



GAIL (India) Limited

**Impact Assessment Report on Support
towards flood relief and rehabilitation
activities in flood affected regions of
Karnataka (FY 19-20)**



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1.1 Executive Summary

Floods are among the most common and destructive natural hazards causing extensive damage to infrastructure, public and private services, the environment, the economy and devastation to human settlements. Recurring flood losses have handicapped the economic development of both developed and developing countries. India is a developing country and prone to several natural hazards. Among all the natural disasters that country faces, river floods are the most frequent and often devastating.

Widespread continuous heavy rainfall over northern Karnataka districts in August 2019 impacted the region resulting in floods. These floods led to human loss, livestock loss, landslips, waterlogging, livelihood losses, property damage, agricultural damage and damage to essential infrastructure (Roads, Water Supply, and Electricity etc.). This calamity affected about seven hundred thousand people in the region. Rescue and relief efforts were undertaken in the flood-affected districts with the help of the Army, Navy, Air Force, Nation Disaster Response Forces, State Disaster Relief Forces, District Administration, various civil society organisations and local people¹.

As per the official data released by the State Government of Karnataka, a total of 61 people lost their lives, 15 people went missing due to North Karnataka Floods in 2019. Further, the farmers had lost not less than 859 livestock. A total of 697,948 people were evacuated to rescue from the water, whereas 51,460 animals were also evacuated. A total of 1,160 Relief Camps were set up to cater for the immediate needs of the people evacuated from floods. A total of 396,617 people across Northern Karnataka were sheltered in the temporary relief camps. More than 56,381 houses collapsed or were severely damaged. It was also estimated that more than 0.458 million hectares of agriculture and horticulture cross occurred permanent loss.² Flooding often handicaps the affected community by adversely affecting its educational system, food availability, mobility, and access to energy on a daily basis.

Thereby, in alignment with the thematic areas as mentioned in the Schedule VII of the Companies Act, 2013, GAIL supported the District Disaster Management Authority, Gadag and the office of District Commissioner Dharwar with disaster relief and safety equipment during the North Karnataka floods of 2019. These equipment's have helped in reducing the recovery time, whereas by providing the equipment's GAIL has ensured that the rescue teams are well equipped and better prepared in times of crisis. GAIL's support through these equipment's has also ensured that the state authorities have the equipment's required to carry relief operations during disasters like floods, fire breakout etc.

To evaluate the impact of the project and understand the perception of the stakeholders, GAIL (India) Limited empaneled KPMG to conduct an impact assessment study. Along with stakeholder consultations, review of documents

¹ [North Karnataka Floods Relief – SEVAK \(sevakindia.org\)](http://sevakindia.org)

² [Top 5: Most Devastating Natural Disasters to Affect India in 2019 | The Weather Channel](#)



and data provided by the team was undertaken to understand the objective and coverage of the project. Subsequent to the desk review, key performance indicators were identified and finalised, in consultation with the programme team. For the purpose of this study, OECD- DAC (Organisation for Economic Co-operation and Development- Development Assistance Committee) framework was used for developing the research tools (questionnaires for qualitative surveys) and evaluating the impact created.

1.2 Introduction

1.2.1 CSR at GAIL

GAIL (India) Limited, conferred with the status of Maharatna in 2013, is India's leading natural gas company with diversified interests across the natural gas value chain of trading, transmission, LPG production, LNG- regasification, petrochemicals, city gas, etc. It owns and operates a network of around 14617 km of natural gas pipelines spread across the length and breadth of country. GAIL firmly believes that meeting people's needs, enhancing communities, and safeguarding the environment will ultimately determine how long progress can be sustained.

Pursuant to the provisions of the Companies Act, 2013 and rules made thereunder including the statutory modifications/ amendments from time to time as notified by the Government of India, GAIL (India) Limited earmarks two percent of its average net profit of the preceding three financial years towards achieving its CSR objectives through implementation of meaningful and sustainable CSR programmes.

1.2.2 GAIL CSR Vision

GAIL, through its CSR initiatives, will continue to enhance value creation in the society and in the community in which it operates, through its services, conduct & initiatives, so as to promote sustained growth for the society and community, in fulfillment its role as a Socially Responsible Corporate, with environmental concern.

1.2.3 GAIL CSR Objectives

- Ensure an increased commitment at all levels in the organization, to operate its business in an economically, socially & environmentally sustainable manner, while recognizing the interests of all its stakeholders.
- To directly or indirectly take up programmes that benefit the communities in & around its work centres and results, over a period of time, in enhancing the quality of life & economic well-being of the local populace.
- To generate, through its CSR initiatives, goodwill and pride for GAIL among stakeholders and help reinforce a positive & socially responsible image of GAIL as a corporate entity.

