2021).

Sewa Onground

10-10:15 am
Glacier bursts in Raini Village

10:15 - 10:30 am
A swollen Dhauli Ganga flows down to Vishnuprayag

10:30 am
Alaknanda river washes away under-construction Tapovan-Vishnugad hydropower project on Rishiganga

10:38 am
First Information to areas downstream domestic and International media, government officials

10:55 am
Srinagar

10:55 am
State disaster response force sounds high alerts as river moves down to Devprayag

11:00 am
Team went to Raini bridge

Uttarakhand

11:30 am
Mobilization of people to safer place

12:45 pm
SDRF team arrived at the site

01:00 pm
Sewa Aarogyam arrived at NTPC

01:15 pm
Volunteers reach tunnel for supporting rescue operations.

08:30 pm
Food and accomodation arrangements made for the displaced

06:30 pm
Team Meeting held to discuss next day's plan

03:30 pm
Food Packets distributed to ITBP Army, SDRF

02:00 pm
Sewa Aarogyam provided First Aid to those rescued

Sewa International Activities:

Rescue and Relief Operations

As the first responders on the scene, Sewa International was tasked with notifying communities farther downstream of the impending crisis, evacuating villages that were in the path of the floods, and informing authorities of the unfolding catastrophe. As quickly as possible, we teamed up with several other disaster relief teams in order to provide assistance. We were able to uncover means to contact those who were trapped inside the tunnel thanks to the expertise that our team possesses in the topography and geography of the area. Our volunteers helped direct NDRF and other rescue teams to persons who were in need of assistance so that they could save them.

Our medical staff were there to provide assistance to those who required it and to offer medical services to those who were being rescued. Our mobile medical unit, also known as the MMU, was heavily involved in both the provision of medical services at the rescue site and the organisation of first aid camps in the villages of Raini and Tapovan. After some time had passed, the MMU set up health camps in a variety of sites throughout the affected area.

The bereaved families in the affected communities received trauma counselling from members of our team, and our volunteers distributed food in those communities. We immediately offered counselling services to the hundreds of families who had been adversely affected by the event. Due to the fact that more than thirty towns were impacted, sixty members of the team were working to provide these services.

We are dedicated to assisting those living in rural areas in reestablishing their means of subsistence through the acquisition of new skills. As part of this, we will provide assistance to them in the formation of Self-Help Groups, Bal Panchayats, Sewa Yuva Udhyami Kendras, community farms, and seed banks. It is because of initiatives such as these that residents of these villages will be able to recover and thrive.

Rehabilitation and Recovery Operations

Work is being done by Sewa International in the areas of "Health, Livelihood, Child Support, Disaster Mitigation and Preparedness." E-Health centres have been built in Tapovan and Urgam as part of Sewa International's dedication to meeting the needs of the local community with medical assistance of the highest standard. These two e-health centres not only offer online consultations with seasoned medical professionals, but they also help people with antenatal and postnatal checkups, the dressing of wounds, sugar-blood pressure checks, the distribution of nebulizers, ECG services, and a variety of other medical services.

Because of the widespread nature of the Covid-19 pandemic, the centres have been outfitted with oxygen concentrators. The individuals who are in charge of operations at the centre are highly qualified health workers who also have nursing education. By locating these centres in close proximity to one another, it is made simpler for people to acquire the information and medical attention they require.

Children who have lost one or both of their parents as a result of a natural disaster frequently experience a variety of difficulties. Sewa International came to the conclusion that the best way to assist these youngsters was to provide financial assistance for their schooling. They have a better chance of avoiding a life of destitution and poverty thanks to the assistance provided.

In addition, Sewa International has begun providing assistance to those who have been impacted in two different ways: first, by supplying the affected people with the instruments and technological assistance necessary to resume farming (via SKSK centres); and second, by supplying the affected women with alternative sources of income. The mission of the Sewa Krishi Sansadhan Kendra, often known as SKSK, is to supply farmers in rural areas with cutting-edge farming tools and equipment so that these farmers can maximise the productivity of their agricultural land in the shortest amount of time. Urgam, Badagaon, and Tapovan each have their own Krishi

Tapovan & Urgam E-Health Center Month-Wise Date
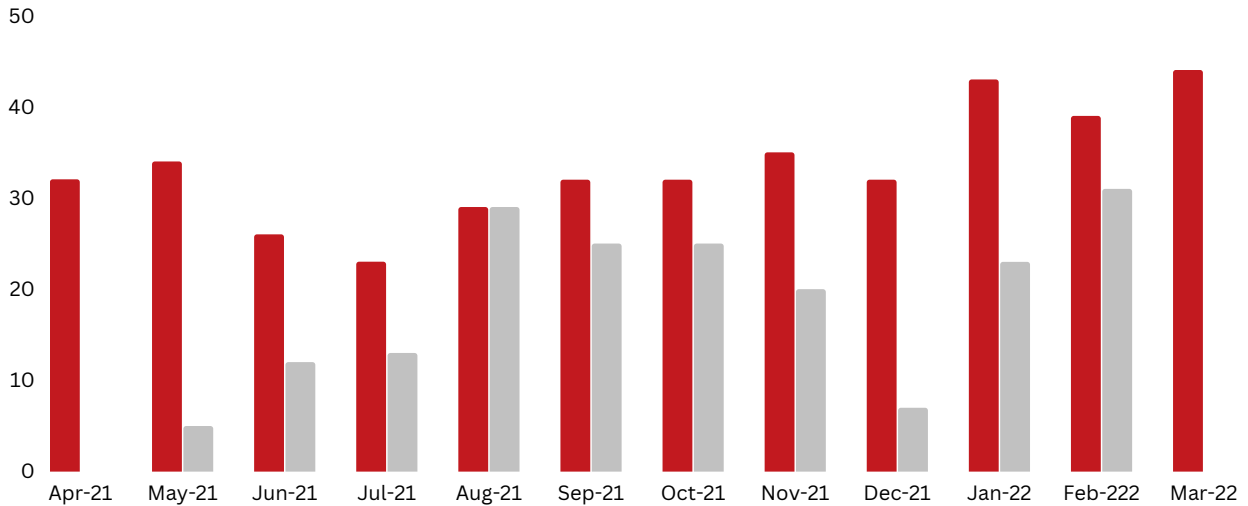
Sansadhan Kendra that we have established. A power weeder, grass cutter, chain saw, plough, knapsack sprayer, spade, hoe, sickle, garden rack, hand rack, water sprinkler, multipurpose scissors, and high–yield seeds are some of the tools and agricultural gear that are available at the centres. The community is also receiving instruction in alternative means of subsistence, such as the processing of food, the stitching of fabric, and other such activities.

Training in disaster management and mitigation is another essential component of our mission. Both Tapovan and Urgam are vulnerable to natural disasters, which can cause significant devastation to the local population and the structures they call home. Training in disaster management is intended to assist individuals in becoming more prepared for the occurrence of natural disasters. People from the local community have been chosen to donate their services as first responders and search and rescue personnel. During any type of calamity, the first responders will be involved in raising awareness on the village level. They will also inform the team responsible for search and rescue, the team responsible for disaster mitigation at Sewa, and the local authority responsible for governing. The search and rescue

team is going to get the information they need from the first responders, and then they are going to move quickly in order to begin any operation of this kind in the region. In addition to that, they will offer those in need the required medical support.

Our Partners:

Ground Implementators

We were/are directly involved in providing these services.

– **Swathi Ram,** Director, Sewa International

"Sewa is beyond ourselves which is shown very well by Sewa International volunteers."

NDRF First Responder CPR Training provided during Conference of Disaster Management, 2022 organised by Sewa International

"Let our workers keep their minds free….. and work for our people, our Dharma in the right spirit, lend a helping hand to all our brethren who need help and strive to relieve distress wherever we see it. In this service no distinction should be made between man and man. We have to serve all, be he a Christian or a Muslim or a human being of any other persuasion; for, calamities, distress and misfortunes make no such distinction but afflict all alike. And in serving to relieve the sufferings of man let it not be in a spirit of condescence or mere compassion but as a devoted worship of the Lord abiding the heart of all beings, in the true spirit of our Dharma of surrendering our all in the humble service of Him who is Father, Mother, Brother, Friend and everything to us all. And may our actions succeed in bringing out the glory and effulgence of our Sanatana-EternalDharma"

K. SURYA NARAYANA RAO,
the founder author of the trust.

In an effort to help those in Uttarakhand recover and become self-sufficient, Sewa International has launched a community agricultural initiative.

CONCLUSION

This day has ended. It is closing upon us even as the water-lily upon its own tomorrow.
Kahlil Gibran

The most coveted award, "Photo of the Year," at the 2004 World Press Photography competition went to a picture of India. It depicts the gruesome reality of a woman resting next to the body of a loved one on a beach in the vicinity of Cuddalore. Her outstretched hands look like she wants advice on how to go with her life. Two days after the tsunami hit the eastern coast of India, Reuters photographer Arko Datta snapped this picture. That's only one of many pictures you can get from our vaults like this one. The Bengal famine, the Uttarkashi earthquake, the Latur earthquake, the Orissa cyclone, the Andhra Pradesh cyclone, the Malpa landslide, and many more are all examples of natural disasters that caused widespread floods and starvation. No single organisation has the size necessary to adequately represent India's grief. It's unlikely that the photo of the woman in the tsunami would be the last one taken by the news crew. Numerous disasters keep happening in India. In addition to earthquakes, cyclones, floods, droughts, and landslides, there have been cases of exceptionally strong cold and heat waves, hailstorms and avalanches, lightning, and cloudbursts. Additionally, there are the dams, bridges, and buildings that have been destroyed. Any tunnel, whether it be used to transport water or oil or to mine for coal or gold, is at risk of cave-ins. Travelers are lost at sea when boats, planes, and trains crash into each other, sinking everyone within. Everything in its path is destroyed by the ferocity of the fire, whether it be forests, farms, factories, businesses, or even movie theatres and homes. Nuclear waste from power stations and dangerous gas leaks from factories producing hazardous goods are also covered. Natural disasters like fires, famines, and floods have been around for a long time, whereas man-made disasters like nuclear reactor breaches, gas from a dangerous location, and train and plane catastrophes are relatively new.

