NETWORKS OF CARE

PARTNERSHIPS FOR RELIEF AND SUPPORT DURING THE COVID-19 SECOND WAVE IN KARNATAKA

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The devastation wrought by the second wave of COVID-19 took its toll on everyone – individuals and communities, caregivers and frontline workers; and their perseverance in the face of such adversity was humbling. We would like to express our gratitude to all the organisations and individuals undertaking relief operations across the state of Karnataka for providing us their time and support.

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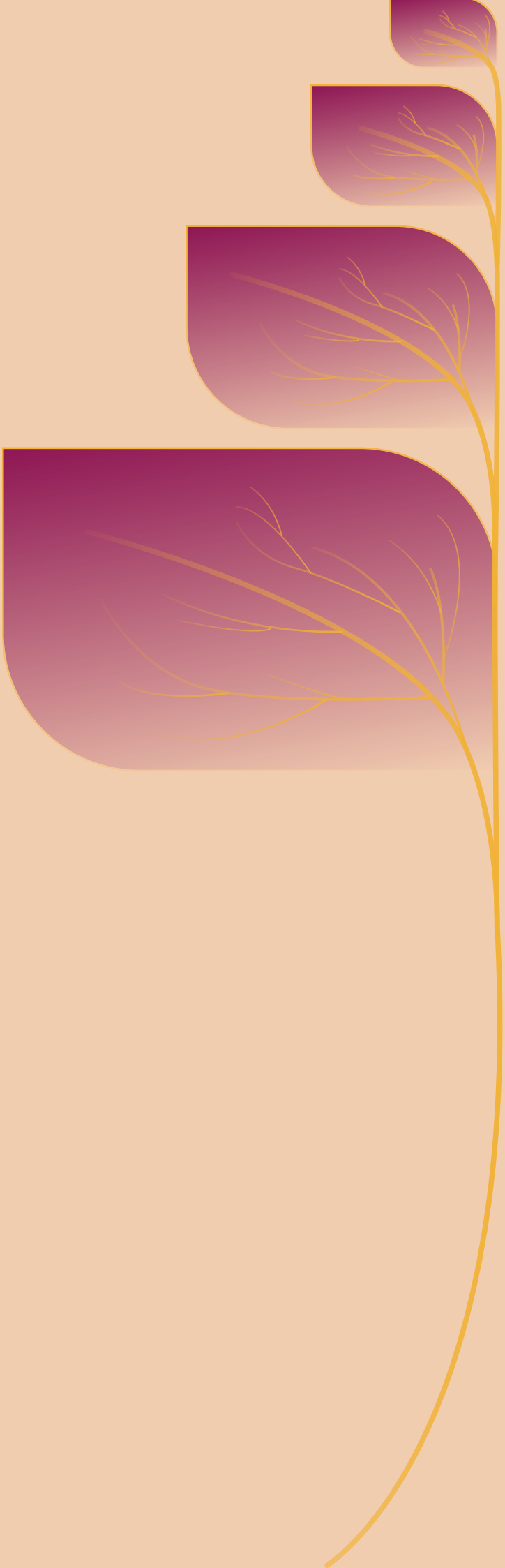

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EXECUTIVE SUMMARY

In 2020, India witnessed a national lockdown to mitigate the spread of COVID-19, heavily impacting access to food and livelihoods, particularly for the country's most vulnerable groups. An estimated hundred million workers lost their jobs between April – May 2020 due to the imposition of the lockdown[1]. In 2021, the second wave of COVID-19 further ravaged India with an increase in the infection rate, symptoms and severity.

In this report, we first map the landscape of relief provided in Karnataka during the second wave. Owing to the sudden lockdown, relief during the first wave was majorly focussed on providing dry and cooked food. During the second wave, however, the most significant demand was for health-related facilities, such as beds, oxygen concentrators, medicines, etc. Triage and teleconsultation services were also offered to minimise infection transmission. Other relief efforts involved setting up of COVID Care Centres, vaccination camps and conducting education programmes in public schools and anganwadi centres.

During the second wave, in Karnataka, similar to the first wave, government agencies and non-governmental organisations came together to address the surge in the demand for relief. The nature of relief efforts provided by the government and the NGOs in Karnataka and their interactions during the first wave has been previously documented through a report by the authors, GIZ, and the RDPR department. The full report may be accessed online here[2]. In this report, we analyse the nature and efficacy of ad-hoc networks created to manage both information and material flows during relief operations. NGOs, CSOs and volunteers along with government departments coordinated the implementation of relief efforts, created awareness materials, collected data for dissemination and set up processes for teleconsultation. Various trust-building measures were also initiated by the government to improve the work processes between the government and the non-government actors. There was an increase in the use of technology to improve relief efforts. Though WhatsApp was mainly used for communication, the Sankalpa platform, created by the RDPR department, was used for gathering relief requirements and displaying public documents.

The severity of the second wave caused immense emotional and psychological strain among the relief providers. A common challenge highlighted by the interviewees was the fatigue and the emotional stress during the relief efforts. Rapidly spreading misinformation, lack of real-time information and unequal resource availability were a few other challenges that hindered the immediate supply of relief.

The analysis of the relief efforts in the report underlines the need to make the sharing and access of information and resources more equitable. There is an urgent need to improve capacity in the system to deal with such a public health emergency. Building resilience among the community and strengthening institutional processes to deepen collaboration between actors must form the foundation for future disaster preparedness. Institutional processes can be strengthened through specific SOPs for public health emergencies; providing adequate public health training to medical professionals; strengthening existing actor networks; and putting in place mechanisms to generate actionable data.

1 State of Working India 2021: One year of COVID-19, Azim Premji University, https://bit.ly/workingIndia2021 (last accessed on November 10, 2021).

2 COVID-19: Sustaining Momentum and Collaborations, Case study on the Relief Ecosystem in Karnataka https://bit.ly/3Fgw3E6

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ABBREVIATIONS

Abbreviation	Full Form
ASHA Worker	Accredited Social Health Activist Worker
BBMP	Bruhat Bengaluru Mahanagara Palike
BESCOM	Bangalore Electricity Supply Company Limited
CCC	Covid Care Centre
CCI	Child Care Institution
CMO	Chief Minister's Office
COVID-19	Coronavirus Disease-19
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
DBT	Direct Benefit Transfer
DC	District Commissioner
DDMA	District Disaster Management Authority
DHO	District Health Officer
GoI	Government of India
GoK	Government of Karnataka
GP	Gram Panchayat
GST	Goods and Services Tax
HFW	Health and Family Welfare Department, GoK
ICDS	Integrated Child Development Scheme
IEC	Information, Education and Communication Material
ITBT	Department of Electronics, Information Technology, Biotechnology, and Science & Technology, GoK
KFC	Karnataka Fights Corona (Sankalpa)
KLLADS	Karnataka Legislators' Local Area Development Scheme
KSDMA	Karnataka State Disaster Management Authority
KSMSCL	Karnataka State Medical Supplies Corporation Limited
MEA	Ministry of External Affairs, GoI
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MLALADS	Member of Legislative Assembly Local Area Development Scheme
MLA	Member of Legislative Assembly
MoHFW	Ministry of Health and Family Welfare, GoI
NGO	Non-Governmental Organisation
NIC	National Informatics Centre
PHANA	Private Hospitals and Nursing Homes Association
PHC	Primary Health Centre
RDPR	Rural Development and Panchayati Raj Department, GoK
Revenue Dept.	Revenue Department, GoK
SOP	Standard Operating Procedure
Transport Dept.	Transport Department, GoK
ULB	Urban Local Body
WCD	Department of Women and Child Development, GoK
WHO	World Health Organisation

Chapter 1

COVID-19 SECOND WAVE: A CRISIS THAT SHOOK THE NATION

On February 11, 2020, the World Health Organisation (WHO) announced the name of the new disease that was spreading rapidly across the world as Coronavirus Disease 2019 (COVID-19). Since then, India underwent periods during which the COVID-19 cases spiked and periods of relative lull. In February 2021, a minor rise in COVID-19 cases was observed in different states across India, which spiked in the coming months[3] and this surge in cases was deemed as the second wave. As was the case with the first wave, it is not possible to pinpoint exactly when the second wave started in India. On May 1, 2021, India recorded the highest surge of 4.14 lakh COVID-19 cases in a single day since the outbreak began[4]. As per reports, within 36 days, the number of daily cases recorded in India jumped from ~8000 on April 1, 2021, to more than 4 lakhs by May 6, 2021, with a positivity rate of ~26%[5]. This was followed by more than 4000 deaths being recorded on May 8, 2021[6]. The devastation wrought by the second wave not only claimed people's lives and livelihoods but also posed an unprecedented challenge to the country's health infrastructure.

The devastation wrought by the second wave not only claimed people's lives and livelihoods but also posed an unprecedented challenge to the country's health infrastructure.

During the first wave, in response to the spread of COVID-19 disease, a national lockdown was imposed from March 25, 2020. As a result of the lockdown, there was a complete shutdown of all essential, economic and educational activities in the country. The halting of economic activities and transport affected access to essential services and also the income levels of vulnerable groups.

In Karnataka, in response to the restrictions imposed, there was an overwhelming response from NGOs and CSOs in the provisioning of various relief measures, along with the support offered by various state and local level departments. In this context, we had conducted a study to document the nature of relief efforts provided by the government and the NGOs in Karnataka and the interactions between them. Shortlisted organisations were interviewed to understand the relief efforts undertaken and the challenges faced in its provision. The full report may be accessed here: https://bit.ly/3Fgw3E6. A summary of the COVID-19 first wave report is provided in Annexure 1.