1.2.4 About the program

The perception about disaster and its management has undergone a change following the enactment of the Disaster Management Act, 2005. The definition of disaster is now all encompassing, which includes not only the events emanating from natural and man-made causes, but even those events which are caused by accident or negligence.³ Natural disasters are unpredictable, and it may take many years to recover and restore the damage caused by natural disasters.

India's geo-climatic conditions as well as its high degree of socio-economic vulnerability, makes it one of the most disaster-prone countries in the world. According to UN officer for Disaster Risk Reduction, CRED India ranks among the top three countries in the world that bore the maximum brunt of natural disasters in recent years. From 2000 to 2019 about 80,000 lives were lost and 100 crores affected due to natural disasters in India. Further besides, the United States, China and India have taken the hardest hit from natural disasters due to their massive population. Both nations accounted for over 280 crore disaster-affected people between the years 2000 and 2019, which is around 70 per cent of the global total.⁴

Rivers have been an important part of human history: They provide food, freshwater, and fertile land for growing crops. While water is essential to life, it can be a destructive force too. When rivers flood, the effects can be catastrophic. Flooding is one of the most common types of natural disaster, and the results are often fatal.

A flood is an overflow of an expanse of water that submerges land. Floods are caused due to heavy monsoons which are beyond the capacity of the rivers and drainage system. Floods are also followed in the aftermath of cyclone and tsunami. Even, mega earthquakes can also become cause of flood if dams are damaged. Flood is one of the most likely and devastating among all natural disasters in India which hit almost every year in the whole North-Eastern States, Gangetic and Kosi River plane in Bihar, Southern coastal areas and parts of Maharashtra and Kerala⁵.

80% of the precipitation takes place in the monsoon months from June to September. The rivers bring heavy sediment load from the catchments. These, coupled with inadequate carrying capacity of the rivers are responsible for causing floods, drainage congestion and erosion of riverbanks. Few of the rivers which originate in neighboring countries and cause heavy damage in India, adds another complex dimension to the problem⁶.

³ [Disaster management in India – A report by Ministry of Home Affairs| India Water Portal](#)

⁴ [300 disasters, 80,000 deaths, 100 crore affected: India's two-decade tryst with natural calamities - India Today](#)

⁵ [FLOOD.pdf \(ndrf.gov.in\)](#)

⁶ [FLOOD.pdf \(ndrf.gov.in\)](#)

India experienced 278 floods during 1980–2017 that affected more than 750 million people and caused about \$58.7 billion in losses⁷. Precipitation events in India are generally characterized as extreme when rainfall exceeds 150 millimeters (mm) per day and flooding affects a large area. The scale of the impacts of such events on human and ecological systems depends on changes in climate, vulnerability, and exposure. Extreme rainfall and resultant floods caused extensive damage to infrastructure and affect millions of people through loss of life, health impacts, damage to property, and socioeconomic disruption. Further, in developing countries such as India, settlement patterns, urbanization, population growth, and changes in socioeconomic conditions also determine exposure and vulnerability to extreme events and the impacts of such events.⁸

Also, it must be noted that according to the World Risk Index 2022 that assesses the disaster risk for 193 countries, India is ranked as the second country with the highest disaster risks such as earthquakes, floods, droughts etc.⁹

Looking at the state of Karnataka, climate change is impacting the water cycle as well as the rainfall patterns, resulting in intense rainfall and associated flooding in some areas and drought in other regions of Karnataka. Extreme weather events have increased both in terms of frequency and intensity across Karnataka in the last decades. The State's normal annual rainfall is 1,153 mm, 74% of which is received during the south-west monsoon, 16% during the north-east monsoon, and 10% during the pre-monsoon¹⁰.

Karnataka has experienced severe floods in 2005, 2009, 2018, 2019, 2020, 2021 and 2022. For the fifth consecutive year since 2018, it has been affected by flooding and landslips. Flooding and landslips have become new normal during the south-west and the north-east monsoon seasons, which hitherto was most vulnerable for drought, obviously indicating the effect of changing climatological conditions.¹¹

In such a scenario, disaster management through flood preparedness becomes extremely crucial. Flood preparedness refers to the measures taken to prepare for and reduce the effects of disasters. That is, to predict and where possible, prevent disasters, mitigate their impact on vulnerable populations and respond to and effectively cope with their consequences. Flood disaster preparedness provides a platform to design effective, realistic and coordinated planning, reduces duplication of efforts and increase the overall effectiveness of National Societies, households and community member's disaster preparedness and response efforts¹².