Injuries and property damage are also common results of disasters, in addition to loss of life. Despite the apparent irony, attention must be given to those who are still alive. Departed have completely vanished without a trace. Those who are left behind will have to take on greater work. Although much time and energy has gone into creating instruments that can precisely time the beginning of a storm, the millisecond of an earthquake, and the minutes of a landslide, there is no instrument or machine that can measure the tragedy that affects the human mind. Like the physical scars left by uprooted trees, wrecked homes, and shattered infrastructure, the emotional scars left by grief and its relatives sadness, suffering, and despair are permanent. It's easy to get back lost items but much harder to repair a broken mind. In the face of the perplexing obscurity of the rapid onset of tragedy, the stupid meaninglessness of unrelenting pain, and the lack of accountability for enormous unfairness, how and why are difficult, uncomfortable questions to ask.

India is being threatened by a slew of disasters, which loom over the country like a sword. How does India handle emergencies caused by weather? What are some of the planning agencies' and ministers' recommended policy concerns? How have governments, banks, and courts dealt with natural disasters? How do newspapers and television shows report on calamities that happen repeatedly? How far along is India in creating a centralised database of disaster records? How much importance do universities put on studying and researching disasters? To get a whole picture of India's response to natural disasters in the post-independence era, these and related topics must be addressed. Considering the victims' mounting hopelessness, inaction would be disrespectful.

In order to better utilise scientific data, coordinate early warning with quicker anticipatory action on the ground, and escape the conceptual, regulatory, and institutional silos we have created for ourselves, we need some new concepts and techniques of thinking, i.e. out of the box thinking. Thanks in large part to the unheralded efforts of the worldwide disaster risk reduction (DRR) community over the past few decades, we already have most of the tools and knowledge we need to succeed.

Our common goal is to minimise the harm that natural disasters cause to as many people as possible, and protecting the most vulnerable and disadvantaged among us must be our first priority. Despite how obvious it may appear, this is not always how our sector acts. Lacking a clear command to prioritise the most vulnerable individuals and ensure their participation in decision-making, many DRM laws, adaptation plans, and DRR programmes fail to protect those most at risk.

The most marginalised communities vary greatly from one location to the next, but some of the most at-risk populations include those who live in urban slums, indigenous communities, rural areas, the elderly, those with disabilities, and those who identify as having a range of sexual orientations, gender identities, and sex characteristics.

Humanitarian organisations should prioritise "doing no harm," which necessitates a shift in the sector toward a much more serious focus on decreasing the environmental effect and carbon footprint of our own activities. The extent to which we contribute to the problem determines how helpful a remedy we can be.

It's understandable if the concept of integrating disaster response efforts doesn't sound novel, but it's essential. Although all three of the major international legal frameworks (the SDGs, Sendai Framework, and Paris Agreement) call for integrated and coherent approaches to climate change adaptation, disaster risk reduction (DRR), and development, none of them are able to fully come together on their own. Few national DRM laws and policies fully integrate adaptation to climate change, and many states employ parallel and independent institutional systems and planning processes. Foreign financing sources frequently function in silos, creating coverage gaps, much like domestic ones. This is especially true for the finance streams for the environment (and other environmental issues), development, and humanitarian aid.

First responders and community organisations receive insufficient support due to a lack of resources. As a community, we frequently forget to support the institutional capacity of local disaster responders. When disaster strikes closer to home, it could be challenging to implement national policies and plans due to a lack of local resources.

As such, now is the time to get ready for disasters to transpire. Why? first, because we must. Even though climate emissions had gone down temporarily during lockdown, CO_2 levels continue to set new records (UN News, 2020). Hurricanes, heat waves, and many other extreme events around the world are still affected by global warming that happened in the past. They won't wait until we owe less money. Second, as was already said, the many recovery plans being made around the world offer a chance to rebuild better, not just in a green way, but also in a way that includes everyone. We s hould use money we have to invest in making communities safer and more resistant to disasters (Hepburn et al, 2020; IMF, 2020). Third, because of climate change and other disasters, youth around the world are getting organise like never before. This is a big chance. They have already done "something that many of us who have been working on it for 20-odd years have failed to do" (Bradley, 2019), and they could do even more if organisations and professionals put more effort into helping their leadership. Lastly, we now know that we can act when we are fully aware of a global disaster, find resources where it seemed there were none, and take quick, impromptu steps toward containment. We still have time to act in the right way before it's too late. Let's not throw away this chance.

ANNEXURE

Tsunami- Sri Lanka 2004

Sri Lanka is an island in the Indian Ocean that is separated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait. It has an area of 65,000 square kilometres and a population of 18.7 million, according to the Department of Census and Statistics (2001). In the island's south-central region, an anchor-shaped mountain range dominates the landscape. Geography and variances in regional climate are the fundamental causes of the island's various contrasts.

According to Climate Risk Index 2019,[1] Sri Lanka ranks 31 in medium risk category and 97- medium risk based on Inform Risk Index 2019.[2] Tsunamis are uncommon but have caused significant devastation. Current knowledge of the tectonics of the Indian Ocean region indicates a growing earthquake danger. The risk of volcanic eruptions is low.Droughts, floods, landslides, cyclones, and coastline erosion are the most prevalent natural hazards affecting Sri Lanka. As a result of climate change, an increase in extreme events and natural disasters is anticipated to pose a significant threat to Sri Lanka's economy and public health (World Bank, 2021).

Source: Bruce Jaffe, 2005. *Kalmunai, Sri Lanka, after the December 2004 tsunami.* USGS Pacific Coastal and Marine Science Center. <https://www.usgs.gov/media/images/kalmunai-sri-lanka-after-december-2004-tsunami-0>

About the Disaster:

The earthquake happened on December 26 at 6:58 a.m. local time in Sri Lanka. Around 8:35 a.m., the first huge wave struck the east shore. Immediately thereafter, waves of several metres in height pounded numerous more coastlines. In a very short period of time, more than 30,000 people perished and several hundred thousand were displaced. In addition, tens of thousands of residences and other buildings, railways, bridges, communication networks, and other infrastructure and capital assets were severely damaged (Jayasuriya et.al., 2006).

Effects of the Disaster:

The tsunami of December 26, 2004 left Sri Lanka with approximately 30,000 dead, almost a million refugees, and an estimated 150,000 without a primary means of subsistence. There was significant damage to infrastructure and capital assets, estimated at approximately $1 billion (4.5 percent of GDP), especially in the tourism and fishing industries. It is anticipated to reduce 2005 GDP by between 0.5 and 1% (Jayasuriya et.al., 2006).

Sewa International Activities:

Rescue and Relief Operations

Sri Lanka was the country hardest hit by the tsunami, with over 50,000 lives lost. Sewa International was prompt in delivering aid to the tsunami-affected regions of that country. It was difficult to create a unit in Sri Lanka while also offering aid to those afflicted by the tsunami. It is important to note that our volunteers performed admirably on both fronts. 14 relief centres were established in the two districts of Batticaloa and Ampara to provide aid to the affected.

Rehabilitation and Recovery Operations

One hundred permanent homes were constructed as part of the rehabilitation effort, which included a number of other building projects. The first part of the project involved the construction of 76 homes, and on February 9, 2006, the Lord Mayor of Coventry, Shri Ram Lakha, presented the

beneficiaries with the keys to their newly built homes. In November of 2006, all of the remaining residences were finally handed over to their respective beneficiaries.

Nepal Earthquake 2015

Because of its location, topography, climatic conditions, high rainfall intensity, and the composition of rocks and soil, Nepal is more likely to be affected by natural disasters such as floods, landslides, extreme weather patterns, earthquakes, avalanches, and fires, amongst others. This is due to the fact that Nepal has been made more prone to disasters as a result of these factors. In terms of the mortality rate, it is the second most vulnerable country to the danger of numerous hazards (Bronkhorst 2012). According to Aryal (2007), the prevalence of natural hazards in Nepal has been growing over time, which has led to an increase in the number of people killed and an increase in the costs. The average number of lives lost due to natural catastrophes is two per day, and the average amount of property lost due to natural disasters is NRs. 1208 million every year (MOHA 2009). Between the years 1983 and 2010, natural disasters were responsible for the deaths of around 23,000 individuals, while the economic damage caused by these disasters totaled more than one billion US dollars between the years 1998 and 2008. (DPNET, 2011).

According to the analysis that was included in the Disaster Vulnerability and Risk Assessment Study, Nepal is the eleventh most vulnerable country in the world to earthquakes. It is located in a highly seismically active zone, which means that earthquakes happen extremely frequently there. It is located directly on the subduction zone between the Eurasian plate and the Indian plate, which is a place where devastating earthquakes frequently take place. Due to the rapid growth of their populations and the many activities that take place in such a concentrated area, modern cities have earned the reputation of being "disaster incubators" (Dovers & Handmer 2007; Pelling 2003). The rapid urbanisation that is taking place in towns like Kathmandu and Pokhara, which are located in the middle of the country, makes these locations more susceptible to earthquakes.