With the first wave lockdown ending on May 31, 2020, the movement of people, goods, and services in the country were gradually moving towards normal. However, this "back to normal" situation was hit with a second wave of COVID-19 disease gradually starting from February 20. During the second wave, given the rapid surge in the number of cases, the priority was to augment the existing health infrastructure. Thus, in addition to food relief measures, other relief materials such as medical supplies (masks, sanitisers, medicines), oxygen concentrators and ventilators, as well as relief support services related to hospital beds availability, triage and telecounselling, awareness campaigns, vaccination provisioning, online education programmes for schools etc. had to be provided. Due to the exceptional demands and severe strains which led to a near-collapse in health infrastructure, this period also saw an increase in the involvement of private medical health professionals and institutions in the relief operations as compared to the first wave. With vaccination efforts underway, this sudden peak in the number of cases also impacted the rate at which people could be vaccinated.

To curb this spread, Karnataka imposed a total lockdown from April 27, 2021, allowing only the construction, agriculture and manufacturing sectors to function[7]. Around May 2021, Karnataka emerged as one of the hotspots during the second wave of COVID-19 disease[8]. Bengaluru Urban, Mysuru, and Ballari were among the most affected districts in terms of death rates[9]. There was a collapse of the health infrastructure due to the impact of the COVID-19 variant leading to an overwhelming demand for medicines, hospital beds, oxygen concentrators etc.

3 Jamie Mullick, 4 charts that show India's second wave has started, Hindustan Times, https://bit.ly/secondwavestart (last accessed on November 10, 2021).

4 Armaan Bhatnagar, In 5 charts: How India's second wave is declining as quickly as it peaked, Times of India, https://bit.ly/secondwavedecline (last accessed on November 10, 2021).

5 Ibid.

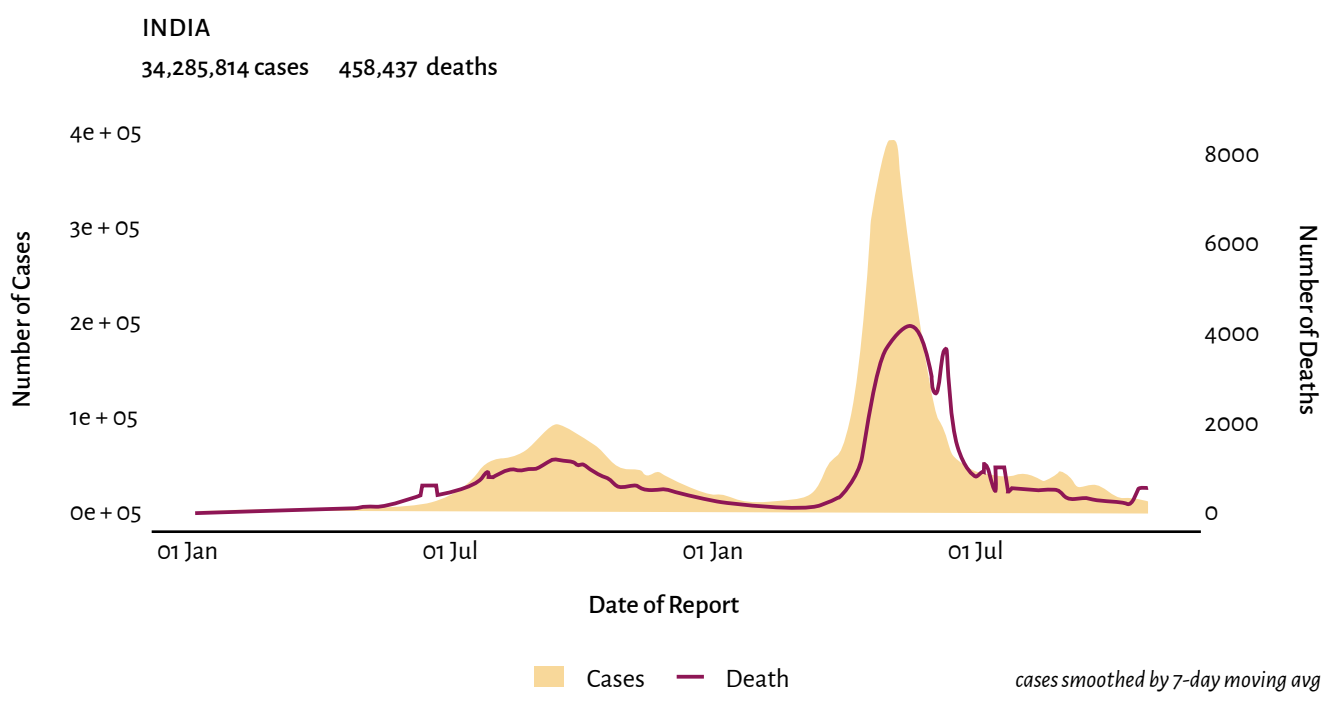
6 https://bit.ly/IndiaMay8Coronavirus (last accessed on November 19, 2021)

7 2020 Recap: How India survived COVID-19 pandemic - a series of lockdowns, unlocks, India TV News, https://bit.ly/2020COVID19recap (last accessed on November 10, 2021).

8 Srivatsan KC, Karnataka's Covid-19 tally goes past 2.5-million mark, daily fatalities continue to remain high, Hindustan Times, https://bit.ly/Covid19tallypast2point5mil (last accessed on November 10, 2021).

9 Ibid.

Figure 1: Timeline showing rise in COVID-19 cases and deaths in India between January 2020 and September 2021



Source: https://covid19.who.int/region/searo/country/in

During the second wave, given the rapid surge in the number of cases, the priority was to augment the existing health infrastructure.

With respect to relief operations, NGOs and other private organisations continued to function in their respective fields of work post the first wave. Thus, when the second wave hit, the relief operations did not have to start from a blank slate. However, the processes and connections between various stakeholders had to be revived, as they had become inactive during the period between the first and the second waves. Added to this was the change in the nature of relief requests.

This report attempts to capture some of the major changes in the demand for relief, the connections and interactions between the various agencies, and the processes involved in the provisioning of relief work during the second wave.

1.1 OBJECTIVES

The primary objective of this report is to document relief effort carried out and the processes followed by various organisations and government departments during the second wave of COVID-19 in Karnataka. In documenting various aspects of the relief efforts, the report highlights the challenges faced by organisations, volunteers and government departments in the provisioning of relief efforts and provides recommendations for the way forward. The role of technology with a focus on the Sankalpa[10] platform has also been documented. The report thus:

10 Sankalpa is a technological innovation initiated by the RDPR department during the first wave of COVID-19 which continued during the second wave. Details of this platform are provided in the following chapters.

- Maps the landscape of various relief efforts during the second wave of COVID-19 disease in Karnataka;
- Explores some of the inter-organisational relationships that were established and maintained for on the ground implementation of the relief efforts;
- Describes some of the processes undertaken to create and generate actionable data; and
- Offers possible recommendations arising from the data for building further resilience.

1.2 SCOPE

In this report, we document some of the relief activities undertaken by the NGOs and the Government of Karnataka across the state from February 2021 to June 2021. February 2021 was when there was a gradual increase in cases, and by June 2021 the number of cases began to taper down. As with the first wave, it is difficult to pinpoint exactly when the second wave started and ended; therefore, these dates can be considered more as tentative indicators, rather than a fixed timestamp.

1.3 METHODOLOGY

The data presented in this report was gathered through primary and secondary research. Primary data was collected through semi-structured interviews conducted with various actors involved in the relief work. Diverse stakeholders were considered for these interviews which included the volunteers, medical health professionals, representatives from organisations (NGOs, CSOs etc.) and government officials. In order to obtain a diverse set of data, the selection of organisations and volunteers was based on the different types of relief efforts they were involved in. With respect to the government stakeholders, the core team in the RDPR department involved in relief work, and other functionaries associated with the department were interviewed.

Further, the secondary literature on frameworks for disaster resilience was studied from which the 4Cs framework was selected for analysis. The primary data collected through interviews was analysed using this framework, and the findings are presented in this report.

As with the first wave, it is difficult to pinpoint exactly when the second wave started and ended.

The information presented in the report is based on primary research conducted through semi-structured telephonic interviews with volunteers, representatives of organisations that were engaged in relief efforts, and government officials. Due to the nature of the research and the geographical scope considered, the following are the limitations of this study:

- The geographical scope of this study is limited to the State of Karnataka and does not represent the nature of relief efforts in the country;
- Relief efforts were still in progress during the time when the interviews were conducted. Hence, the sample size for this study is limited to 24 stakeholders, which includes the representatives from the relief organisations (NGOs, CSOs etc.), volunteers, medical health professionals and government functionaries; and
- Processes and relief efforts have continued even after the end of the first wave. The information documented thus might not exclusively belong to the second wave as many efforts and interactions between various stakeholders continued in the period between the first and the second waves.