In 2019 massive floods occurred in the districts of Dharwad, Haveri and Gadag, Karnataka. Life was severely affected due to heavy rain in the districts of

⁷ EM-DAT. 2018. The International Disasters Database. <https://www.emdat.be/>

⁸ [Impacts of Natural Disasters on Households and Small Businesses in India \(EWP No. 603\) \(adb.org\)](#)

⁹ [WorldRiskReport-2022_Online.pdf \(weltrisikobericht.de\)](#)

¹⁰ [Karnataka sees rise in extreme weather events in the last few decades - The Hindu](#)

¹¹ *ibid*

¹² [FLOOD.pdf \(ndrf.gov.in\)](#)

Dharwad, Haveri and Gadag. Loss of property and infrastructure due to heavy rain had been reported from Gadag and Haveri districts, which were affected by heavy downpour. It started raining in Hubballi and Dharwad and life came to a standstill within a few minutes. As rain became heavy, storm water entered several residential and commercial buildings in Dharwad. People found it extremely tough to drain rainwater out of their houses as power supply too was disrupted. All the major roads remained waterlogged throwing traffic out of gear. In Hubballi, traffic was affected due to waterlogging. Heavy rain also damaged roads in several areas. Heavy rain has also been reported from the rural areas of the district where farm pits are brimming, streams are overflowing, and roads were damaged in several areas. The disaster led to shortage of equipment required for conducting rescue operations. This is where flood preparedness came in and there was a need felt to involve other stakeholders as well for provision of adequate quantities of equipment required to conduct the relief work.

Given this scenario GAIL India signed an MOU with the State Government on request for support towards relief and rehabilitation activities for the flood affected areas in Karnataka. GAIL provided safety and relief equipment like life jacket, hand torch, Generator, inflatable rubber boat amongst others to the district authorities in Gadag and Dharwar districts of Karnataka.

1.3 Methodology and Approach

GAIL has been implementing successful CSR initiatives based on community needs. A third-party evaluation of the results attained is essential given the dynamic nature of the social development programmes deployed. This impact assessment aims to explain what has been done well and what can be done moving forward. It will not only assist in determining the significance of the project, including the efficiency of project design and interventions, sustainability of results, and impact of the intervention on the target community, but it will also provide guidance for expanding or replicating the successful initiatives while redesigning or ending the projects/initiatives that were unable to have the intended impact.

The impact assessment is intended to provide key insights on the following questions:

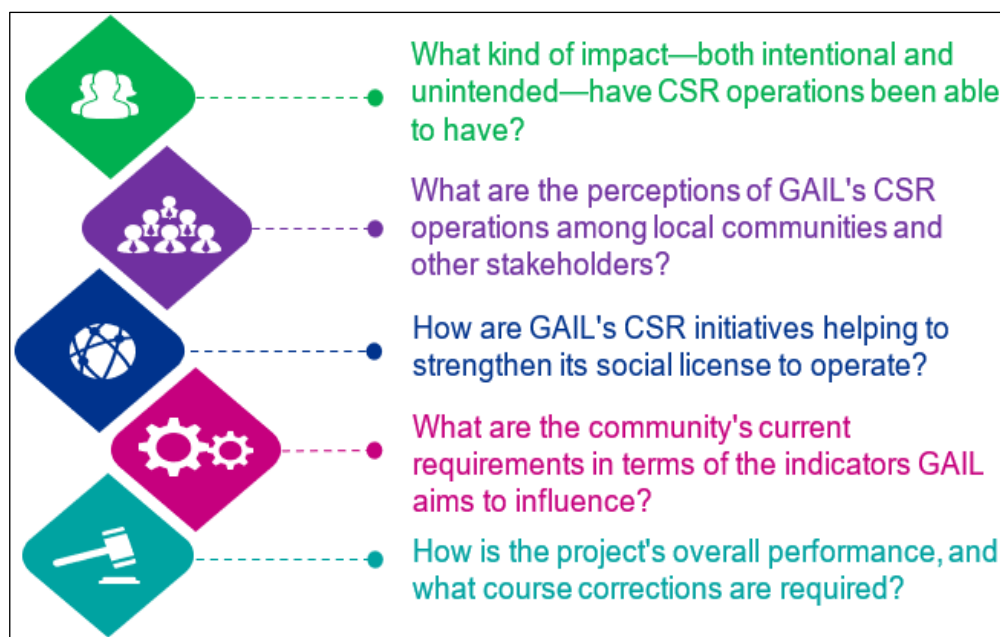


Figure 1: Research questions

The study was conducted through interactions with a combination of qualitative and quantitative data collection techniques. These include in-depth interviews with key stakeholders, as well as secondary research in the multiple thematic areas for a baseline perspective.