About the Disaster:

The 7.8M Gorkha or Nepal Earthquake occurred on April 25, 2015 at 11:56 NST, 77 km northwest of Kathmandu, and had a depth of 15 km. The April 25, 2015 earthquake was in Gorkha district near Barpark village, followed by a 7.2M aftershock in Dolakha district that struck the east of the country. Disaster aftershocks lasted months (GoN MoHA, and DPNet-Nepal, 2015).

Effects of the Disaster:

There were 75 districts in Nepal, 31 of which were reported to have been affected by the earthquake in the central and western regions of the country, while 14 of those 75 districts were badly damaged by the earthquake in terms of the rescue and relief priority they required (GON, 2015). Almost immediately after the quake, the government proclaimed a state of emergency and asked for aid from the international community.

According to the authorities, as of May 25, 2015, a total of 500,717 houses had been fully demolished, while an additional 269,190 houses had been partially destroyed. As of June 24, 2015, approximately 8,832 people had died, and 22,309 people were injured. After the devastating earthquake that occurred in Nepal and Bihar in 1934, there was another tremor that could be felt all the way in India, Tibet, and Bangladesh. Approximately 2.8 million people within the country were impacted when the recent earthquake struck (OCHA 2015). More than 860,000 people were in urgent need of aid in finding shelter before the rainy season began. On May 4, about 423 million dollars in US dollars were requested for humanitarian operations in Nepal (OCHA, 2015).

Sewa International Activities:

Rescue and Relief Operations

Three hours after the devastating earthquake hit Nepal, volunteers from Sewa International stepped into rescue and relief efforts. Urgent aid including water, food, and tarps were distributed across the

country. Sewa International was the first organisation to reach on the scene in numerous areas, including Bhaktapur, to search for and aid survivors.

An official rescue team from the government of Nepal was assisted by volunteers from the organisation Sewa, whose members removed bodies and treated the injured. Nepal as a whole was severely impacted by the magnitude of the earthquake, and rescue and relief efforts were hampered by the mountainous landscape. Several persons were rescued by Sewa volunteers who were stuck at elevations of more than 3,000 feet and given emergency supplies. Since the upcoming monsoon season threatened to make circumstances even more difficult for those who had lost their homes, there was a significant demand for tarpaulins to be utilised in the creation of makeshift camps during the relief effort. Emergency and temporary shelters were provided by Sewa International to those who had lost their homes. These shelters were built out of tarps. Further, Sewa International has distributed toolkits to villagers in Nepal's outlying areas, where Sewa volunteers will utilise them to assist residents in cleaning rubbish from around their homes.

There were 1,600 Sewa volunteers who spread out throughout more than 300 villages and 560 wards to provide aid during the duration of the relief operations.

The Birth of Bharat

The stories of miraculous survival throughout the disaster are the consequence of the human spirit and desire to persevere. One such occurrence was brought to light during the search-and-rescue operations that took place in Nepal in the aftermath of the deadly earthquake. Eight medical professionals who were members of the Arogya Bharathi Haryana team were travelling in the bus. They intended to travel to the small village of Jalbire, which is located close to the border with China. The landslide forced the bus that was transporting the physicians to come to a stop, which meant that the doctors had to walk to the hospital in order to treat their patients. They packed their backpacks with all of the essential equipment and provisions before setting off on their journey. Along the way, they came across a critical issue that

required their immediate attention. A woman who was going through excruciating labour pains need immediate medical attention in order to alleviate her suffering. The medical personnel immediately sprang into action, hurried the patient to the ambulance, and began performing urgent surgery on her. After the procedure, a child who appeared to be in good health was delivered. The name of the newborn was decided upon by the baby's parents as Bharat, who thought it was appropriate. This birth brought an outpouring of joy and hope in spite of the devastation and ruins that were all around.

Rehabilitation and Recovery Operations

Several major initiatives, such as the following, were launched as part of the Rehab programme:

1. About 250 earthquake orphans are housed in five hostels run by Aamako Maya Chhatravas, the Hostels for Orphans and Displaced Children. As part of this effort, a shelter for 100 women was set up in case of an emergency.
2. Sewa International reconstructed three damaged schools, including both residential and non-residential institutes of higher learning. In an effort to prevent earthquake-affected students from falling behind in their studies due to a lack of critical scholastic equipment, a School Kit Drive for 65,000 students was organised for the children studying in the rural regions of 14 districts of Nepal.

For Junior students (upto 5th Grade)	**1** *School Bag*
	6 *Notebooks (**100** Pages)*
	1 *Pencil Box (**2** Pencils, **1** Eraser, **1** Sharpner, **1** Scale)*
	1 *Drawing Book (**28** Pages) and **1** Crayon box (**12** colours)*
For Senior students (upto 6th Grade and Up)	**1** *School Bag*
	7 *Notebooks (**100** pages), **1** Graph book (**60** pages)*
	2 *Long notebooks and registers (**100** pages)*
	1 *Geometry box (**1** Pencil, **1** Pen, **1** Eraser, **1** Sharpner, **1** Scale, **1** Protector, Compass, Set Squares)*

Figure: School Kit Distributed in Nepal

3. About 250 earthquake orphans are housed in five hostels run by Aamako Maya Chhatravas, the Hostels for Orphans and Displaced Children. As part of this effort, a shelter for 100 women was set up in case of an emergency.

Bibliography

Introduction

Acharya, K. (2000). Double Victims of Latur Earthquake, Indian Journal of Social Work, 61 (4): 558–64.

Asian Disaster Reduction Centre, n.d. 'Top 25 Natural Disasters in India according to Amount of Damage (1,000 US$) (1901–2000)'. [Online] Available at: http://www.adrc.asia/databook_20th/IND1.xls [Accessed 05 01 2023].

Alexander, D. ed., (2011). Encyclopaedia of Disaster Relief. Vol. 2. Thousand Oaks, CA: SAGE Publications, Inc.

Chatterjee, K., Chatterjee, A., and Das, S. (2005). Case study 2: India–Community adaptation to drought in Rajasthan. IDS Bulletin, 36(4), 33–52.

FSI, 2021. Forest Fire Activities. [Online] Available at: https://fsi.nic.in/forest-fire-activities [Accessed 04 01 2023]

CNBC TV18, 2022. The worst floods in India- from Mumbai to Uttarakhand to now Assam under water. [online] Available at: https://www.cnbctv18.com/photos/india/floods-in-india-kedarnath-uttarakhand-mumbai-july-26-assam-kerala-gujarat-photos-13928952.htm [Accessed 15 08 2022]

Geological Survey of India, 2023. Landslide Incidences for the period 2020. [online] Available at: https://www.gsi.gov.in/webcenter/portal/OCBIS/pageQuickLinks/pageLandslideIncidents2020 [Accessed 23 01 2023]

Glaser,B. (1963). The use of secondary analysis by the independent researcher.The American Behavioural Scientist, 6, 11–14.

Gupta, A. K., Nair, S.S., Ghosh, O., Singh, A. and Dey, S. (2014). Bundelkhand Drought: Retrospective Analysis and Way Ahead. New Delhi: National Institute of Disaster Management.

Hinds,P.S., Vogel, R.J., & Clarke-Steffen, L. (1997). The possibilities and pitfalls of doing a secondary analysis of a qualitative dataset.Qualitative Health Research, 7(3):408–424.

IFRC. (2020). World Disasters Report 2020: Come Heat or High Water. Geneva: International Federation of Red Cross and Red Crescent Societies

Kapur, A., (2010). Vulnerable India: A Geographical Study of Disasters. New Delhi: SAGE Publications India Pvt Ltd.

Kaushik, G., and Sharma, K. C. (2015). Climate change and rural livelihoods: Adaptation and vulnerability in Rajasthan. Global NEST Journal, 17(10), 1–9.

Kellett, M., 2005. How to Develop Children as Researchers: A Step-by-Step Guide to Teaching the Research Process. London: SAGE Publications Ltd.

Khadka, N.S., 2021. Why India and Nepal's forest fires are worrying scientists. Available at: https://www.bbc.com/news/world-asia-india-56671148 [Accessed 04 01 2023]

L'ESTRANGE, S. ed., 2003.The A–Z of Social Research. Vol. 0. London: SAGE Publications, Ltd.

Long-Sutehall, Tracy, Magi Sque, and Julia Addington-Hall, (2012). SAGE Secondary Data Analysis. 0 vols. London: SAGE Publications Ltd.

NDMA, (n.d.) Cyclone. [Online] Available at: https://ndma.gov.in/Natural-Hazards/Cyclone [Accessed 04 01 2023]

O'Reilly, M. and Dogra, N., (2017). Interviewing Children and Young People for Research. London: SAGE Publications Ltd.

Pal, I. and Ghosh, T., 2018. Natural Hazards Management in Asia. First Edition, London: SAGE Publications, Inc.

Paik, S. ed., (2020). Drought Risk Management in South and South-East Asia. First Edition New Delhi: SAGE Publications Pvt Ltd.

Payne, G. and Payne, J., (2004). Key Concepts in Social Research. SAGE Key Concepts. London: SAGE Publications, Ltd.

Planning Commission, 2002. Tenth Five Year Plan (2002-2007). Government of India: New Delhi

Planning Commission, Approach Paper to the Tenth Five Year Plan (2002-2007). Available at: <https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/appdraft_1.pdf> [Accessed 03 01 2023]

Robinson, J., (2019). Focus Groups. In: Paul Atkinson, ed., SAGE Research Methods Foundations. London: SAGE Publications Ltd.