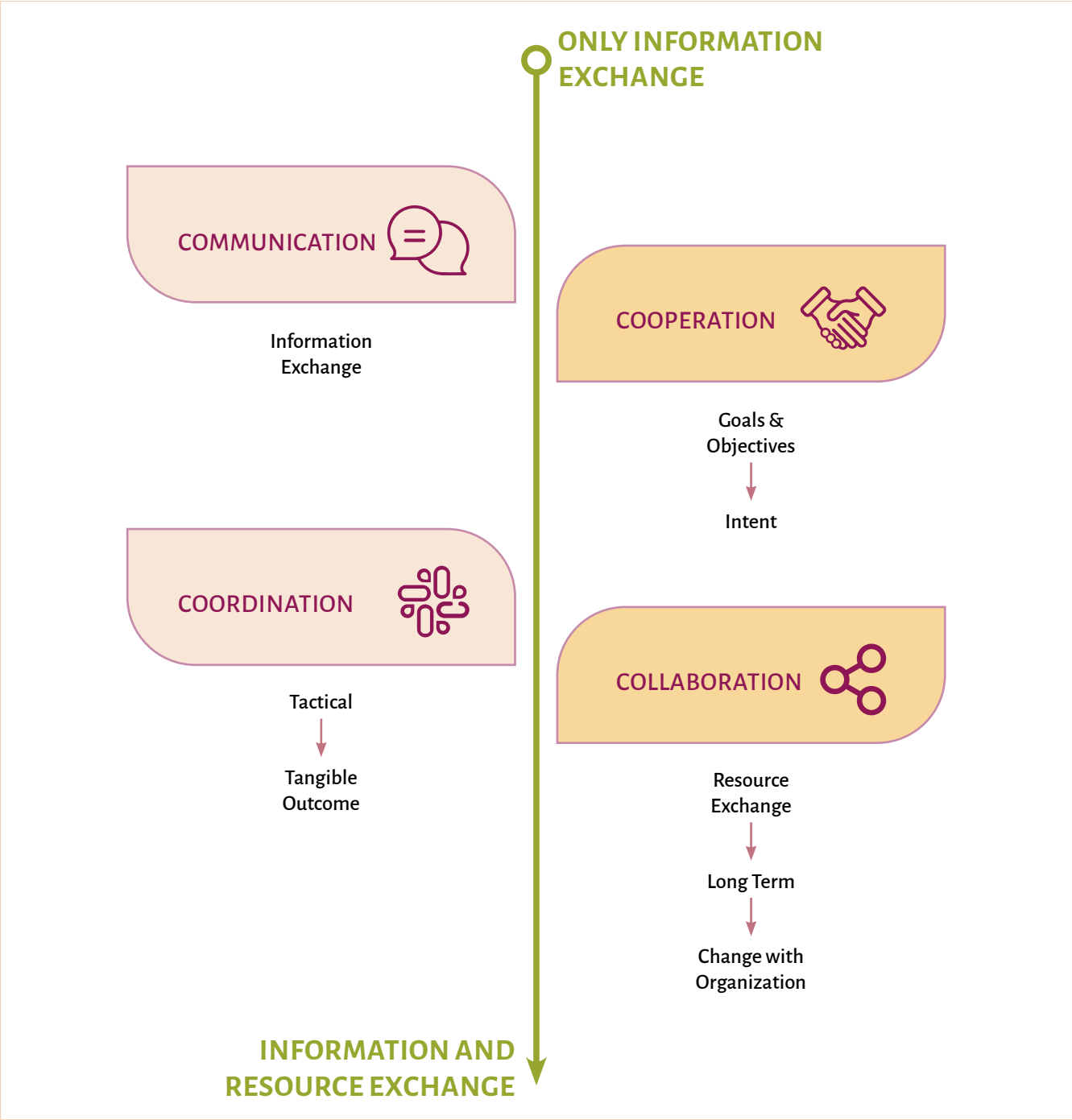
DATA COLLECTION MECHANISM

For this study, a list of organisations and volunteers was collated to understand the breadth of the relief work. The list was then categorised to identify the range of the various relief efforts provided by the organisations. The volunteer list was also categorised in a similar way to cover the extent of the relief effort undertaken by the community, including individual persons during the second wave. A more limited list of medical professionals, functionaries associated with the Rural Development and Panchayat Raj (RDPR) department and tech personnel involved in the Sankalpa platform was also collated. The final interviewee list included 7 organisations (NGOs, CSOs etc.), 12 volunteers which included medical professionals, volunteers associated with the government, and tech personnel, and 5 government functionaries. A table of the study's participants and interviewees is attached in Annexure 2.

In the next step, we conducted semi-structured interviews with each of these stakeholders to understand the following:

- Relief efforts they were involved in during the second wave and the changes observed from the first wave;

Figure 2: 4Cs framework for evaluating disaster response and resilience



Source: Image created by Bharath M. Palavalli, Fields of View, Multi-stakeholder Relief Operations, May 2020

- Challenges involved in both the first and the second waves;
- The nature and quality of interactions between stakeholders during the relief efforts;
- Awareness and use of the Sankalpa platform; and
- Recommendations for the way forward.

Detailed questionnaires for different stakeholder groups have been provided in Annexure 3.

1.4 APPROACH

We have used the 4Cs framework in this report to analyse the interactions between various stakeholders during the COVID-19 second wave. A brief description of the 4Cs Framework is provided below.

Table 1: Summary of characteristics under the 4Cs

Characteristic	Communication	Cooperation	Coordination	Collaboration
Cost of interaction	Low	Medium	Medium	High
Degree of embeddedness	Low	Medium	High	High
Following of common goals	Low	Medium	High	High
Frequency of interaction	Low	Medium	Medium	High
Reciprocity	Low	Medium	High	High
Shared resources	Low	Medium	Medium	High
Shared risk	Low	Medium	Medium	High

4Cs FRAMEWORK FOR DISASTER RESILIENCE

Any disaster relief operation involves complex networks with several actors at different levels and multiple relationships between them. The interactions between these actors can range from information sharing to resource building. Engagement between actors involved in relief work thus begins with information collection and exchange, which then proceeds on to alignment of intent i.e., common goals and objectives. The next step in actor interactions is more tactical which requires an exchange of resources, followed by a long-term collaboration between actors aimed at future disaster resilience [11]. A combination of these 4Cs forms the basis for implementing an efficient disaster relief system.

Communication

Communication is an act of information exchange between different stakeholders in real-time and is the first step in any disaster relief response. Activities under communication include the announcement of meetings and updates, collecting and sharing information, offering and requesting help and transmitting information from one organisation to another. It is thus perceived as a unidirectional act and is not contingent upon feedback. Effective communication between stakeholders involves collecting and sharing information in a usable way, and failure in this step can hamper further relief measures.

Cooperation

Interactions between organisations can be defined as cooperation when there is a recognition of similar goals and objectives. It is often short-term, with informal connections between different organisations or within the same organisation. Cooperation can be characterised as a passive activity that involves a lower level of shared risks between two parties. One of the reasons for cooperation among organisations is to ensure that duplication of relief efforts is avoided.

Any disaster relief operation involves complex networks with several actors at different levels and multiple relationships between them. The interactions between these actors can range from information sharing to resource building.

11 Martin, Eric, Isabelle Nolte, and Emma Vitolo. 2016. "The Four Cs of Disaster Partnering: Communication, Cooperation, Coordination and Collaboration." Disasters 40 (4): 621–43. https://doi.org/10/f8875d (last accessed on November 10, 2021).

Coordination

Relief measures by organisations can be defined as a coordinated response when the interventions are tactical and tangible to achieve a common objective. Unlike the act of communication and cooperation, the cost of interaction and shared risks are higher in coordination. Consequently, organisations must have strong processes in place to achieve successful coordination. Coordination is characterised by sharing of information and aligning actions for better on-ground distribution of relief measures.

Collaboration

Collaboration can be defined as a long-term activity involving resource exchange that involves high levels of shared risk and interdependency between organisations. Relief measures in collaboration involve a policy-level change or structural/organisational changes. Enabling collaboration involves understanding the cultural context and having in place a strong process of communication, cooperation and coordination. Collaboration can also be defined as the formation of a long-term partnership, alliance or coalition.

The 4Cs framework, thus, allows us to:

- *Identify the types of organizations involved in disaster relief operations*
  In any disaster relief operation, the types of actors involved are organisations and volunteers involved in humanitarian relief operations[12], government agencies, and lastly organisations involved in logistics supply (vendors, warehouse-operators, transport managers etc.). Analysis through this framework will help to recognise these key stakeholders that were a part of the disaster relief operation.

- *Map interactions between the diverse stakeholders*
  During exceptional circumstances, multiple actors come together to perform roles that are different from their originally defined roles. This framework helps to understand changes in roles and the interactions between various stakeholders involved in disaster relief operations.

- *Identify pathways for sustainable engagement for future preparedness*
  The 4Cs framework describes the levels of engagement required to move towards a collaborative response mechanism for future disasters. The framework thus helps to identify the ongoing practices and the new measures that could be implemented for a sustained engagement between the stakeholders.

12 Humanitarian relief operations involve diverse stakeholders. For example, volunteers and organisations involved in relief operations might not be trained but provide the critical support needed.