1.3.1 OECD DAC: Evaluation Criteria

Given the fundamental approach for conducting an impact study, the OECD-DAC (Development Assistance Committee) Evaluation Network's framework is well regarded for assessing the efficacy of development programmes. In response to the need for a method through which bilateral development agencies could monitor the financing supplied to multilateral organisations for various development initiatives, the DAC Evaluation Network developed a set of evaluation criteria for measuring the performance of any development project (UNICEF, 2012).

In 1991, the OECD Development Assistance Committee (DAC) devised the criteria for assessing international development cooperation. They are now widely used beyond the DAC and have established themselves as a cornerstone of evaluation methodology. These standards have routinely been used for international donors, including UN agencies (OECD, 2020).

The OECD DAC Network has identified six evaluation criteria and two principles for their application: relevance, coherence, effectiveness, efficiency, impact, and sustainability. These criteria are meant to help facilitate evaluations. They were revised in 2019 to improve the accuracy and utility of assessment and to strengthen evaluation's contribution to sustainable development (OECD, 2020).

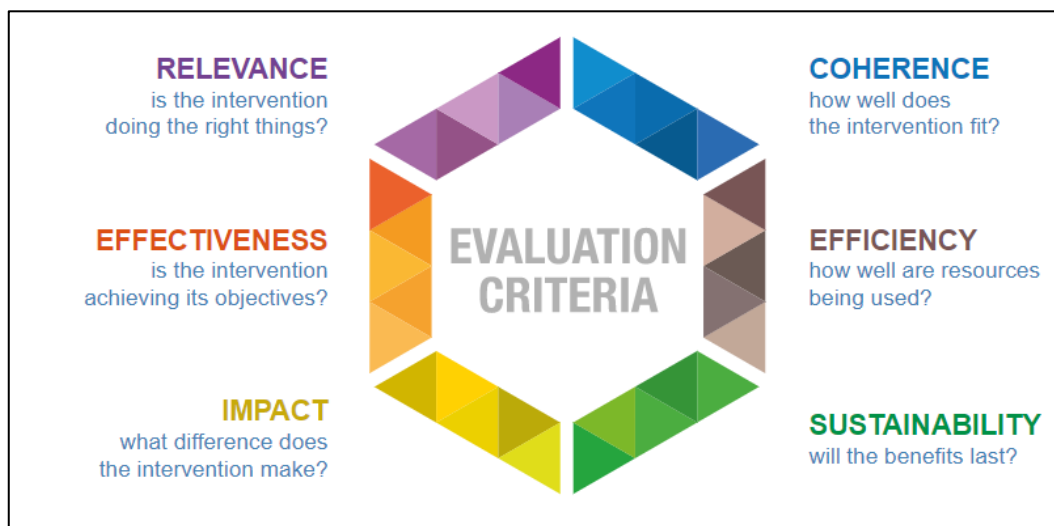


Figure 2: OECD-DAC Evaluation Criteria

1.3.2 Geographical Scope

State	Districts
Karnataka	Dharwar
	Gadag

Table 1: Geographical Scope for project on Support towards flood relief and rehabilitation activities

1.3.3 Data Collection and Analysis

In-depth interviews were conducted with the relevant stakeholders, with the help of pre-designed questionnaires, through telephonic means and Microsoft Teams for data collection. The data was later updated and translated into excel sheets.

1.3.4 Stakeholder Map

Stakeholders play an imperative role in project implementation on the ground. Stakeholder involvement can offer insightful information that aids in making critical decisions for the organisation. They can aid in designing improved guidelines, processes, and systems, as well as future communications and plans. Institutions and stakeholders taking part in the exercise include:

Project	Type of Stakeholder	Number of stakeholders
Support towards flood relief and rehabilitation activities in flood affected regions of Karnataka (FY 19-20)	GAIL CSR Project SPoC	1
	Fire Station Representative	1

Table 2: Stakeholders involved in the sampling

1.3.5 Impact Map

Thematic Area	Location	Project Name	Implementing Agency	Overall Objective	Key Activities	Key Outputs	Key Outcomes	Impact
Disaster Management	Karnataka	PROJECT 6: Support towards flood relief and rehabilitation activities in flood affected regions of Karnataka (FY 19-20)	National/State/Local District Disaster Management bodies/ Dist. Authorities/ Board Purchase/NGO etc.	Providing disaster relief support to those affected during floods.	Contribution of safety materials to be distributed in the affected districts	<ul style="list-style-type: none"> Number of safety materials purchased and distributed Number of people provided with rehabilitation support 	<ul style="list-style-type: none"> Improved and timely disaster response Increased outreach during relief and rehabilitation activities 	Prompt disaster response

Table 3: Impact map from the project

1.4 Scoring Matrix

A scoring guideline was designed where OECD DAC parameters were scored and bundled basis our understanding of GAIL CSR project and availability of information. Weights were assigned to the bundled OECD DAC parameters. Also, a parameter on Branding was included to understand the community's awareness on the project. Various components within the parameters have been assigned scores. Weights and scores have been used to compute the overall score for the location where project was implemented.