Warf, B. ed., (2010). Encyclopaedia of Geography. Thousand Oaks, CA: SAGE Publications, Inc.

World Bank, 2022. Fragility, conflict, and violence. [Online] Available at: https://www.worldbank.org/en/topic/fragilityconflictviolence/overview#:~:text=Fragility%2C%20conflict%2C%20and%20violence%20(,80%25%20of%20all%20humanitarian%20needs. [Accessed 04 01 2023]

Word Health Organisation (WHO), 2020a. Novel Coronavirus Disease (COVID-19) Situation Update Report-19. [Online] Available at: https://cdn.who.int/media/docs/default-source/wrindia/situation-report/india-situation-report-19.pdf?sfvrsn=14c7933f_2 [Accessed 12 04 2022]

World Health Organisation (WHO), 2020b. Key Messages and Actions for COVID-19 Prevention and Control in Schools. Online] Available at: https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf [Accessed 12 04 2022]

WHO, 2023. Earthquakes. [Online] Available at: https://www.who.int/health-topics/earthquakes#tab=tab_1 [Accessed 04 01 2023]

Works Cited Chapter 1

ADB, 2021. Disaster Resilience in Asia a Special Supplement of Asia's Journey to Prosperity: Policy, Market, and Technology over 50 Years. Metro Manila: Asian Development Bank.

Disaster Management Act 2005. (c.1.). New Delhi: Ministry of Law and Justice.

IFRC, 2022. What is a disaster? Retrieved from IFRC: https://www.ifrc.org/what-disaster

National Centre for Disaster Management, 2002. THE REPORT of HIGH POWERED COMMITTEE ON Disaster Management [Online] Available at: https://nidm.gov.in/pdf/pubs/hpc_report.pdf [Accessed 06 08 2022]

Matthews, J. ed., 2014. Encyclopaedia of Environmental Change. Vol. 3. Thousand Oaks,, CA: SAGE Publications, Ltd.

Penuel, K. B., Statler, M. and Hagen, R. eds., 2013. Encyclopaedia of Crisis Management. Vol. 2. Thousand Oaks, CA: SAGE Publications, Inc.

Prasad, A. S., & Francescutti, L. H., 2017. Natural Disasters . International Encyclopaedia of Public Health, 215-222.

Sawada, Y., 2007. The impact of natural and manmade disasters on household welfare . Agricultural Economics, 59-73.

Twigg, J., 2004. Disaster Risk Reduction: Mitigation and Preparedness in Development and Emergency Planning.London: Overseas Development Institute.

U.N. ISDR, 2004. Living with Risk: A Global Review of Disaster Reduction Initiatives. Geneva: United Nations.

UNDRR, n.d. Terminology. Retrieved from Disaster: https://www.undrr.org/terminology/disaster

Van Brunschot, E. G. and Kennedy, L. W., 2008. Risk Balance & Security. Thousand Oaks, CA: SAGE Publications, Inc.

Wisner, B., Blaikie, P., Cannon, T. & Davis, I., 2004. At risk. Natural Hazards, People's Vulnerability and Disasters. 2nd ed. Routledge: London – New York.

Works Cited Chapter 2

ADB, 2021. Disaster Resilience in Asia A Special Supplement of Asia's Journey to Prosperity: Policy, Market and Technology over 50 Years. Metro Manila: Asian Development Bank.

Apte J. 2009 . "Facilitating Transformative Learning: A Framework for Practice." Australian Journal of Adult Learning, 49 (1), 169–89.

Chan, E. Y., 2017. Public Health Humanitarian Responses to Natural Disasters. London and New York: Routledge.

Cheltenham Observatory, 1998. Directory of Sustainable Rural Initiatives. Cheltenham: Countryside and Community Research Unit, in association with Forum for the Future.

IFRC. (1996). World Disasters Report 1996. Oxford: Oxford University Press/IFRC.

IFRC. (2020). World Disasters Report 2020: Come Heat or High Water. Geneva: International Federation of Red Cross and Red Crescent Societies.

JHBSPH; IFRC, 2008. Public health guide in emergencies. Geneva: International Federation of Red Cross and Red Crescent Societies.

Lloyd-Jones, T., 2006. Mind the Gap! Post-Disaster Reconstruction and the Transition from Humanitarian Relief.London: Royal Institute of Chartered Surveyors.

Moseley, M. J., 2003. Rural Development: Principles and Practice. London: SAGE Publications Ltd.

Pal, I. and Ghosh, T., 2018. Natural Hazards Management in Asia. First Edition55 City Road, London: SAGE Publications, Inc.

Prasad, A., & Francescutti, L., 2017. Natural Disasters. International Encyclopedia of Public Health, 215-222.

Twigg, J., 2004. Disaster Risk Reduction: Mitigation and Preparedness in Development and Emergency Programming. London: Overseas Development Institute.

UNDRR, n.d. Our Impact [Online] Available at: https://www.undrr.org/about-undrr/our-impact [Accessed 05 05 2022]

UNISDR, 2009. 2009 UNISDR Terminology on Disaster Risk Reduction. Geneva: United Nations International Strategy for Disaster Reduction (UNISDR).

UNISDR, 2015. Proposed Updated Terminology on Disaster Risk Reduction: A Technical Review. The United Nations Office for Disaster Risk Reduction.

Van Wassenhove L.N. 2006 . "Blackett Memorial Lecture. Humanitarian Aid Logistics: Supply Chain Management in High Gear." Journal of the Operational Research Society, 57 (5), 475–89.

Warfield C. 2008 . The Disaster Management Cycle. [Online] Available at: http://www.gdrc.org/uem/disasters/1-dm_cycle.html [Accessed 08 05 2022].

Works Cited Chapter 3

India Meteorological Department (IMD), 2020. Climate Hazards and Vulnerability Atlas of India. Ministry of Earth Science, Office of Climate Research and Services: Pune. [Online] Available at: https://imdpune.gov.in/hazardatlas/index3.html [Accessed 19 08 2022]

Kapur, A., 2010. Vulnerable India: A Geographical Study of Disasters. New Delhi: SAGE Publications India Pvt Ltd.

Works Cited Chapter 4

Andrews, C. F., 1935. The Indian Earthquake. London: George Allen and Unwin Limited.

Baker, J. N. L., 1923. 'The Economic Future of India', Geographical Teacher, 12: 127–31.

Beck, U., 1998. World Risk Society. Cambridge: Polity Press.

Bradshaw, Sarah, 2004. Socioeconomic Impacts of Natural Disasters: A Gender Analysis. United Nations, Sustainable Development and Human Settlements Division, Women and Development Unit. Available online: http://www.eclac.org/.../xml/3/15433/P15433.xml&xsl=/deype/tpl/p9f.xsl&base=/mexico/tpl/top-bottom.xslt (Accessed on 19 06 2022).

Building Materials and Technology Promotion Council, 1997. Vulnerability Atlas of India. New Delhi: Government of India, Ministry of Urban Affairs and Employment.

Byrne, B. and S.Baden, 1997. Gender, Emergencies and Humanitarian Assistance. Report No. 33 (Commissioned by the WID Desk, European Commission, Directorate General for Development), BRIDGE, Institute of Development Studies, Sussex University, Brighton, UK. Available online: http://www.earthscape.org/r1/ES2_6863/6863.pdf (Accessed on 10 06 2022).

Central Board of Secondary Education (CBSE), 2003. Together, Towards, a Safer India, An Introduction to Disaster Management for Class VIII.

Chatterjee, B., 2000. Environment Laws, Implementation Problems and Perspectives. New Delhi: Deep and Deep Publications.

Chew, Lin and KavitaRamdas, 2005. Caught in the Storm: The Impact of Natural Disasters on Women. The Global Fund for Women. Available online: http://www.cohintl. org/02projects/_docs/_srilanka/disaster-report.pdf (Accessed on 19 06 2022).

Dekens, Julie, 2007a. Herders of Chitral—the Lost Messengers: Local Knowledge on Disaster Preparedness in Chitral District, Pakistan. International Centre for Integrated Development (Kathmandu, Nepal) and DIPECHO, European Commission Humanitarian Aid (ECHO). Available online: http://www.disasterpreparedness.icimod.org/articles.php?id=7 (Accessed on 19 06 2022).

Dekens, Julie, 2007b. The Snake and the River Don't Run Straight: Local Knowledge on Disaster Preparedness in the Eastern Terai of Nepal. International Centre for Integrated Development (Kathmandu, Nepal) and DIPECHO, European Commission Humanitarian Aid (ECHO). Available online at http://www.disasterpreparedness.icimod.org/articles.php?id=7 (Accessed on 19 06 2022)

D'souza, D., 2002. 'The Disaster After the Disaster', Humanscape, 9 (2): 203–38.

Enarson, Elaine, 2001a. Gender Equality, Environmental Management and Natural Disaster Mitigation. Report from the online conference conducted by the Division for the Advancement of Women, International Strategy for Disaster Reduction (ISDR). Available online: http://www.erc.gr/English/d&scrn/murciapapers/session2/Enarson_Meyreles_II_Original.pdf (Accessed on 19 06 2022).

Enarson, Elaine, 2001b. We Want Work: Rural Women in the Gujarat Drought and Earthquake. National Hazards Research and Applications Information Centre, University of Colorado. Available online: http://www.colorado.edu/hazards/research/qr/qr135/qr135.html (Accessed on 19 06 2022).