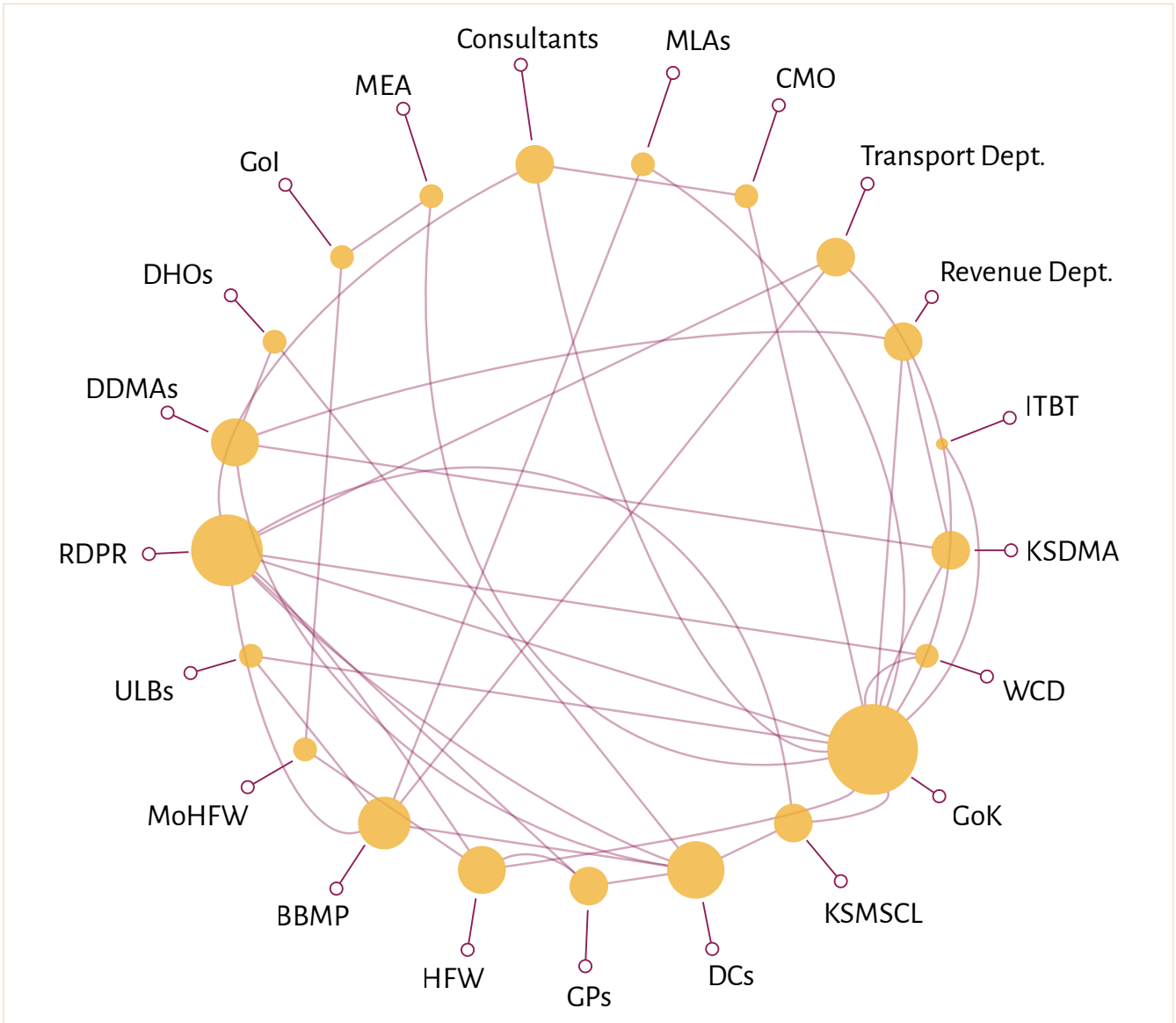
Chapter 2

RELIEF ECOSYSTEM DURING COVID-19 SECOND WAVE

The second wave was described as more difficult and emotionally exhausting in comparison to the first wave by all stakeholders who were interviewed.

The second wave was described as more difficult and emotionally exhausting in comparison to the first wave by all stakeholders who were interviewed. Relief efforts during the first wave focused primarily on food relief. During this period, call centres were set up for distress calls, and non-medical relief support teams were put in place for the distribution of food and other rations. During the second wave, the caseload exponentially increased, causing various and sudden deficiencies in the health infrastructure. With both the government and the NGOs involved in direct relief work, the focus this time was shifted to providing urgent healthcare-related relief measures.

Figure 3: Key stakeholders in Karnataka's relief ecosystem during the COVID-19 second wave in Karnataka



2.1 KEY STAKEHOLDERS INVOLVED IN RELIEF MEASURES

Multiple actors, comprising government and non-government stakeholders, were equally active in the provision of relief during the second wave in Karnataka and included various NGOs, CSOs, foundations, donor organisations, government departments (RDPR, BBMP etc.), individual volunteers and local communities. As mentioned previously, given the timing of this study, efforts from all actors have not been captured comprehensively and this report does not describe the work done by all stakeholders in providing relief in its entirety.

Below, we provide a map of all government stakeholders involved in the relief efforts. Many of them share administrative relationships, such as those of supervision or granting permissions. Other institutions shared financial relationships in terms of grants of funds for relief work. Assistance and expertise provided by external consultants and volunteers to the government constituted a third kind of interaction. Finally, stakeholders across the system and at different levels, such as the Centre, state and districts shared information and resources in order to accelerate relief work.

- *Government – Government:*
  Interactions between the different levels in a particular government department and also between various government departments.

- *Government – CSOs:*
  Interactions between the government and the CSOs / NGOs / volunteers involved in relief work. Medical health professionals and other private organisations also fall within the same category.

- *CSO – CSO:*
  Engagements between various non-governmental institutions which also includes NGOs, donors, foundations, trusts etc.

- *Relief providers – individuals or communities in need:*
  Here, the relief providers might consist of representatives of government departments or non-governmental bodies, volunteers, etc., and the interactions were mostly with respect to the collection of relief requests, data dissemination and distribution of other resources.)

Multiple actors, comprising government and non-government stakeholders, were equally active in the provision of relief during the second wave in Karnataka and included various NGOs, CSOs, foundations, donor organisations, government departments (RDPR, BBMP etc.), individual volunteers and local communities.

As is clear from the graphic, a major role was played by the state government. In addition to the enormous burden borne by the Health Department of providing medical care and guiding community care in the context of a grave public health emergency, the RDPR department, and the Revenue department (disaster management) played key roles at the state level. At the local level, Gram Panchayats (GPs) and Deputy Commissioners (DCs) played a crucial role in delivering relief in rural areas while Urban Local Bodies (ULBs) such as the BBMP did so in urban areas.

The interactions and relationships between the different actors developed over the duration of both the first and the second waves. Four distinct levels of interactions emerged between the stakeholders:

2.2 RELIEF EFFORTS DURING THE SECOND WAVE

DRY RATIONS AND COOKED FOOD

Unlike the first wave, organisations that provided food relief came down significantly during the second wave. Requests for relief were either received through WhatsApp groups, from people who were involved with various organisations engaged in relief or from other established local networks. The relief took various forms, including:

Distribution of dry rations
Extending their relief efforts after the first wave, organisations and volunteers continued providing food kits as relief material during the second wave. However, unlike the first wave, during which cooked food packets were distributed, the NGOs and

CSOs interviewed provided either dry ration kits, vegetables or essential groceries as part of food relief measures during the second wave. For instance, a volunteer involved with Neravu Trust distributed food kits on request in Yelahanka, Bengaluru. These kits included dry rations such as rice, onions, dal and oil. Materials for distribution were bought at discounted rates and funded through donations.

Facilitation of direct access to consumers as alternative markets
With inter-state borders being closed, many farmers lost access to their usual markets. For example, fruit and vegetable farmers in Kolar usually sold their produce in Tamil Nadu and Andhra Pradesh. To mitigate the situation when the borders were closed, vegetables were procured from affected farmers and distributed in Bengaluru. Resident Welfare Associations collected the produce and distributed it in areas under the Bruhat Bengaluru Mahanagara Palike (BBMP).

Provision of food to quarantine centres in rural areas
In rural areas where the focus was on setting up quarantine centres, RDPR funded the provision of food. They also ensured the availability of milk for pregnant and lactating women in such areas.

MEDICAL SUPPLIES

The second wave saw an increase in demand for healthcare-related relief measures. Infection spread rapidly during this period, and there was a shortage in the availability of beds for hospitalisation, oxygen cylinders and medicines. Government and non-government actors thus took measures to ensure that people were following health and safety precautions and to ramp up the availability of healthcare services and medical supplies, including the following:

Efforts focused on infection prevention and promotion of health-seeking behaviours
One Billion Literate Foundation, an organisation based in Bengaluru, distributed surgical masks to people in need in high infection areas. The Muslim Industrialists Association provided sanitisers, soaps and detergents with the help of their member industries. With their existing affiliations as a long-standing association, they were able to distribute this relief directly within the community.

Efforts focused on procuring essential medicines
The Muslim Industrialists Association helped procure essential medicines and injections to assist the relief efforts. Nodal officers were appointed by the RDPR Department to procure medicines, as the second wave also saw the emergence of black

fungus infections among patients.

Monetary assistance with hospitalisation expenses
In multiple instances, the Muslim Industrialists Association provided cash assistance for emergency hospitalisation.

Efforts focused on the safety of frontline community health personnel
One Billion Literate Foundation conducted health education sessions with Accredited Social Health Activist (ASHA) workers on safety measures that needed to be followed. They also distributed kits that consisted of N95 masks, surgical masks, oximeters, gloves etc. to around 450 ASHA workers in Anekal taluk.

Efforts focused on promoting safe livelihoods
RDPR sources reported that in several rural areas, the Government supplied health kits to worksites on realising the impact of the second wave on the livelihoods of the rural poor.

Efforts focused on channelling resources for promoting general health in rural communities
The RDPR was also able to equip Gram Panchayats with screening kits for malnutrition, blood pressure etc. and provided medicines for other health issues, to ensure that there was also the necessary and more generalised focus on promoting community health during the pandemic. The Department obtained donations from various national and international organisations, which facilitated the provision of these resources to rural areas.

OXYGEN AND HOSPITAL BEDS

The severity of the second wave and the increased infection rate created an overwhelming need for oxygen concentrators and hospital beds. As the health infrastructure could not cope with the increased infection rate, it led to an increased death rate in comparison to the first wave.

Proactive efforts in anticipation of the second wave
A respondent from the India Cares Foundation mentioned that they had started the process of putting up oxygen generation units and stocking up on oxygen cylinders to ensure supply of oxygen in anticipation of the second wave. Many other organisations, including India Cares Foundation, collected funds for these projects through CSR projects.

Setting up oxygen generating plants in Primary Health Centres (PHCs)
Some organisations focused on supporting state institutions dealing with COVID-19 care by setting up oxygen generating plants in PHCs.

Increasing the in-patient capacity of hospitals by the provision of more hospital beds
The overwhelming need for beds and their shortage meant that many PHCs and hospitals were unable to cater to patients. Hence, some organisations were also involved in increasing the capacity of hospitals and PHCs by providing them with beds to meet the demand.

Countering misinformation

A crucial task in the procurement of oxygen and beds was to ensure the availability of verified and updated information. Given the costs involved, it was important to do so while preventing the circulation of unreliable information. The work on the creation and updating of databases with respect to essential Covid-related healthcare services, including bed availability, was also important in order to validate the information, and counter some of the rampant misinformation being spread using social media and causing panic amongst people.

Creating and updating accurate databases on bed availability
Members of the community volunteered with the RDPR, collating information and creating and updating databases on the availability of hospital beds, ICU beds, etc. for reaching essential information to relevant stakeholders in an efficient way during health crises when the timing was often critical.