The following scoring matrix was developed to rate the performance of the projects across districts:

OECD Parameters	Indicators	Weightage	Combined Weightage
Relevance	If need assessment was undertaken	20%	W1:40%
	If beneficiaries found the support relevant	50%	
	Alignment with SDGs	30%	
Coherence	Alignment with GAIL Policy	50%	
	Alignment with national priorities	50%	
Efficiency	Timeliness of delivery	40%	W2:40%
	Adherence: Budget	40%	
	Duplication of project	20%	
Effectiveness	Identification of problem	25%	
	Process driven implementation strategy	25%	
	Qualified implementation team	25%	
	Targeted beneficiaries	25%	
	Identification of problem	25%	
Impact	Improved preparedness while conducting rescue operation	25%	
	Increased efficiency of rescue workers/staff	25%	
	Reduced recovery period and increased resilience	25%	
	Improved living standard	25%	
Sustainability	Sustainability Mechanism, Convergence	100%	W3:10%
Branding	GAIL Branding/visibility	100%	W4:10%
Score: W1*Average (Relevance, Coherence) + W2*Average (Efficiency, Effectiveness, Impact) + W3* (Sustainability) + W4*(Branding)			

Table 4: Scoring Matrix

1.5 Impact Assessment

1.5.1 Relevance of Intervention

Relevance is a measure of how much the intervention objectives and design respond to the needs, beliefs, and priorities of the beneficiaries and continue to do so even if circumstances change.

Relevance measures how effectively a programme is aligned with the goals and policies of the Government in which it is implemented. It also aims to know if the programme is relevant to the needs of the beneficiaries. The program's relevance is understood in this context in terms of community needs as well as linkages to existing Government operations.

India's unique geo-climatic conditions and high socio-economic vulnerability to calamities are responsible for increased frequency in natural disasters. This causes great damage across the States. India is highly vulnerable to floods, cyclones, avalanches, heat/cold waves, landslides, lightnings, earthquake and droughts.

According to the National Disaster Management Authority, around 40 million hectares of land in India is exposed to floods (around 12 per cent of the total land area)¹³, 68 per cent of land is vulnerable to droughts, landslides, and avalanches, 58.6 per cent landmass is earthquake prone. India's increasing population and extensive constructions mushrooming all over, including multistoried luxury apartments, huge factory buildings, gigantic malls, supermarkets as well as warehouses and masonry buildings keep - India at high risk. During the last 15 years, the country has experienced 10 major earthquakes that have resulted in over 20,000 deaths.¹⁴ Further, the Indian subcontinent is one of the worst affected regions in the world. The subcontinent with a long coastline of 8041 kilometres is exposed to nearly 10 per cent of the world's tropical cyclones.¹⁵

The project and support provided by GAIL to the district authorities to ensure efficient relief and rehabilitation of victims was extremely relevant and the same was reiterated by the stakeholders during interaction with them. The stakeholders found the project to be relevant and there was a need for this support

1.5.2 Coherence of Intervention

Coherence refers to the compatibility of the intervention with other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa.

¹³ [Floods | NDMA, GoI](#)

¹⁴ [Earthquakes | NDMA, GoI](#)

¹⁵ [Cyclones & their Impact in India – NCRMP](#)

I. Alignment of the programme with National Priorities - Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs), commonly recognized as the global goals, were established in 2015 by all United Nations members with the purpose of eradicating poverty, protecting the environment, and ensuring that everyone lives in peace and prosperity by 2030. India was a significant contributor to the development of the SDGs and is committed to achieving them by 2030.



SDG Goal	Target	Sub-targets ¹⁶	Relevance
GOAL 13	Climate Action	<p>13.1 Strengthen resilience and adaptive capacity to climate - related hazards and natural disasters in all countries</p> <p>13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p> <p>13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities</p>	<p>By providing equipment's to state governments to ensure disaster relief and rehabilitation activities are conducted efficiently, GAIL ensured that through timely rescue victims get the right services and rehabilitation. The project also helped in building the capacity of the rescue workers</p>

Table 5: Coherence with SDGs

II. Coherence with national priorities:

The project is further aligned with the national and state government goals, policies, and initiatives, as listed below:

¹⁶ <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

Schemes/Policies	Description	Coherence
<p align="center">National Policy on Disaster Management (NPDM) 2009</p>	<p>National Policy on Disaster Management was approved by the Union Cabinet on 22nd October 2009 and released on 18th January 2010. It portrays a paradigm shift from erstwhile 'Response-Centric' approach to the holistic management of disasters with emphasis on Prevention, Preparedness and Mitigation</p>	<p>By providing equipment's to state governments to ensure disaster relief and rehabilitation activities are conducted efficiently, GAIL ensured that through timely rescue victims get the right services and rehabilitation. The project also helped in building the capacity of the rescue workers</p>

Table 6: Coherence with national priorities

1.5.3 Effectiveness of Intervention

Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy in order to achieve the greatest possible social impact. The efficacy of the programme is established by examining how well the program's activities were carried out as well as the efficiency with which the program's systems and processes were implemented.

The project's goal was to support the state government by providing equipment's to carry out relief and rehabilitation operations efficiently. Therefore, to successfully attain these outcomes, the project adopted the following measures:

I. Identification of the problem:

During any natural disaster it is essential for rescue teams to be well prepared and well equipped with the required equipment's. Therefore, to ensure that victims of flood hit districts are evacuated, rescued, and rehabilitated efficiently GAIL provided safety equipment's to the Government of Karnataka.

II. Process driven implementation strategy:

The project employed a process-driven implementation strategy that includes fundamental market research to ensure a context-specific initiative, standardised activities with a set timeframe to assure quality, and pre-determined KPIs to ensure consistency.

1.5.4 Efficiency of Intervention

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way.

The purpose is to establish whether the inputs—funds, knowledge, time, etc.—were effectively employed to create the intervention outcomes. This evaluation criterion attempts to determine whether the programme was completed on schedule and within budget.

The project has been efficiently implemented in the target districts with the support of key stakeholders.

I. *Timeliness of delivery or implementation of project interventions*

The programme was implemented within the given time period by GAIL CSR team along with district authorities.

II. *Cost efficiency of project activities*

Interaction with the GAIL CSR and representative from fire department revealed that there was no budget overflow and that all the activities were successfully carried out within the allotted budget.

III. *Duplication/ overlap of project activities*

Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. In this case GAIL supported the state government by providing safety equipment's to ensure efficient relief and rehabilitation activities.

1.5.5 GAIL Branding/Visibility

Considering the urgency of the situation and immediate need during the pandemic, proper branding was a challenge and thus couldn't be done. However, state and district authorities were well aware of GAIL's contribution.

1.5.6 Impact of Intervention

Impact has been measured in terms of the futuristic vision to address the issue and significant changes observed.

The goal of measuring the impact is to determine the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favorable or harmful.

Every other year various states in India experience heavy rains leading to floods. Karnataka is one such state that experiences heavy downpour of water which eventually leads to massive floods in the state. Scores of people lose their lives, and thousands are rendered homeless. According to data by the Ministry of Home affairs about 1300 lives have been lost in Karnataka due to floods from 2010-2019. Whereas nearly 9 lakh houses and crops on more than 40 hectares have been damaged¹⁷.

In the aftermath of a flood, workers may be involved in a variety of response and recovery operations. However, some operations, such as utility restoration, cleaning up spills of hazardous materials, and search and rescue, should only be conducted by workers who have the proper training, equipment, and experience.

To ensure smooth and efficient rescue of victims from the flood hit districts GAIL provided safety equipment's to the Disaster Management Authority, Gadag District and Dharwar district.

In Gadag, GAIL provided the following equipment:

Sr. No	Item Name	Quantity provided
1.	Air Compressor	01
2.	Canister Mask	06
3.	Concrete Cutter	06
4.	Fire Suit	06
5.	Foldable Stretcher	12
6	Head Lights	12
7.	Inflatable Rescue Rubber Boat	01
8	Brush Cutter	06
9	Chain Saws MS 210	06
10.	Chain Saws MS 382	06
11	Hedge Trimmer	06
12	Torch Heavy type	30

Table 7: Equipment's provided to Disaster Management Authority, Gadag District

The below mentioned equipment were provided to the district authorities in Dharwar:

¹⁷ [Karnataka floods claimed 1,300 lives in 10 years | Bengaluru News - Times of India \(indiatimes.com\)](https://www.indiatimes.com/news/karnataka-floods-claimed-1300-lives-in-10-years-bengaluru-news-times-of-india)

Sr. No	Item Name	Quantity provided
1.	Diesel Operated self-priming non clog dewatering mud pump set	05
2.	Hammer drill concrete	02
3.	Carbide tipped chain saw	03
4	Life Buoy	60
5	Life jacket	60
6	Petrol driver chain SAW	10
7	Nylon Rope	6
8	Led base Handheld Search Limit	6
9	Raincoat	200
10	Battery operated light	1
11	Inflatable boat	2
12	OBM Motor	2

Table 8: Equipment's provided to Office of Deputy Commissioner, Dharwar District

Disaster management is essential as it aims to ensure an effective and coordinated response to disasters. Through work to save lives and reduce the impact of crises on affected communities, disaster management is fundamental to timely and effectual assistance to disaster hit people.