Enarson, Elaine, 2006. Violence against Women in Disasters. Gender and Disaster Network. Available online at http://www.gdnonline.org/resources (Accessed on 19 06 2022)

Fordham, Maureen, 2000. 'The Place of Gender in Earthquake Vulnerability and Mitigation'. Available online at http://www.iiasa.ac.at/Research/RMS/july2000/Papers/fordham0208.pdf (Accessed on 19 06 2022)

Gupta, M. C. (ed.), 2001. Natural Disaster Management in India. New Delhi: National Centre for Disaster Management, Indian Institute of Public Administration.

Gupta, M. C., L. C.Gupta, B. K.Tamini and Vinod K.Sharma (eds), 2001. Manual on Natural Disaster Management in India. New Delhi: National Centre for Disaster Management, Government of India.

Gurung, Jeannette (ed.), 1999. Searching for Women's Voices in the Hindu Kush–Himalayas. Kathmandu, Nepal: International Centre for Integrated Mountain Development.

International Federation of Red Cross and Red Crescent Societies (IFRC), 2005. World Disasters Report: Focus on Information in Disasters. Sterling, VA: Kumarian Press, Inc. and London: Eurospan. Available online at http://www.ifrc.org/publicat/wdr2005/ (Accessed on 19 06 2022).

International Federation of Red Cross and Red Crescent Societies (IFRC) 2006. World Disasters Report: Focus on Neglected Crises. Sterling, VA: Kumarian Press, Inc. Available online at http://www.uat.ifrc.org/PUBLICAT/wdr2006/index.asp (Accessed on 19 06 2022).

International Federation of Red Cross and Red Crescent Societies (IFRC), 2004. World Disasters Report: Focus on Community Resilience. Sterling, VA: Kumarian Press, Inc. Available online at http://www.uat.ifrc.org/PUBLICAT/wdr2006/index.asp (Accessed on 19 06 2022).

IUCN with Khwendo Kor (Sisters' Home) Women and Children's Development Programme, 2006. Hearing Their Voices: The Women and Children in the Earthquake Affected Areas of Pakistan. Pakistan: IUCN Country Office.

Kapur, A., N.Chopra, M.Ajit, D.Massey, R.Devi and D.Chakrabarti, 2005. Disasters in India: Studies of Grim Reality. New Delhi: Rawat Publication.

Kapur, A, 2009. On Disasters in India. New Delhi: Cambridge University Press.

Mehta, Manjari, 2007. Gender Matters: Lessons for Disaster Risk Reduction in South Asia. International Centre for Integrated Development, Kathmandu, Nepal and DIPECHO, European Commission Humanitarian Aid (ECHO). Available online at http://www.disasterpreparedness.icimod.org/articles.php?id=7 [Accessed on 19 06 2022]

Ministry of Agriculture (MoA), 1990. Contingency Action Plan for Natural Calamities. New Delhi: Government of India.

Ministry of Agriculture (MoA), 1992. Agricultural Statistics at a Glance of India. New Delhi: Government of India.

Ministry of Agriculture (MoA), 2001a. High Powered Committee for Preparation of Disaster Management Plans, Report II. New Delhi: Government of India.

Ministry of Agriculture (MoA), 2001b. High Powered Committee Report on Disaster Management. New Delhi: Government of India.

Ministry of Agriculture (MoA), 2004. Drought 2002. New Delhi: Department of Agriculture and Cooperation, Government of India.

Ministry of Railways (MoR), 2003. Railways Annual Statistical Statements. New Delhi: Government of India.

Ministry of Rural Development (MoRD), 1994. Report of the Technical Committee on Drought Prone Area Programme and Desert Development Programme. New Delhi: Government of India.

Schwoebel, Mary Hope and GeetaMenon (CEDPA), 2004. Mainstreaming Gender in Disaster Management Support Project. A report submitted to USAID, India. Available online at http://www.gdnonline.org/sourcebook/chapt/sec_view.php?id=7.2 [Accessed on 19 06 2022].

Subhradipta, S., & Sarma, A., 2006. Disaster Management Act, 2005: A Disaster in Waiting? Economic and Political Weekly, 41(35), 3760–3763.

Town and Country Planning Organization (TCPO), 2001. Retrospect and Prospect. New Delhi: Ministry of Urban Development and Poverty Alleviation.

Twigg, John, 2004. 'Disaster Risk Reduction: Mitigation and Preparedness in Development and Emergency Programming', Good Practice Review, No. 9. London: Overseas Development Humanitarian Practice Network.

World Health Organisation (WHO), 2002. Gender and Health in Disasters. Geneva: World Health Organisation. Available online at http://www.who.int/gender/other_health/disasters/en/~19k [Accessed on 19 06 2022].

Yoner, Ayse with SengulAkcar and PremaGopalan, 2005. Women's Participation in Disaster Relief and Recovery. SEEDS. Available online at http://www.popcouncil.org/pdfs/seeds/Seeds22.pdf [Accessed on 19 06 2022].

Works Cited Chapter 5

Begum, M. M., & Momen, M. N., 2019. Coordination Does Matter for Disaster Management in Bangladesh. In Z. B., A. A., & S. A., Disaster Risk Reduction (pp. 19-35). Singapore: Palgrave Macmillan.

Brown, R.P.C. and B. Poirine, 2005. 'A model of migrants' remittances with human capital investment and intrafamilial transfers', International Migration Review, 39(2), 407–438.

Christensen, T., & Lægreid, P., 2008. The Challenge of Coordination in Central Government Organizations: The Norwegian Case. Public Organization Review, 97-116.

Connell, J. and Brown, R., 2020. The Sage Handbook of International Migration. London: SAGE Publications.

Dannenmann, S., & Warner, K., 2004. Solidarity and opportunity: the potential of insurance for disaster risk management in developing countries. Conference Proceedings and Workshop Report. Zurich: ProVention Consortium.

Duval, L. and F.-C. Wolff, 2016. 'Do remittances support consumption during a crisis? Evidence from Kosovo', Oxford Development Studies, 44(4), 479–492.

GHD, 2003. A global crisis like no other needs a global response like no other. Retrieved from International Monetary Fund Blog: https://blogs.imf.org/2020/04/20/a-global-crisis-like-no-other-needs-a-global-response-like-no-other/

Hulkenberg, J, 2015. 'The cost of being Fijian in the United Kingdom', Anthropological Forum, 25(2), 148–166.

Indian Express, 2022. 60 per cent of Indians in Ukraine crossed the borders and are safe: Centre submits to Kerala HC. [Online] Available at: <https://www.newindianexpress.com/states/kerala/2022/mar/02/60-per-centof-indians-in-ukraine-crossed-the-borders-and-are-safe-centre-submits-to-kerala-hc-2425418.html> [Accessed 25 December 2022].

Kapur, D., 2005. 'Remittances: The new development mantra', in S. Maimbo and D. Ratha (eds.), Remittances: Development Impact and Future Prospects. Washington, DC: World Bank, pp. 332–360.

Le De, L., J.C. Gaillard and W. Friesen, 2013. 'Remittances and disaster: A review', International Journal of Disaster Risk Reduction, 4, 34–43.

Lindley, A., 2009. 'The early-morning phonecall: Remittances from a refugee diaspora perspective', Journal of Ethnic and Migration Studies, 35(8), 1315–1334.

Linnerooth-Bayer, J., Amendola, A., Okada, N., & Shi, P., 2007. Disaster risk management: Pro-active financing to reduce vulnerability. Environmental Hazards: Human and Policy Dimensions, 1-6.

Mintzberg, H., 1988. A Typology of Organizational Structure. In D. M. Friesen, Organizations: A Quantum View (pp. 278-304). London: Prentice-Hall International.

OECD, 2017. Proposal to establish a policy marker for Disaster Risk Reduction in the OECD DAC Creditor Reporting System. Organisation for Economic Co-operation and Development.

Robinson, D., Hewitt, T., & Harriss, J., 2000. Why Inter-organizational Relationships Matter. In D. Robinson, T. Hewitt, & J. Harriss, Managing Development: Understanding Inter-organizational Relationships (pp. 1-16). London: Sage.

Stodolska, M. and C. Santos, 2006. 'You must think of Familia': The everyday lives of Mexican migrants in destination communities', Social and Cultural Geography, 7(4), 627–647.

World Bank, 2018. Disaster Risk Finance: a primer: Core principles and operational framework. World Bank.

Yang, D. and H. Choi, 2007. 'Are remittances insurance? Evidence from rainfall shocks in the Philippines', World Bank Economic Review, 21(2), 219–248.

Works Cited Chapter 6

Action Aid, 2006. Indian floods: Our Response in Andhra Pradesh. [Online] Available at: https://reliefweb.int/report/india/indian-floods-our-response-andhra-pradesh [Accessed 23 12 2021].

Andhra Pradesh (AP) Archive, 1998. India: Kandla: Officials Try to Repair Damage Caused by Cyclone. [Online] Available at: http://www.aparchive.com/metadata/youtube/3f2803c31cd72eba7c6d9157490edab4 [Accessed 17 12 2021].

Andrews, M.A., Areekal, B., Rajesh, K.R., Krishnan, J., Suryakala, R., Krishnan, B., Muraly, C.P., Santhosh, P.V., 2020. First confirmed case of COVID-19 infection in India: A case report. Indian J Med Res., [e-journal] 151(5), pp. 490-492. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7530459/> [Accessed 25 August 2022].

ANI, 2022. Maharashtra: Flood situation grim in parts of Wardha due to rainfall. (Online) Available at: https://www.business-standard.com/article/current-affairs/maharashtra-flood-situation-grim-in-parts-of-wardha-due-to-rainfall-122071900105_1.html [Accessed 23 05 2022]

Anon., 1997. Hindustan refinery to restart in 2 months. Oil and Gas Journal, 95(40), p. 34.