Facilitating bed allotment
A few volunteers worked with the RDPR department in facilitating bed allotment, while others coordinated with panchayats for resources.

Assistance with importing critical healthcare equipment
Various central government ministries such as the Government of India's Ministry of External Affairs (MEA) and Karnataka state government departments such as the RDPR, were involved with both administrative assistance and actual provisioning of health infrastructure in many instances. This could take different forms. For instance, the MEA was able to source supplies through donors from abroad which helped the RDPR department meet some of its essential equipment demands. Further, government officials mentioned that they had introduced measures such as duty exemptions, GST waivers etc. on imports of essential health equipment.

VACCINATION

The vaccination program started in India on January 16, 2021. Both government departments and private organisations worked hard to deliver immunisation support to special groups initially, and the general public later.

Efforts by the RDPR

A key function of the RDPR department during this phase involved coordinating vaccination drives. They first targeted all health workers, including doctors, ASHA workers, Gram Panchayat members, the Police department and officials of the RDPR department. Next, vulnerable groups such as senior citizens, and members of urban poor communities (where space constraints often forced people to stay in close proximity and social distancing was difficult), were prioritised for vaccination.

Efforts by private organisations to complement government efforts to promote immunisation against Covid-19

Private organisations were involved in setting up vaccination camps to expedite the vaccination process. One of the organisations interviewed mentioned that during this period, many PHCs were getting 40-50 doses of vaccines every few days, which would be immediately accessed by people with influence in the area. Hence, the organisation procured vaccines privately and set up vaccination camps. They identified disadvantaged communities in their locality who would find it difficult to access vaccines and provided them with vaccination services through these camps. Given the digital and physical barriers to access during the early stages of the vaccine programme, the Muslim Industrialists Association procured vaccines privately and vaccinated almost 15,000 workers for free. They also provided water and other facilities during the vaccination process.

house for home isolation. Depending on the above-mentioned factors, the patient is either advised home isolation or shifted to a COVID Care Centre (CCC) or a COVID-19 hospital[15]. The interviews revealed various organisations and volunteers were involved in providing triage and teleconsultation facilities in different capacities and in different ways.

Services were provided in both urban and rural areas –

The Institute of Public Health (IPH) was involved in providing medical triage to urban PHCs. Triage and teleconsultation were also done in rural areas of Karnataka to improve the accessibility of the rural poor to healthcare.

Door-to-door services

One Billion Literate Foundation focused on building a ground force in Anekal for early surveillance and tracking of COVID-19 positive and symptomatic cases. The volunteers on the ground were trained to go door to door and seek information to determine the level of severity and risks in the communities. Homecare kits, if needed, were also delivered to the patient's house.

App-based triage support

The volunteers working with One Billion Foundation entered data obtained from the door-to-door effort into an app created by the organisation for data analysis and risk assessment. Based on the data collected, they connected the patient to a call centre operated by doctors and nurses, who would provide them with telecare and medicines.

Given the digital and physical barriers to access during the early stages of the vaccine programme, the Muslim Industrialists Association procured vaccines privately and vaccinated almost 15,000 workers for free.

TRIAGE AND TELE CONSULTING

Triage is a process followed to prioritise treatment based on the severity of the health condition. With the rise in the number of cases during the second wave, Karnataka mandated physical triage of all patients infected with the COVID-19 virus[13]. Circulars were also released by GoK detailing the guidelines and protocols to be followed for triaging[14]. The process includes assessing the severity of the infection once the patient has tested positive, and the suitability of the patient's

Telecalling for triage, teleconsultation, and psychological support

Volunteers joined the BBMP to provide services through telecalling for various purposes. Volunteers were involved in contacting doctors and nurses to check their availability to provide teleconsultations. They were required to track people in home isolation, often calling patients every day to check their status, and requirements for doctors or bed allocation. A volunteer mentioned that unlike during the first wave, Quarantine Watch and Seva-Sindhu – applications that provided updates on the status of the people in home isolation – were no longer the primary sources of information, given a planned

13 Karnataka makes physical triage mandatory for Covid patients, The Statesman, https://bit.ly/physicaltriagemandate (last accessed on November 10, 2021).

14 Circular on Medical Triage and Follow-up of COVID-19 Positive Persons, Department of Health and Family Welfare, Government of Karnataka, https://bit.ly/medicaltriagefollow (last accessed on November 10, 2021).

15 Ibid.

Volunteers were involved in contacting doctors and nurses to check their availability to provide teleconsultations. They were required to track people in home isolation, often calling patients every day to check their status, and requirements for doctors or bed allocation.

increase in reliance on the Sankalpa platform. Even though the apps were reactivated when cases began to rise, with the sheer increase in the case rates, it was tougher to monitor the situation through self-reporting applications[16]. As a result, during the second wave, telecalling services became a critical method of communication and monitoring. Volunteers also noted that in comparison to the first wave, there was an increased number of patients during the second wave who were identified as requiring psychological support.

AWARENESS CAMPAIGNS

Like the first wave, health education was a priority, and organisations and government departments were involved in creating awareness campaigns through different media. These campaigns were focused on spreading awareness regarding the COVID-19 virus and addressing the issue of vaccine hesitancy. During the interviews, participants also mentioned the issue of misinformation being spread during this period, and the need to counter it. RDPR had also set up an Information, Education and Communication (IEC) team for translating government orders and circulars into multiple languages in addition to spreading awareness regarding COVID-19 in both urban and rural Karnataka. The team also worked with the task force in Gram Panchayats.

COVID-19 CARE CENTRES

It was realised that home isolation was not possible in many rural areas due to space constraints within homes. Given the increase in the infection rate and the overwhelming demand for medical infrastructure, temporary COVID-19 care centres had to be created in both rural and urban areas to supplement existing hospitals. Task forces at the Gram Panchayat level managed these care centres in rural areas.

The interviews revealed that one organisation was also involved in creating COVID-19 care centres as the taluk had a large migrant population and self-isolation was difficult due to space constraints. The process started with identifying a location, close to the worksites, for the centre to be set up in conjunction with the state health department, and equipping them with infrastructural requirements, including beds, oxygen, doctors, nurses, attendants etc. In one instance, a

METHODS OF INFORMATION DISSEMINATION

- ***In-person awareness***
  A volunteer or the member of the organisation went door to door to provide information on the virus and vaccination.
- ***Awareness through broadcasting***
  Organisations hired autos and jeeps with pre-recorded messages that went around different neighbourhoods to spread awareness.
- ***Awareness through multimedia***
  Creation of banners, posters, audios and videos for spreading awareness. Volunteers were also involved in translating posters from Kannada to other languages (English, Malayalam, Telugu, Marathi, Oriya, Tamil, Hindi, Bengali) and vice-versa.

16 Poulomi Ghosh, Karnataka brings back 'Quarantine watch' app, hand stamping, as Covid cases rise, Hindustan Times, https://bit.ly/quarantinewatchapp (last accessed on November 10, 2021).

Volunteers also noted that in comparison to the first wave, there was an increased number of patients during the second wave who were identified as requiring psychological support.

vacated boys' hostel, which could be accessed free of cost, was converted into a COVID-19 care centre. The organisation also worked with PHCs to transfer patients who tested positive into these centres for isolation.

DATA DIRECTORY

In addition to access to relief measures and health infrastructure, the availability and accessibility of appropriate and accurate data on available services for the people was a common issue during both the first and second waves. Hence, the government focused on creating a data directory for the public. One volunteer who was interviewed described working on the team which created a data directory for the Sankalpa platform (Karnataka fights corona) that published contact details provided by the government for availing medicines and other health services.

EDUCATION PROGRAMMES

A major impact of the COVID-19 pandemic was on the education sector. With classes being converted from offline to online mode, various challenges were faced in accessing digital education. To address these shortcomings, organisations prepared educational materials for children to access physically during lockdowns. They also prepared support material for parents. For instance, an organisation, Makkala Jagrithi, undertook the following measures to assist teachers, students and parents associated with the organisation:

In order to ensure meaningful engagement with young children during the second wave lockdown period, Makkala Jagriti worked with parents to create content for preschoolers. They created activities for creative development, language learning, social and emotional development and fine and gross motor skills development. For parents who were unable to read and write, they made videos of activities they could do with their children. This was piloted with 100 anganwadis associated with the organisation. Every anganwadi had a WhatsApp group. The parents posted photographs and videos of activities being done with their children in these WhatsApp groups. They also conducted competitions over Zoom for parents and children to participate.

- *Programme for government schools*
  Makkala Jagrithi distributed learning kits to children in the 6-14 years age group, which included workbooks for holistic development, creative activities, courses on self-awareness and activities to do with their families. These books were distributed at schools and anganwadis. These activities were also sent through WhatsApp to beneficiaries with smartphones. For the people with feature phones, the organisation made calls for updates and follow-ups. Community visits were also conducted in rural areas. The organisation also partnered with teachers to conduct online classes and organised meetings with parents. This service catered to 51 schools in Bangalore, Tumkur, Koppal and Gadag. Under the Vidyagama programme launched by the Government of Karnataka, these modules were also sent to an additional 200 schools.

- *Anganwadi teacher training*
  Under the Integrated Child Development Scheme (ICDS) programme, the organisation also focused on the well-being of *anganwadi* workers. They conducted a webinar for the well-being and upskilling of the *anganwadi* workers and trained them on methods to use the materials provided for teaching.

- *Women and childcare support*
  Under ICDS, the organisation also started focusing on women and childcare, where every week, activities would

be sent to government and private institutions. The organisation created content focused on holistic development and provided worksheets and videos. Movie screenings were also done.

- *Training for the staff of Child Care Institutions (CCIs)*
  Makkala Jagriti provided training for staff working with and caring for children with special needs and children in conflict with the law.