In times of disaster, what is needed is quick response and essential aid. By providing the safety equipment's GAIL ensured:

1. Improved preparedness while conducting rescue operation

Flood preparedness refers to the measures taken to prepare for and reduce the effects of disasters. That is, to predict and where possible, prevent disasters, mitigate their impact on vulnerable populations and respond to and effectively cope with their consequences. It provides a platform to design effective, realistic, and coordinated planning, reduces duplication of efforts and increase the overall effectiveness of the rescue operation. Being prepared to face a natural disaster is a s a continuous and integrated process resulting from a wide range of risk reduction activities and resources.

By providing the above-mentioned equipment GAIL has ensured that the rescue teams are well equipped and better equipped in times of crisis. GAIL's support through these equipment's has also ensured that the state authorities have the equipment required to carry relief operations during disasters like floods, fire breakout etc. Given the large population of Karnataka, sufficient rescue equipment was essential to ensure that maximum people trapped during the floods could be rescued in time to avoid casualties.

2. Increased efficiency of rescue workers/staff

Having the right and sufficient equipment as well as a well laid out disaster recovery plan is essential. When specific roles and responsibilities are assigned in advance, effectiveness and productivity will both increase. In some instances, disaster recovery planning can mean having at least two people that can handle the same task. Such redundancies can prove to be incredibly beneficial in the long run. When multiple employees are capable of handling a given task, organizations can benefit from peace of mind pertaining to overall the integrity of the network.

GAIL's support has helped ensure that authorities have the right equipment to carry out disaster relief operations. This support decreased the time taken to carry out particular activities during the rescue mission thus making the operation swift and effective.

3. Reduced recovery period and increased resilience

The availability of a proper disaster recovery plan, equipment and manpower in place are essential to ensure reduced time taken for recovering from a disaster as well as makes the workers and the people involved in the disaster more resilient. It helps in efficient rescue operations as well as reduces time that could be lost in the absence of the required safety equipment.

Equipment provided by GAIL such as boats helped the rescue workers reach a particular point faster during flood relief operations, whereas having sufficient life jackets was essential to save people from drowning. Having all the equipment in place in the required quantity made the workers more resilient while assisting the and rescuing the survivors. Thus, by providing such useful equipment GAIL ensured that the recovery time is reduced, and lives are protected during times of crisis.

1.5.7 Sustainability of Intervention

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence.

The continuation of a positive effect after development or aid has stopped is referred to as sustainability. This evaluation criterion contains key elements concerning the likelihood of continuous long-term benefits and risk tolerance. To achieve sustainability, a governing framework, financial model, and operating system must be established. This was a one-time activity conducted by GAIL to contribute towards managing crisis in the districts. By providing disaster relief and safety equipment, GAIL ensured that state authorities are better prepared in times of natural disaster to ensure efficient and timely rescue operations.

1.6 Overall rating of the project

The scoring matrix was used to evaluate and score performance of the project across districts of Gadag and Dharwar in Karnataka. The following table provides the district-wise rating across the defined parameters:

Relevance	Coherence	Efficiency	Effectiveness	Impact	Sustainability	Branding	Total Score
100%	100%	100%	100%	100%	100%	100%	100%

Table 9: Overall scoring of project

GAIL's project on supporting relief and rehabilitation during floods in Karnataka by providing safety equipment's to district authorities scored an average of 100 percent. The project was well aligned to GAIL's CSR policy as well as the SDGs.

Though there was no need assessment survey conducted specifically before the programme, the need was clearly identified basis the evident challenges that the entire state was facing at the time of floods that severely impacted human life. However, the project was efficiently executed across the selected districts and states within the allocated budget and timelines.

In terms of branding, considering the urgency of the situation and immediate need during the pandemic. Proper branding was a challenge and thus couldn't be done. However, state and district authorities were aware of GAIL's contribution.

Despite its challenges the overall score of the project stands to 100% due to which the projects can be rated as **"Highly Impactful"**.