Asian Development Bank (ADB), United Nations & World Bank, 2006. India Earthquake 8th October 2005 Jammu and Kashmir: Preliminary Damage and Needs Assessment. [Online] Available at: http://hdl.handle.net/10986/12615[Accessed 21 12 2021].

Asian Disaster Reduction Centre (ADRC), 2002. ADRC 20th Century Asian Natural Disasters Data Book, s.l.: Asian Disaster Reduction Center.

Australian Institute for Disaster Resilience (AIDR), n.d. Indian Ocean tsunami, 2004. [Online] Available at: https://knowledge.aidr.org.au/resources/tsunami-indian-ocean-boxing-day-tsunami-2004/ [Accessed 20 12 2021].

Available at: https://earthobservatory.nasa.gov/images/76814/tropical-cyclone-thane [Accessed 06 02 2022].

BBC, 2014. Cyclone Hudhud pounds India's Andhra Pradesh and Orissa. [Online] Available at: https://www.bbc.com/news/world-asia-india-29581787 [Accessed 28 05 2022]

Bhan, S. K. & Team, F., 2001. Study of floods in West Bengal during September, 2000 using Indian Remote sensing satellite data. Journal of the Indian Society of Remote Sensing volume, 29(1-2).

Chadha, R., 2016. What caused the massive 2004 Indian Ocean Tsunami. [Online] Available at: https://www.thehindu.com/sci-tech/what-caused-the-massive-2004-indian-ocean-tsunami/article6723085.ece [Accessed 20 12 2021].

Comfort, L. K., 1995. Self organization in disaster response and recovery: The Maharashtra, India Earthquake of September 30, 1993, Pittsburgh: FMHI Publications.

Cork Declaration, 1996. A living countryside. Conclusions of the European Conference on Rural Development: Rural Europe-Future Perspectives. Cork, Ireland, 7−9 November.

Countryside Council (Raad voor het Landelijk Gebied), 1997. Ten Points for the Future. Advice on the Policy Agenda for the Rural Area in the Twenty-first Century. Amersfoort: RLG Publication, 97/2a.

Dani, S. S. & Motwani, A., 2013. India - Uttarakhand disaster : joint rapid damage and needs assessment report., Washington, D.C.: World Bank Group.

Dartmouth Flood Observatory (DFO), 2006. Dartmouth Flood Observatory. [Online] Available at: http://www.dartmouth.edu/~floods/ [Accessed 23 12 2021].

Department of Revenue (Disaster Management), 2019. Seeking Central Assistance For Relief And Emergency Works Due To Flood And Landslides In Karnataka During August 2019, s.l.: Government of Karnataka.

Department of Revenue (DM), 2018. Memorandum Presented To Government Of India Seeking Central Assistance For Relief And Emergent Works Due To Flood And Landslides In Malnad And Coastal Districts Of Karnataka During South-West Monsoon 2018, Bengaluru: Government of Karnataka.

Depoele, L. van., 1996. European Rural Development Policy. In W.Heijman, H.Hetsen and J.Frouws (eds), Rural Reconstruction in a Market Economy. Wageningen: Wageningen Agricultural University. pp. 7–14.

Deutsche Presse Agentur, 2001. Villagers protest discontinuation of drought relief work in India. [Online] Available at: https://reliefweb.int/report/india/villagers-protest-discontinuation-drought-relief-work-india [Accessed 18 12 2021].

Directorate of Economics and Statistics (DES), 2021. Brief History of Most Intense Cyclones from 1970 to 2007. [Online] Available at: https://eands.dacnet.nic.in/At_Glance_2008/ch_21/24-Chapter%2021(21.2).xls [Accessed 17 12 2021].

Disaster Management, Relief & Civil Defence Department (DMRCDD), 2021. Position Of Drought Since Year 81-82. [Online] Available at: http://www.dmrelief.rajasthan.gov.in/index.php/irrigation-calender/position-of-drought-since-year-81-82 [Accessed 18 12 2021].

Disaster Mitigation and Management Centre (DMMC), 2012. Sikkim Earthquake of 18th September, 2011: A Report, Dehradun: Uttarakhand Secretariat.

Dutta, S. C., Mukhopadhyay, P. S., Saha, R. & Nayak, S., 2011. Sikkim Earthquake at Eastern Himalayas: Lessons learnt from performance of structures. Soil Dynamics and Earthquake Engineering, Volume 75, pp. 121-129.

Environment Protection Training and Research Institute (EPTRI), 2012. State Action Plan On Climate Change For Andhra Pradesh. Hyderabad: Environment Protection Training and Research Institute.

Evangelical Fellowship of India Commission on Relief (EFICOR), 2006. India: Floods update 1, 25 Aug 2006. [Online] Available at: https://reliefweb.int/report/india/india-floods-update-1-25-aug-2006 [Accessed 23 12 2021].

Fischler, F., 1996. Europe and its Rural Areas in the Year 2000: Integrated Rural Development as a Challenge for Policy Making. Opening speech presented at the European Conference on Rural Development: Rural Europe-Future Perspectives. Cork, Ireland, 7–9 November.

Fischler, F., 1998. Food and the Environment: Agriculture's Contribution to a Sustainable Society. In WUR, Compendium van een driedaagse confrontatie tussen wetenschap, samenleving en cultuur, Wageningen, 16–18 April. Wageningen: Wageningen Agricultural University.

Ghosh, C. & Parkash, S., 2012. Sikkim Earthquake (2011)- Reconstruction Strategy, New Delhi: National Institute Of Disaster Management.

Government of Bihar, World Bank & Global Facility for Disaster Reduction & Recovery, 2010. Bihar Kosi Flood (2008) Needs Assessment Report, s.l.: World Bank and GFDRR.

Government of India (GoI), 2004. India: South west monsoon 2004 - Situation report on floods 6 Aug 2004. [Online] Available at: https://reliefweb.int/report/india/india-south-west-monsoon-2004-situation-report-floods-6-aug-2004 [Accessed 21 12 2021].

Government of India (GoI), 2005. India: Tsunami - A report to the nation. [Online] Available at: https://reliefweb.int/report/india/india-tsunami-report-nation [Accessed 20 12 2021].

Government of Maharashtra (GoM), 1993. A Preliminary Report by the Government of Maharashtra, Bombay: Government of Maharashtra.

Govt. of Odisha; World Bank; United Nations Development Programme; Asian Development Bank, 2019. Cyclone Fani: Damage, Loss and Needs Assessment, Bhubaneshwar: Government of Odisha.

Gupta, P., Khanna, A. & Majumdar, a. S., 2012. Disaster Management in Flash Floods in Leh (Ladakh): A Case Study. Indian J Community Med, 37(3), pp. 185-190.

Guzmàn, S., Gonzalez, E., 1990. M.Ecosociologia: Elementos Teoricos Para El Analisis De La Coevolucion Social Y Ecologica En La Agricultura. In Revista Espanola de Investigaciones Sociologicas, 52, pp. 7–45.

GVSS, n.d. Draft Report Evaluation study of Rehabilitation & Reconstruction Process in Post Super Cyclone, Orissa, 24, Paragana (North): Gramin Vikas Sewa Sanstha.

Hindustan Times, 2010. Flood extensively damages crops in Haryana, Punjab. [Online] Available at: https://www.hindustantimes.com/india/flood-extensively-damages-crops-in-haryana-punjab/story-UhZs1hNdNz5BRWqfRlM3DM.html [Accessed 12 2 2022].

Hindustan Times, 2013. Revisiting the super cyclone that hit Odisha in 1999. [Online] Available at: https://www.hindustantimes.com/india/revisiting-the-super-cyclone-that-hit-odisha-in-1999/story-S0lDY1STwdrVdMravThCZK.html [Accessed 17 12 2021].

Hindustan Times, 2018. Ockhi was the deadliest storm to hit India's coast after supercyclone of 1999 [Online] Available at: <https://www.hindustantimes.com/india-news/ockhi-was-the-deadliest-storm-to-hit-india-s-coast-after-supercyclone-of-1999/story-xSPtGAOs3DoifhFfvWfZUM.html> [Accessed 27 12 2021]

Hindustan Times, 2021. Major fire breaks out at HPCL refinery in Vizag, no casualties reported. [Online] Available at: https://www.hindustantimes.com/india-news/major-fire-breaks-out-at-hpcl-refinery-in-vizag-no-casualties-reported-101621947191638.html [Accessed 16 01 2022].

Hydrology (S) Directorate , 2018. Study Report Kerala Floods Of August 2018, New Delhi: Central Water Commission, Government of India.

IFRC, 2014. Tropical Cyclone Hudhud - Oct 2014. [Online] Available at: https://reliefweb.int/disaster/tc-2014-000141-ind [Accessed 28 05 2022]

IFRC, 2020. India: Cyclone Amphan Operation Update Report (DREF n° MDRIN025). (Online) Available at: <https://reliefweb.int/report/india/india-cyclone-amphan-operation-update-report-dref-n-mdrin025> [Accessed 21 05 2022]

India Today, 2015. Maharashtra's deadliest earthquake: Some facts you must know about the Latur earthquake. [Online] Available at: https://www.indiatoday.in/education-today/gk-current-affairs/story/maharashtras-deadliest-earthquake-265569-2015-09-30 [Accessed 15 1 2022].

India Today, 2019. 20 years before Cyclone Fani, Super Cyclone killed 10,000 in Odisha. [Online] Available at: https://www.indiatoday.in/india/story/cyclone-fani-odisha-super-cyclone-1516419-2019-05-03 [Accessed 17 12 2021].

Indian Red Cross, 2013. Uttarakhand flash floods – A report. [Online] Available at: https://www.indianredcross.org/press-rel27-june2013.htm [Accessed 27 12 2021].