TRAINING ON DATA COLLECTION, VERIFICATION AND DISSEMINATION FOR VOLUNTEERS AND OFFICIALS

Training was an important part of providing relief measures during the first and second wave. Appropriate training of all stakeholders in aspects of data collection, verification and dissemination was carried out to ensure a systematic distribution of resources. Various training programmes were conducted for government officials, volunteers, Gram Panchayat elected representatives, ASHA workers etc. on the provision of relief measures during the second wave, such as:

- *Training for Gram Panchayat elected representatives, Gram Panchayat and Zila Panchayat Task Force members and ASHA workers*
  YouTube was used as a medium for the training, and some sessions were conducted every week.

- *Team-specific volunteer training*
  Volunteers who signed up for relief work were categorised by RDPR into smaller teams for training. Each team was oriented regarding their roles and responsibilities. For example, the training program included a method to clearly document patient details and follow naming conventions while sharing relief requests.

2.3 THE 4Cs IN ACTION DURING RELIEF EFFORTS

As noted earlier, the 4Cs framework was used to analyse the relief activities under the categories of communication, cooperation, coordination or collaboration. From the interviews, it was clear that the interactions between stakeholders could not be distinctly categorised into one of these 4Cs. Some of the interactions belong to more than one category of the 4Cs framework while a few others formed the basis for strengthening the coordination and collaboration between the stakeholders. While a few of these interactions have yielded positive outcomes to a certain extent during relief operations, there were also some challenges encountered which have been detailed in Chapter 4. Below is a detailed description of the various interactions between actors during the second wave categorised under Communication, Cooperation, Coordination and Collaboration.

COMMUNICATION

Information collection

Listing of NGOs and CSOs that could assist and establish contact and norms
In March 2020, at the start of the pandemic, a list of NGOs and CSOs that were involved in the relief work was curated. These organisations were contacted by the RDPR department during the second wave of COVID-19. A virtual meeting was conducted before the second wave, briefing government departments, NGOs and CSOs regarding preparedness for future relief efforts.

Obtaining real-time information from the community for situation analysis
An immediate need, when the pandemic hit, was for the government to understand the situation on the ground to provide the required relief. The RDPR department created a WhatsApp group during the first wave which included a few members from the department, along with different organisations working in local rural and urban communities. The group was kept unmoderated so that the department could receive all requests without any messages being filtered. In addition to a large WhatsApp group, smaller sub-groups were also created which dealt with specific groups such as trade unions, children, and migrant workers to source focused relief requests. While these groups were created during the first wave, they continued during the second wave. These groups functioned as a communication channel between the government and the NGOs and CSOs where the NGOs and CSOs could share the actual conditions prevailing in local communities and the consequent relief requests. For the government officials, these groups provided real-time information and helped them understand the emerging needs and processes. The interview data revealed that this was one of the fastest ways for the government to receive information. Formats to be used for sending in their relief requests were created by the government which were also circulated through WhatsApp. The department received various requests relating to medicines, oxygen food etc. through these groups.

Selection of volunteers
A format designed to collect volunteer information was circulated in these groups to facilitate the selection of volunteers for relief work. The volunteers, once selected, were categorised into the following teams - Beds, Oxygen, IEC, Medical donations, Data, Phone verification, Doctors for assessment, and Plasma team.

Real-time information on health infrastructure demand and supply
Data on the real-time availability of health infrastructure was collected and updated using the WhatsApp platform.

Communication between and data sourcing by private organisations and local communities

Private organisations also collected information from local communities. For example, the CBR network created a WhatsApp group that helped with the identification of patients and their referral for medical assistance, especially, early identification of those in need of urgent support. Another WhatsApp group assisted with collecting information with a special focus on children's needs during the pandemic.

Information on the availability of hospital beds

The helpline 1912 was a centralised system introduced by the government during the second wave under the BESCOM. The helpline played a dual purpose, of collecting information regarding demand from the community and collecting data on supply availability from public hospitals. It also served as another source of valuable data in tracking the state of the pandemic and securing and offering support to residents across Karnataka.

Information dissemination

Government orders on relief measures

During the pandemic, the Centre and States released different orders as part of relief measures. However, these orders took time to reach the people. The RDPR department, with the help of volunteers, translated government orders into explainers for the public so they could avail benefits more easily. For example, there were relief measures announced such as DBT (Direct Benefit Transfers) for farmers, barbers etc. The explainers about these measures were immediately sent out. This was done by establishing an IEC team of volunteers, which helped translate government circulars, guidelines and other materials into multiple regional languages to reach all sections of the society. Volunteers mentioned that they would receive content for translation through WhatsApp groups. Government officials were also a part of this group. These posters were also uploaded to the Sankalpa portal for easy access. Due to the intensity of the pandemic, release times for these posters were reduced from 2 weeks to 2 days for better and faster reach.

Information on the availability of medical equipment

During the pandemic, communication of data on the availability of medical equipment, such as oxygen cylinders and concentrators, had to be timely and reliable. The phone verification team verified posts for requests circulating on social media, WhatsApp etc. and forwarded this information only once authenticated. The same data was uploaded in the Sankalpa directory for better accessibility. Data collected was verified and updated daily during the second wave. Excel sheets were also used to record data and once validated, was forwarded to the operations team.

Information on bed availability in private hospitals

Data dissemination during the second wave was also done by private organisations. For example, owing to popular demand, a portal on private bed allocation, called PHANA (Private Hospitals and Nursing Homes Association), was created. The portal showed the beds available in hospitals. However, many stakeholders felt that the data on this portal was not updated regularly, and this hindered the real-time dissemination of data to those in urgent need of services.

Health education and health promotion materials

Private organisations (NGOs, CSOs) were also involved in creating posters and banners to communicate and disseminate information in different languages.

COOPERATION

Sharing information for aligning relief efforts by multiple actors for better efficiency and effectiveness

Both government and non-government actors worked towards directing efforts in a cooperative manner. NGOs and CSOs would post their requests for assistance in the WhatsApp group, which would also help other organisations understand the ongoing demand and align their actions accordingly. For example, requests from patients for medicines, oxygen, food etc. posted on various groups would be transferred by the volunteers in these groups to the phone verification team. This team would verify the request and based on the nature of the relief being sought, transfer it to the concerned team to take appropriate action. Volunteers also helped in managing helplines and documenting different activities. The team in RDPR also functioned as a bridge between other government departments (e.g., BBMP) and NGOs.

Given the increase in the infection rate and the overwhelming demand for medical infrastructure, temporary COVID-19 care centres had to be created in both rural and urban areas to supplement existing hospitals.

Real-time information on hospital bed availability

The success of the helpline 1912 which, as noted above, was a centralised mechanism for all bed allocation, required significant cooperation between different teams in the RDPR

Table 2: Classification of relief operations and processes according to the 4Cs framework

Classification of relief operations and processes according to the 4Cs framework	
Communication	Information collection (virtual meetings, requests relayed on WhatsApp, helplines)
	Information dissemination (posters, circulars, infrastructure availability, helpline numbers)
Cooperation	Requests for relief on WhatsApp group
	Alignment of objectives between CSR initiatives and NGOs and between NGOs
Coordination	Distribution of relief efforts
	Donations and Logistics
Collaboration	Openness to collaborative efforts between government and NGOs
	Changes in the hierarchical structure and communication styles within the government

The helpline 1912 was a centralised system introduced by the government during the second wave under the BESCOM. The helpline played a dual purpose, of collecting information regarding demand from the community and collecting data on supply availability from public hospitals.

department to bring about a smooth allocation process and avoid duplication.

Vision alignment for funding allocation

Cooperation was also evident with respect to funding allocation, and interviews revealed the alignment of visions between the donors and NGOs providing relief. Many times, CSR funds would have a designated NGO partner to provide relief. This process of vision alignment also happened between donors and government departments, where donors would identify the target locations and match their CSR goals with the needs identified and prioritised by the government. The government also brought specialised NGOs and CSOs into their relief networks based on the alignment of their needs with the objectives of the NGOs' operations.

Using complementary organisational strengths for a common purpose

Cooperation was also noticed between organisations with different strengths as they aligned with each other to achieve a common goal. For example, an organisation named CBR network, worked with other NGOs to ensure speedy assistance to children. They initiated the building of a network specifically for NGOs. They pooled and verified information with other NGOs and provided referrals for medical assistance.

COORDINATION

Working towards tangible outcomes

Interview data revealed that most of the interactions between different stakeholders proceeded towards tangible outcomes. These outcomes were in the form of funding, implementation of relief efforts, conveying/exchange of information across different levels to secure resources of different kinds, etc.

Coordination of district-level relief efforts through a lead NGO

During the first wave, the government interacted with various NGOs directly to ensure that different relief efforts reached those in need. However, during the second wave, relief efforts were coordinated in the districts through a lead NGO working in the region. This lead NGO coordinated with other NGOs for the provision of relief-related services. The complete operations were managed by the district collector who was also the Nodal Officer for COVID-19 management in that district. The RDPR department, after analysing the different kinds of

relief requests, clustered them and matched them to the NGO working in that particular location to implement the relief measure.

Coordination of funding receipts and disbursements
Another aspect of the relief operation that required coordination involved the collection and distribution of funds. In Karnataka, during the first wave, BBMP and the Government of Karnataka along with KSMSCL (Karnataka State Medical Supplies Corporation Limited) accepted donations. During the second wave, KSMSCL was appointed as the nodal agency to receive all the donations for the state. The donations received by KSMSCL would be sent to the District Health Officer, who would earmark the funds for relief in consultation with the DC. To build trust between the organisations and donors, KSMSCL recorded the relief measures provided by individual donors and their areas of deployment.

There were a number of simultaneous donations which needed to be coordinated and handled due to the frequent change in demand. For example, KSMSCL would get a list of demands from the health department, say, oxygen concentrators. This need would be communicated to multiple donors. KSMSCL would then collect acknowledgements of the donations from the Principal Secretary of RDPR. A mechanism was also put in place to track donations in order to provide receipts to donors. In some cases, photographs were also sent as proof to donors regarding their donations being used on the ground. In other cases, the coordination involved matching requirements and donors, and putting donors directly in touch with people in need of relief.