1.7 Conclusion and Way Forward

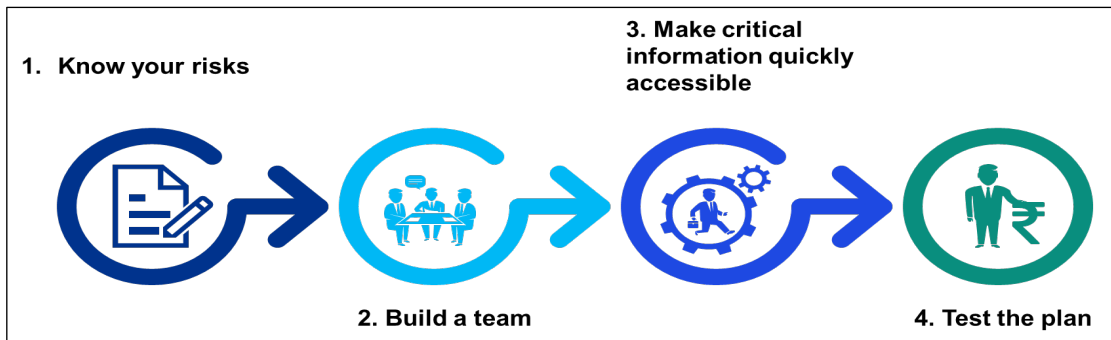
India, a country with a wide range of physical features and different geo-climatic zones, is prone to disasters and hazards owing to its diverse physical geography. Over the years, there has been an increase in the number and intensity of natural disasters mainly due to the anthropogenic activities for infrastructure development and negligence of the environmental concerns. In addition, climate change has added to the ongoing problems and the disasters which were earlier witnessed at a larger interval are now more frequent.

India's geo-climatic zones are prone to floods, earthquakes, cyclones, droughts, desertification, landslides, avalanches, etc. For example, the northern states of the country—Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Gujarat, Rajasthan, Punjab, Haryana, and Delhi—experience a combination of natural disasters including flood, earthquakes, avalanches, landslides, cloud burst, flash floods, and more. Therefore, when we are planning for disaster preparedness and response, the multi-disaster-prone nature of the area has to be kept in mind. The entire action needs to be seen in

totality. The economic losses due to these recurring disasters have been immense. The poor in our country is more vulnerable to disasters and the coping capacity of the poor in the vulnerable community is also less. Further, with the recurring disasters the vulnerability of the poor and the marginalised increases manifolds.

Whether it's a fire, flood, shooting, power outage, or other situation, like emergencies, they unfortunately hit the headlines often enough that the subject of preparedness is no longer limited to security and facility professionals. Thus, one should always be prepared to tackle such circumstances.

The following are some potential steps that could be taken to achieve this goal:



1. **Know your risks:** Listing potential emergencies/natural calamities and ranking them regarding importance and likelihood is essential to knowing what to do and what resources to invest.
2. **Build a team:** Emergency plans should be the product of an inclusive team instead of a single individual or group. Putting together a team of subject matter experts from different departments helps in determining the overall span of the plan, including a cycle of the four phases of emergency management:
 - Mitigation. Preventing emergencies and minimizing the effects if an event occurs.
 - Preparedness. Identified efforts to prepare for the event.
 - Response. Plans and efforts to respond safely to the event.
 - Recovery. Actions needed to return the facility to normal operations.
3. **Make critical information quickly accessible:** Post creation of teams it is essential to keep ready information needed to spread awareness amongst people as well as assess the need and act basis that.
4. **Test the plan:** To test the efficiency of the plans it is essential to test them to assess responses of people. To do so one can conduct series of tests or tabletops, drills, and exercises designed to go through procedures that you are expected to know — in fact, that you need to know to save your own life and the lives of others.

Though it is important to work towards constraining disaster losses on all fronts, there is a need for strong and swift policy measures to secure human losses due to lightning deaths. To mitigate natural disaster fatalities across States, GAIL can help minimize fatalities by ensuring:

- 1. Enhanced collaboration with State Governments:** In collaboration with State Governments, GAIL can invest in the installation of advanced disaster warning systems, particularly in low lying areas, that are accurate in predicting rainfall in coastal areas is needed. Additionally, GAIL may consider supporting other disaster relief related requirements from time to time in advance and contribute to disaster preparedness.
- 2. Campaigns and Awareness Drives:** Going forward, GAIL may plan to introduce an element of spreading awareness and holding awareness drives and campaigns in collaboration with the district authorities and disaster relief management teams in select locations across states where it has supported disaster relief measures to spread awareness among people regarding steps to be taken during different natural calamities in order to protect oneself and those around as well as the dos and don'ts during any disaster.
- 3. Documentation and follow - ups:** Going ahead, for similar kinds of one – time support projects, GAIL may take steps to ensure proper documentation of the support provided which can be monitored by specific teams in place. Post disaster follow – up mechanism can also be used wherein GAIL can follow up with the authorities on the impact created by the support provided by them and how it helped in saving lives of people. This would ensure proper closure of the project.

Thank you



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