IRP, 2019. Latur Earthquake, 1993. [Online] Available at: https://www.recoveryplatform.org/countries_and_disasters/disaster/22/latur_earthquake_1993 [Accessed 17 12 2021].

Janardhanan, A., 2020. Explained: The intensity and impact of Cyclone Nivar [Online] Available at: <https://indianexpress.com/article/explained/cyclone-nivar-landfall-chennai-intensity-impact-7066350/> [Accessed 18 04 2022]

Kalsi, S. R., 2006. Orissa super cyclone – A Synopsis. Mausam, 57(1), pp. 1-20.

Kapur, A., 2010. Vulnerable India: A Geographical Study of Disasters. New Delhi: SAGE Publications India Pvt Ltd.

Khurana, A., 2005. Situation Report On Earthquake Of 8th October in Jammu and Kashmir and Other Parts of Northern India and Related Relief Measures. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/3A7BBDE96B2AE99C85257098006F1D5E-goi-india-11oct.pdf[Accessed 21 12 2021].

Khurana, A., 2005a. Situation Report On Earthquake Of 8th October In Jammu And Kashmir And Other Parts Of Northern India And Related Relief Measures. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/E6DF9841702751E1492570AB001A78F2-govtind-ind-26oct.pdf[Accessed 21 12 2021].

Kumar, S., Sahdeo, A. & Guleria, S., 2013. Bihar Floods: 2007 (A Field Report), New Delhi: National Institute of Disaster Management, Ministry of Home Affairs.

Lahiri, A. K., Sen, T. K., Rao, R. K. & Jena, a. P. R., 2001. Economic Consequences of Gujarat Earthquake. Economic and Political Weekly , 36(16), pp. 1319-1332.

Margherita , F., Dash, J., Tompkins, E. L. & Craig, W. H., 2020. The 1999 super cyclone in Odisha, India: A systematic review of documented losses. International Journal of Disaster Risk Reduction, Volume 51.

Mishra, P. K., 2004. The Kutch Earthquake 2001 Recollections, Lessons and Insights, New Delhi: National Institute of Disaster Management.

Mohammed, A., 2020. Karnataka declares 130 taluks as flood-hit zones. (Online) Available at: <https://www.deccanherald.com/state/top-karnataka-stories/karnataka-declares-130-taluks-as-flood-hit-zones-885630.html[Accessed 23 05 2022]

Mueller, S. et al., 2019. Disaster scenario simulation of the 2010 cloudburst in Leh, Ladakh, India. International Journal of Disaster Risk Reduction, Volume 33, pp. 485-494.

Nair, R. B., 2016. Cyclone Thane hits Puducherry, 7 killed. [Online] Available at: https://www.thehindu.com/news/national/other-states/Cyclone-Thane-hits-Puducherry-7-killed/article13447395.ece[Accessed 06 02 2022].

NASA GSFC, 2011. Tropical Cyclone Thane. [Online]

NASA GSFC, 2011. Tropical Cyclone Thane. [Online] Available at: https://earthobservatory.nasa.gov/images/76814/tropical-cyclone-thane [Accessed 06 02 2022].

National Emergency Response Centre (NERC), 2019. Situation report on Flood/Heavy Rain fall as on 21 st October, 2019 at 1800 Hrs, New Delhi: Disaster Management Division, Ministry of Home Affairs.

News18, 2021. EXPLAINED: Why Chennai Downpours Are Reviving Memories Of 2015 Floods. [Online] Available at: https://www.news18.com/news/explainers/explained-why-chennai-downpours-are-reviving-memories-of-2015-floods-4424840.html [Accessed 28 12 2021].

NIDA, 2015. "Cyclone Hudhud" Strategies and Lessons for Preparing Better & Strengthening Risk Resilience in Coastal Regions of India, New Delhi: National Disaster Management Authority.

NIDA, 2016. Tamil Nadu Floods: Lessons learnt and Best Practices- A Report, New Delhi: National Disaster Management Authority.

Outlook, 2006. 33 lakh affected by floods in Andhra Pradesh, Gujarat. [Online] Available at: https://www.outlookindia.com/newswire/story/33-lakh-affected-by-floods-in-andhra-pradesh-gujarat/405267 [Accessed 23 12 2021].

Oxfam International, 2005. The tsunami's impact on women. [Online] Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/115038/bn-tsunami-impact-on-women-250305-en.pdf [Accessed 20 12 2021].

Panigrahi, N., 2003. Disaster management and the need for convergence of services of welfare agencies-A case study of the Super Cyclone of Orissa. Social Change, 33(1), pp. 1-25.

Patil, S. V., 2001. India Weekly drought report No. 9. [Online] Available at: https://reliefweb.int/report/india/india-weekly-drought-report-no-9 [Accessed 18 12 2021].

Patil, S. V., 2001. India Weekly drought report No. 9. [Online] Available at: https://reliefweb.int/report/india/india-weekly-drought-report-no-9 [Accessed 18 12 2021].

Patnaik, S., 2020. Smoke from HPCL Visakh Refinery triggers panic among residents. [Online] Available at: https://www.thehindu.com/news/national/andhra-pradesh/smoke-from-hpcl-visakh-refinery-triggers-panic-among-residents/article31645133.ece [Accessed 13 01 2022].

People's Standing Committee on Gujarat Floods (PCGF) , 2007. 2006 Gujarat Floods: Dam Made Disasters. [Online] Available at: https://sandrp.files.wordpress.com/2018/03/people_committee_report_on_gujarat_flood_aug07.pdf[Accessed 22 12 2021].

Pradhan, B., 2018. This Article is From Aug 20, 2018 Over 8 Lakh People In Nearly 4,000 Relief Camps Across Flood-Hit Kerala. [Online] Available at: https://www.ndtv.com/india-news/kerala-floods-over-8-lakh-people-in-nearly-4-000-relief-camps-across-flood-hit-kerala-1903031 [Accessed 27 12 2021].

Punithavathi, J., Tamilenthi, S. & Baskaran, R., 2012. A study of Thane cyclone and its impacts in Tamil Nadu, India using geographic information system. Archives of Applied Science Research, 4(1), pp. 685-695.

Ramesh, R., 2006. More than 1 million displaced by monsoon rains. [Online] Available at: https://www.theguardian.com/world/2006/aug/09/india.randeepramesh [Accessed 23 12 2021].

Ramesh, R., 2006a. Indian floods displace hundreds of thousands. [Online] Available at: https://www.theguardian.com/world/2006/aug/10/india.randeepramesh [Accessed 22 12 2021].

RGIDS, 2018. A Report On Kerala Flood 2018 The Disaster Of The Century, Thiruvananthapuram: Rajiv Gandhi Institute of Development Studies (RGIDS).

Rodante, T. V., 2003. Analysis of an LPG explosion and fire. Process Safety Progress, 22(3), pp. 74-181.

Saini, S. S. & Kaushik, S. P., 2012. Risk and vulnerability assessment of flood hazard in part of Ghaggar Basin: A case study of Guhla block, Kaithal, Haryana, India. International Journal Of Geomatics And Geosciences, 3(1), pp. 42-54.

Satendra, A. K. G. et al., 2015. Uttarakhand Disaster 2015, New Delhi: National Institute of Disaster Management.

Scottish Office, Land Reform Policy Group, 1998. Identifying the Problems and Identifying the Solutions. Edinburgh: Scottish Office.

Sen, A. & Chander, M., 2004. Disaster Management in India: The case of livestock and Poultry, s.l.: Revue scientifique et technique (International Office of Epizootics).

Sharma, P., 2018. Ladakh Floods: A Timeline of Disaster. [Online] Available at: https://thewire.in/environment/ladakh-floods-timeline-disaster [Accessed 13 2 2022].

Singh, S., n.d. Disaster Management in India: Emerging Issues and Responses, New Delhi: National Institute of Disaster Management.

Sinha, A., 2021. A cyclone called Ockhi — why this is raising such an unusual storm. [Online] Available at: https://indianexpress.com/article/explained/a-cyclone-called-ockhi-why-this-is-raising-such-an-unusual-storm-4966455/[Accessed 28 12 2021].

Sphere India, 2009. India: Andhra Pradesh Floods Situation Report, s.l.: Sphere India.

State Relief Commissioner, 2018. Additional Memorandum Kerala Floods – 2018 1st August to 30th August 2018, s.l.: Government of Kerala.

The Economic Times, 2006. PM announces Rs 400 cr flood relief for Maharashtra. [Online] Available at: https://economictimes.indiatimes.com/news/politics-and-nation/pm-announces-rs-400-cr-flood-relief-for-maharashtra/articleshow/1886335.cms?from=mdr [Accessed 22 12 2021].

The Hans India, 2019. Godavari witnesses floods 34 times between 1953 and 2019. [Online] Available at: https://www.thehansindia.com/andhra-pradesh/godavari-witnesses-floods-34-times-between-1953-and-2019-554322[Accessed 23 12 2021].

The Hindu, 2010. Several villages marooned in flood-hit Punjab, Haryana. [Online] Available at: https://www.thehindu.com/news/national/other-states//article59939933.ece [Accessed 12 2 2022].

The Hindu, 2021. Uttarakhand Glacier Burst. (Online) Available at: < https://www.thehindu.com/news/national/other-states/uttarakhand-glacier-burst/article56832360.ece> [Accessed 23 05 2022]

The Indian Express, 2015. Rains, Floods Kill 269 in Tamil Nadu, 54 in Andhra. [Online] Available at: https://www.newindianexpress.com/nation/2015/dec/03/Rains-Floods-Kill-269-in-Tamil-Nadu-54-in-Andhra-851335.html [Accessed 28 12 2021].