Reaching donations in kind to appropriate locations
An official interviewed mentioned that donations were also made in-kind (health kits, masks etc.) to the Government of Karnataka, and also to the Government of India. Airlines offered their help in transporting relief material from Delhi to Karnataka. However, the pandemic was very dynamic and occasionally, there were changes in demand after the aid supplies reached the location initially identified. In order to address this challenge, and to ensure that appropriate aid reached the particular locations where there was a genuine demand, a high level of coordination was required between the panchayats and taluks from where the demands had arisen, the RDPR department, donors and the transportation department.

NGOs coordinated to serve the broader community, rather than only their immediate constituencies
Several organisations mentioned that initial relief efforts in the first wave were concentrated towards primary stakeholders in their respective target locations and constituencies. During the second wave, requests were collected from, and services provided to a much broader community, through established networks with other organisations or through WhatsApp groups.

COLLABORATION

Sustained collaboration over the course of the pandemic
The RDPR department did not disband the WhatsApp group for relief coordination after the first wave. This helped them to immediately contact NGOs for relief efforts when the second wave hit. The continued existence and collaborative working of the group of NGOs and the government officials, can be viewed as having the potential for long-term collaboration even after the pandemic.

During the second wave, KSMSCL was appointed as the nodal agency to receive all the donations for the state. The donations received by KSMSCL would be sent to the District Health Officer, who would earmark the funds for relief in consultation with the DC.

Efforts made towards trust-building
Both government officials and NGOs, mentioned the necessity to trust each other for effective long-term collaboration. The interviews revealed that trust between NGOs and the government had improved from the first wave to the second wave. There has been a significant amount of confidence built in each other and appreciation of efforts by the government on the part of the NGOs and vice-versa. Constant engagement with NGOs and CSOs during the relief period contributed to this. Several Zoom meetings were organised for briefings and debriefings. This allowed both sets of actors (government and CSOs/NGOs) to audit the processes for coordination and enhance mutual understanding. Many organisations and volunteers expressed the perception that in comparison to the first wave, the government was more open to civil society involvement during the second wave. Staff from private organisations also felt that the engagement with RDPR leadership was more open, with the involvement of multiple and diverse NGOs and CSOs for relief operations.

Blurring of conventional forms and hierarchies in service of the community in crisis

Government processes have myriad formal and organisational hierarchies, which become difficult to follow during emergency situations such as the pandemic. During the relief efforts, the RDPR department oversaw import authorisation letters. A challenge during this time was to find ways to accelerate the process and grant approvals, for the relief materials to reach target locations on time. Interviews revealed that a platform for sharing and learning was created at the core of relief operations. The core team of RDPR consisted of both senior civil servants and junior officials, responsible for conducting meetings and taking decisions for relief work. Moreover, none of the email transactions from the department were signed personally as it was considered a partnership. This helped in trust-building within the organisational structure. And created an environment where the junior officials were able to work without fear and felt empowered to make decisions. One of the senior officials in the team also mentioned that an SOP was put in place during the pandemic and their objective was to cater to all requests which came to them. The principles under which they worked consisted of building and maintaining mutual trust, transparency and accountability.

An expressed desire to sustain community participation beyond the pandemic

Officials also mentioned the need to not stop such collaborative efforts after the pandemic. The community participation at a granular level that had emerged and been shepherded successfully during the rural areas' relief response, was seen as an important aspect that needed to be taken forward to build greater resilience at the community level.

The RDPR department did not disband the WhatsApp group for relief coordination after the first wave. This helped them to immediately contact NGOs for relief efforts when the second wave hit.

Chapter 3

ROLE OF TECHNOLOGY IN RELIEF EFFORTS

Different digital and technological applications were used for the collection and dissemination of information, both during the first wave and the second wave. For example, WhatsApp, Google Sheets, Telegram etc. were used as platforms for getting volunteers, collecting relief requests, forwarding them to concerned actors and tracking these requests. Among these, the Sankalpa platform, technological innovation of the RDPR, was also developed and used for relief work during the first and second waves. The evolution of the Sankalpa platform, its use during relief efforts and challenges faced by volunteers and organisations in using this platform are discussed in this chapter. In addition, we summarise the role of WhatsApp in facilitating relief efforts.

3.1 THE SANKALPA PLATFORM

Sankalpa (karnatakafightscorona.org), a digital platform initiated by the RDPR department, was used during relief efforts in addition to other digital applications such as WhatsApp and Excel sheets. Officials shared that the development of this platform occurred in two phases, based on the needs that arose at those times. Initially, according to one official, it served as a "match-making" platform for NGOs and communities or vulnerable groups in distress. Thus, the platform was designed to collect information and connect relief requests to NGOs. During the second phase, in addition to such information collection and linkages to secure basic needs, there was a need to connect people to health facilities, increase awareness and address the issue of misinformation. Consequently, the platform was substantially changed to its current form to meet the above-mentioned requirements.

The platform was managed by the tech help team, with support from volunteers during the pandemic. The interface was developed keeping in mind ease of use for the volunteers. However, for sustained long-term use, an institutional structure needs to be identified or established to maintain the platform.

VISION FOR SANKALPA

Although Sankalpa was developed during the pandemic to cater to an immediate need, the long-term vision is to develop it as a communication and cooperation tool for infrastructure and data accessibility post the pandemic. The objective is to develop the platform:

- *To function as an information platform for migrants*
  Karnataka has a lot of inter-state and intra-state migrants. Often due to language and/or literacy barriers, accessing entitlements for migrants poses a challenge. Thus, the aim is to develop this platform to provide access to information regarding entitlements in formats such as audio and video that are more accessible.

- *To function as a resource finder*
  Another objective is for Sankalpa to be used as a platform for locating infrastructure facilities in a region. Thus, the aim is to integrate this platform with K-GIS, which would help in finding infrastructure facilities such as *anganwadis*, PHCs, ATMs, student hostels, etc.

- *For matching relief requests to relief measures*
  Sankalpa is also being developed as a platform on which requests for help can be raised by government functionaries. These relief requests can then be addressed by local NGOs that have access to the platform. For example, if a request to access *anganwadis* is raised for a migrant woman, an NGO in the vicinity can immediately connect her to the nearest *anganwadi*.

The core team of RDPR consisted of both senior civil servants and junior officials, responsible for conducting meetings and taking decisions for relief work. Moreover, none of the email transactions from the department were signed personally as it was considered a partnership. This helped in trust-building within the organisational structure.

EVOLUTION OF SANKALPA

The figure shows the evolution of the use of the platform from the first wave to the second wave.

Figure 4: Evolution of Sankalpa platform

KEY FEATURES

Though initially created only as a dashboard to collect information during relief work, the platform was further developed to include resources for information dissemination as demand changed during the second wave. A volunteer described Sankalpa as a "one-stop platform" for all information. The platform includes the following features:

- *COVID-19 resource directory*
  The data directory included helpline numbers and information related to access to relief. The phone verification team at the RDPR department verified the data posted on social media and once authenticated, uploaded them on this platform.

- *Awareness material*
  All resources from the initial Google spreadsheets and awareness material created by the IEC team at the RDPR department were uploaded to the platform for improved information accessibility by the people. The information uploaded was verified by the volunteers.

- *Citizens' resource finder*
  One of the objectives of the platform during the second wave was to provide access to health services. Paradoxically, due to the large amounts of data being circulated during the pandemic, people found it difficult to access specific data required for their needs. The citizens' resource finder was thus set up to function as a discoverable platform for accessing health services. Development of this resource finder is still under process and the aim is to include all healthcare-related services for improved accessibility.

The platform also provided details of relief requests, donation details and an option for volunteers to register for relief work. However, the platform has currently no option for NGOs to register for relief work. This was reported as a major hindrance for NGOs from joining the network for future collaborations on disaster preparedness.

Table 3: Summarising the role of Sankalpa and WhatsApp during the second wave

Parameters for analysis	Sankalpa platform	WhatsApp
Vision	Information dissemination	–
	Raise relief requests	
	Match relief requests with local NGOs	
Data providers	Government functionaries	Government functionaries, Private organisations (NGOs, CSOs, donors etc.), volunteers
Data users	Private organisations (NGOs, CSOs, donors etc.), volunteers	Government functionaries, Private organisations (NGOs, CSOs, donors etc.), volunteers
Aid and assistance	Easy access to government orders and circulars	Immediate reach to government functionaries
	Single window for volunteer registration	Quick updates on the real-time ground information
	Data dissemination of verified awareness materials	Information dissemination
	–	Prompt facilitation and coordination of relief efforts
Challenges and limitations	Lack of awareness about the platform	Limited accessibility into relief groups for other organisations
	Lacking a user-friendly interface design	Circulation of unverified information
	Lack of accessibility features in interface design	The informal nature of the platform limit long-term collaboration
	Unidirectional data dissemination	–

UNDERSTANDING INTERACTIONS THROUGH SANKALPA DURING THE SECOND WAVE

Analysis of Sankalpa based on the 4Cs framework reveals that the platform was mostly used for communication and facilitating cooperation during both the first and second waves of the COVID-19 pandemic. While the platform was used for information dissemination of helpline numbers, awareness materials and explainers, it also helped donors align their actions with the relief requests uploaded on the platform.

One of the organisations reported using the platform extensively to connect with people who needed relief. Volunteers also used Sankalpa to download official government circulars and orders for translations. Functionaries in the government used this platform to select volunteers for relief work.

Though Sankalpa was designed as a platform for communication and cooperation, several respondents (both NGO representatives and volunteers) said that they had not used this platform during the second wave. There were two major reasons for such a response. Some were unaware of the existence and use of such a platform; others knew the site by a different domain name. Though the platform was referred to as Sankalpa among the officials in the RDPR department, many volunteers and NGOs identified it as the "karnatakafightscorona website".