The Indian Express, 2016. Floods in Chennai and parts of Andhra Pradesh last year, resulted in a Rs 14,602 crore loss to property and business, including those insured, for about Rs 5,005 crore. The insured, persons

and property for which claims can be made, impacted by the floods. [Online] Available at: https://www.newindianexpress.com/business/2016/mar/31/Chennai-Floods-in-November-Washed-Away-Over-Rs-14000-crore-918382.html [Accessed 28 12 2021].

The Indian Express, 2018. 483 dead in Kerala floods and landslides, losses more than annual plan outlay: Pinarayi Vijayan. [Online] Available at: https://indianexpress.com/article/india/483-dead-in-kerala-floods-and-landslides-losses-more-than-annual-plan-outlay-pinarayi-vijayan-5332306/ [Accessed 27 12 2021].

The Indian Express, 2019. December 26, 2004 Tsunami: 12 years on. [Online] Available at: https://indianexpress.com/article/india/december-26-2004-tsunami-india-thailand-indonesia-srilanka-natural-disaster-earthquake-12-years-on-4445361/ [Accessed 20 12 2021].

The Indian Express, 2022. Bengaluru, Karnataka news highlights : Flood hits 13 districts in state, CM oversees relief operations. (Online) Available at: https://indianexpress.com/article/cities/bangalore/bengaluru-karnataka-live-updates-flood-13-districts-cm-8020027/ [Accessed 23 05 2022]

Times of India (TOI), 2011. Govt declares 25 districts flood affected. [Online] Available at: https://timesofindia.indiatimes.com/city/lucknow/govt-declares-25-districts-flood-affected/articleshow/9740718.cms[Accessed 12 2 2022].

Times of India (TOI), 2020. Cyclone 'Nisarga' to hit Maharashtra coastline with high wind speed, heavy rainfalls: Top Developments. [Online] Available at: <http://timesofindia.indiatimes.com/articleshow/76160831.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst> [Accessed 9 04 2022]

TISS, 1994. Survey of People Affected by the Earthquake in the Latur and Osmanabad Districts (1993): Joint Action Group of Institutions for Social Work Education. Final Report, Bombay: Tata Institute of Social Sciences.

Toledo, V., 1992. La racionalidad ecologica de la produccion campesina. In E. Sevilla Guzman, and M. Gonzalezde Molina (eds), Ecologia, Campesinado E Historia. Madrid: Las Ediciones de la Piqueta. pp. 197–218.

Tsunami Global Lessons Learned Project (TGGLP), 2009. The tsunami legacy - Innovation, breakthroughs and change. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/TGLLP_2009_TS_legacy.pdf [Accessed 20 12 2021].

UNCT India, 2009. Situation Report Floods In Andhra Pradesh And Karnataka. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/B0635D5CAC76A0BAC1257646004BFED0-Full_Report.pdf[Accessed 27 12 2021].

UNDP, 2004a. India: Situation report - Bihar floods. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/8294AFBE5FA1AEC5C1256EEF0041A57E-undp-india-13aug.pdf[Accessed 21 12 2021].

United Nations Development Programme (UNDP), 2004. India: Situation report - Assam floods, 22 Jul 2004. [Online] Available at: https://reliefweb.int/report/india/india-situation-report-assam-floods-22-jul-2004 [Accessed 28 12 2022].

United Nations Development Programme (UNDP), 2006. India: Situation Report Floods. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/BA75EF13404E4FAF492571C5001F1A8A-undp-ind-08aug.pdf[Accessed 22 12 2021].

United Nations Development Programme (UNDP), 2006a. India: Situation Report Floods. [Online] Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/46BC586097643D9C492571C60003BDD7-undp-ind-09aug.pdf[Accessed 22 12 2021].

United Nations Development Programme (UNDP), 2006b. Situation Report, s.l.: United Nations Development Programme.

Vatsa, K. S., 2001. The Bhuj Earthquake District of Kutch, State of Gujarat (India) January 26, 2001 A Reconnaissance Report Identification of Priority Issues, s.l.: DRM-World Institute for Disaster Risk Management .

Waghmode, V., 2020. Maharashtra: State pegs Cyclone Nisarga damages at Rs 6,048 crore. [Online] Available at:

https://indianexpress.com/article/india/maharashtra-state-pegs-cyclone-nisarga-damages-at-rs-6048-crore-6511283/[Accessed 18 04 2022]

Watts, A., 2011. Rain, flash flood kill 9 in Jammu region. [Online] Available at: https://www.tribuneindia.com/2011/20110812/j&k.htm#1 [Accessed 12 2 2022].

West Bengal Disaster Management & Civil Defence Department (WBDMCDD), 2020. Natural Disaster : Flood. [Online] Available at: http://wbdmd.gov.in/pages/flood2.aspx [Accessed 3 2 2022].

Word Health Organisation (WHO), 2020. Novel Coronavirus Disease (COVID-19) Situation Update Report-11. [Online] Available at: https://cdn.who.int/media/docs/default-source/wrindia/situation-report/india-situation-report-11.pdf?sfvrsn=f7646851_2 [Accessed 12 04 2022]

Word Health Organisation (WHO), 2020a. Novel Coronavirus Disease (COVID-19) Situation Update Report-19. [Online] Available at: https://cdn.who.int/media/docs/default-source/wrindia/situation-report/india-situation-report-19.pdf?sfvrsn=14c7933f_2 [Accessed 12 04 2022]

World Bank and Asian Development Bank (WB & ADB), 2001. Gujarat Earthquake Recovery Program Assessment Report, s.l.: World Bank and Asian Development Bank.

World Bank and GFDRR, 2014. Stories of Impact. [Online] Available at: https://www.worldbank.org/content/dam/Worldbank/document/drm/gfdrr-stories-of-impact-uttarakhand.pdf [Accessed 27 12 2021].

World Health Organisation (WHO), 2020b. Key Messages and Actions for COVID-19 Prevention and Control in Schools. [Online] Available at: https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf [Accessed 12 04 2022]

Works Cited Chapter 7

Bradley L., 2019. David Attenborough to Greta Thunberg: I'm Very Grateful to You. We All Are. Vanity Fair. [online] Available at: <https://www.vanityfair.com/hollywood/2019/12/greta-thunberg-david-attenborough- skype-call-meeting> [Accessed 23 07 2022].

Hepburn C. et. al, 2020. Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? Oxford Smith School of Enterprise and the Environment. Working Paper No. 20-02. [online] Available at: <https://www. smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf> [Accessed 23 07 2022].

IMF (International Monetary Fund), 2020. Greening the Recovery. Special Series on Fiscal Policies to Respond to COVID-19. [online] Available at: <https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on- covid-19-greening-the-recovery.ashx?la=en> [Accessed 23 07 2022].

UN News, 2020. Fall in COVID-linked carbon emissions won't halt climate change. UN weather agency chief. [online] Available at: <https://news.un.org/en/story/2020/04/1062332> [Accessed 23 07 2022].

Nepal Earthquake 2004

Aryal T.R., 2007. Age at First Marriage in Nepal: Differentials and Determinants. Journal of Biosocial Science, 39 (5), 693–706.

Bronkhorst J., 2012 . "Levels of Cognition: Did Indian Philosophers Know Something We Do Not?" Asiatische Studien – Études Asiatiques, 66 (2), 227–37.

Dovers S. , and Handmer J., 2007 . The Handbook of Disaster and Emergency Policies and Institutions. London: Earthscan Publications.

DPNET, 2011 . Nepal: Disaster Preparedness Network Nepal (DPNET). [online] Available at: <http://www.dpnet.org.np/> [Accessed 13 11 2022].

GoN MoHA, and DPNet-Nepal, 2015. Nepal Disaster Report 2015. Kathmandu: The Government of Nepal (GoN)—Ministry of Home Affairs (MoHA) and Disaster Preparedness Network-Nepal (DPNet-Nepal).

GON. 2015 . National Strategy for Disaster Risk Management. Government of Nepal.

Ministry of Home Affairs (MoHA) Nepal, 2009. Nepal Earthquake 2015 [Online] Available at: https://www.moha.gov.np/ [Accessed 23 07 2022].

OCHA, 2015 . World Humanitarian Data and Trends. Geneva: United Nations.

Pelling Mark ., ed. 2003 . Natural Disasters in a Globalising World. London: Routledge.

Sri Lanka Tsunami 2004

Department of Census and Statistics. 2001. Statistical Abstract of the Democratic Socialist Republic of Sri Lanka. Colombo: Department of Census and Statistics.

Eckstein D., Hutfils M.-L., & Winges M., 2019. GLOBAL CLIMATE RISK INDEX 2019 Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2017 and 1998 to 2017. Berlin: Germanwatch.

INFORM, 2019. INFORM Risk Index Sri Lanka. [online] Available at: <http://www.inform-index.org/Countries/Country-profiles/iso3/LKA> [Accessed 17 04 2019].

Jayasuriya S., Steele P., Weerakoon D., Knight-John M., and Arunatilake N., 2006. Post-Tsunami Recovery: Issues and Challenges in Sri Lanka. ADB Institute Research Paper Series No. 71. Asian Development Bank Institute and IPS. [online] Available at: <Asian Development Bank Institute and IPS. All rights reserved. Produced by ADB Publishing> [Accessed 12 01 2022]

World Bank, 2021. Sri Lanka. Available at: <https://climateknowledgeportal.worldbank.org/country/sri-lanka/vulnerability> [Accessed 12 01 2022]

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