3.2 THE ROLE OF WHATSAPP IN RELIEF EFFORTS

Interviews with various stakeholders revealed that the popular digital app, WhatsApp, was extensively used as a medium of interaction during relief efforts. This digital platform played a major role in relief provisioning in the following ways:

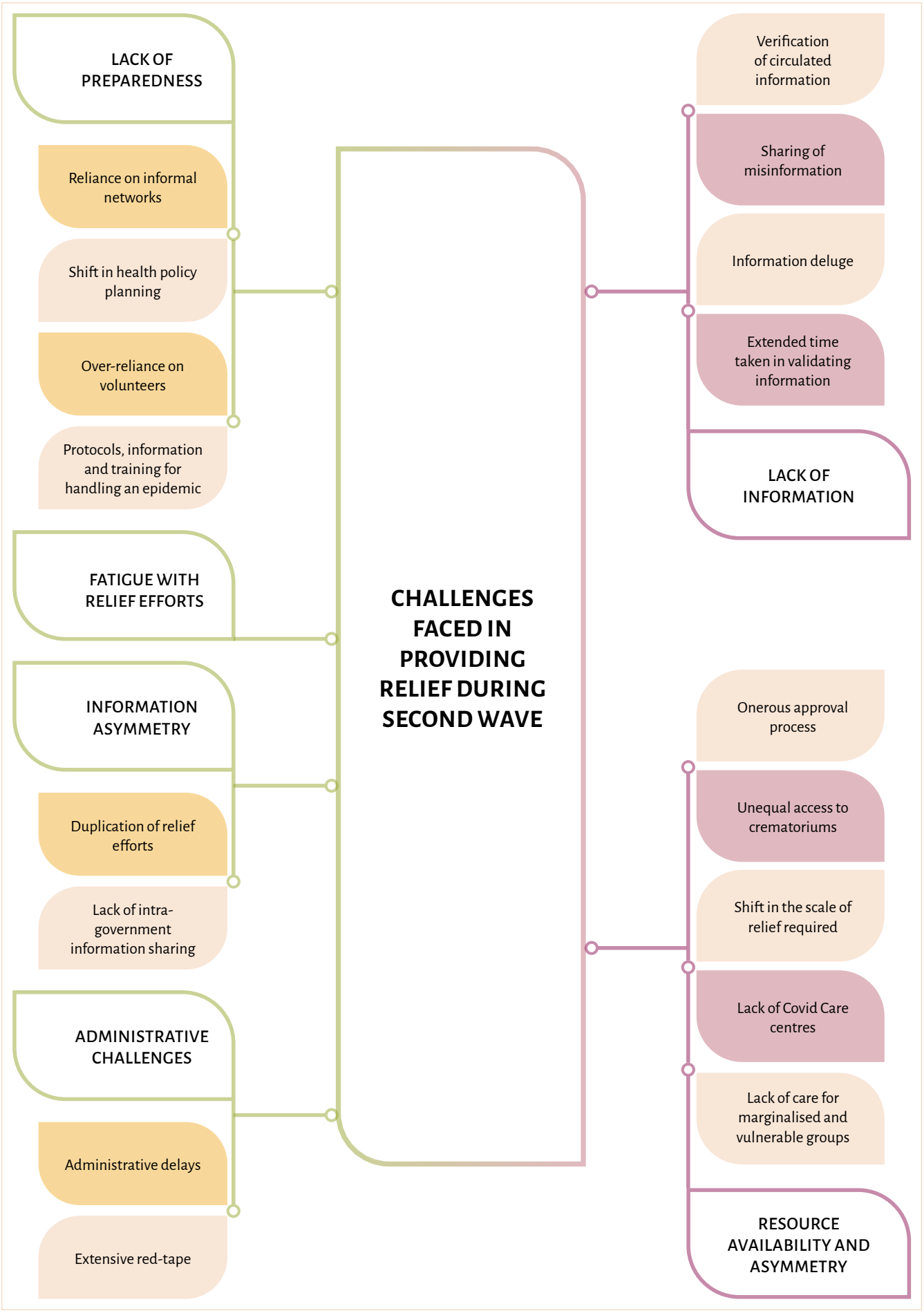
- WhatsApp was used as the main medium for communication and cooperation between the Government and CSOs and among the NGOs/CSOs as well. The different relief groups that were created both by the RDPR department and the NGOs became the main channels for data collection (relief requests, data on availability of any relief measures, volunteer registration etc.) and data dissemination (posters on awareness, circulars and guidelines) and for building networks with other NGOs.
- The existence of the WhatsApp group from the first wave and the inclusion of NGOs here were major reasons for the relief efforts to start immediately when the second wave hit. Though this medium of interaction was easy to access during the pandemic, it is an informal platform that might not aid long-term collaboration to face adversities in the future.
- This medium was also extensively used by the NGOs and CSOs both during the first and second waves to coordinate relief efforts on the ground.

Though initially created only as a dashboard to collect information during relief work, the platform was further developed to include resources for information dissemination as demand changed during the second wave. However, the platform has currently no option for NGOs to register for relief work. This was reported as a major hindrance for NGOs from joining the network for future collaborations on disaster preparedness.

Chapter 4

OBSERVATIONS

Figure 5: Summarising the challenges faced in providing relief during the COVID-19 second wave in Karnataka



4.1 STRENGTHS

The second wave had severe consequences with respect to spiralling cases, increased death rates and supply shortages. Various departments in the state government in addition to fulfilling their administrative roles were also involved in the direct provision of relief efforts. Interviews revealed the fatigue and the emotional distress that government functionaries faced due to the intensity of the second wave and its devastating impact on people's lives. Despite, or perhaps because of, the extent of the difficult situations, several steps were taken by the government officials to keep up the momentum of relief efforts in the state. One major endeavour was to strengthen ties and build trust with the private organisations, which was a challenge mentioned by various non-governmental actors during the first wave.

Below mentioned are a few such measures were undertaken during the second wave:

- Various trust-building measures were executed through the use of new communication methods such as unmoderated WhatsApp groups and prompt e-mail replies to NGOs and donors for provisioning of relief efforts. Non-governmental actors were able to access the government officials directly in times of crisis, as opposed to going through the usual official processes, which are time-consuming.

- A challenge mentioned in the first wave was the increased turnaround time for government approvals. Though the issue was not completely addressed, during the second wave the RDPR department tried to reduce the time taken for obtaining permissions to a large extent.

- The operations team initiated several Zoom call meetings with NGOs and CSOs for updates on relief measures and to audit the processes put in place. This helped in enhancing mutual understanding between the government and non-governmental actors. Smaller groups were also created with the DCs and the lead NGOs in the districts to improve communication.

- Interview data suggested that RDPR served as the bridge department between other departments and NGOs. In terms of coordinating the relief requests, the district officer coordinated the requests at the district level, and at the panchayat level, task forces were employed. An increased level of coordination was also observed between the state-level and central-level departments and ministries, especially during the transportation of physical aid.

- With respect to intra-governmental interactions, interviews revealed efforts being made to reduce the structured and hierarchical nature of coordination and communication between officers at different levels. This was especially seen within the core team of the RDPR department where junior officers were encouraged to present, conduct meetings and also get involved in the decision-making process. All emails sent from the department bore the signature of the RDPR team and did not use personal names, to build a sense of partnership among the team members.

4.2 CHALLENGES

During the second wave, it was observed that the nature of challenges in providing relief was different from that during the first wave. This was primarily due to two factors. One, the lack of time to prepare adequately, given the rapid increase in caseloads. Two, knowledge of the pandemic and the virus, which was substantially higher during the second wave.

Interviews with various stakeholders revealed that the popular digital app, WhatsApp, was extensively used as a medium of interaction during relief efforts. This digital platform played a major role in relief provisioning.

As discussed in the sections above, the nature of relief required itself had changed from the first to the second wave. From supporting livelihoods and meeting the immediate needs of displaced persons and migrant workers in the first wave, the focus of the relief efforts shifted to facilitating and providing medical support for dealing with the intensity of the symptoms of the virus and pressures on the healthcare system during the second wave.

In this section, we will discuss the major challenges faced by different actors during the relief efforts in the second wave of COVID-19 in India. The challenges below have been analysed on parameters based on the 4Cs framework discussed above.

Interviews revealed the fatigue and the emotional distress that government functionaries faced due to the intensity of the second wave and its devastating impact on people's lives. Despite, or perhaps because of, the extent of the difficult situations, several steps were taken by the government officials to keep up the momentum of relief efforts in the state. One major endeavour was to strengthen ties and build trust with the private organisations, which was a challenge mentioned by various non-governmental actors during the first wave.

LACK OF PREPAREDNESS

Lack of preparedness was a major issue identified during the second wave, especially relative to the first wave, during which the rate of increase in the caseload was more gradual and allowed institutions more time to augment hospital bed capacity, arrange for medical equipment, etc. While the crisis in the first wave was a consequence of the imposed lockdowns, and the subsequent disruptions caused by them rather than the virus itself, the change in the second wave was noticeable due to the lack of preparedness for it.

Reliance on informal networks

A few NGOs reported that real-time access to government officials often depended on knowing someone personally within the department. Using the official helplines meant the turnaround time would be high, by which time the crisis would shift. The external helplines often had outdated information. As a result, government support for NGOs in real-time could only be accessed through personal networking.

Shift in health policy planning

As a result of the COVID-19 pandemic, officials, including healthcare professionals, were forced to make a significant shift from planning for individual healthcare to making plans for public health. Medical personnel, according to doctors involved in the relief work, were not trained in such approaches on the scale required to deal with the pandemic. A particular consequence of this was that SOPs for treatment and quarantines were not readily available and often changed.

Over-reliance on volunteers

The maintenance and uploading of data on the KFC platform were done entirely by volunteers. Given the extent of the effects of the second wave, volunteers found it difficult to sustain work when personally affected and had to drop out. Further, according to some NGOs, there were no mechanisms put in place by the government to incentivise or sustain the efforts of the volunteers.

Protocols, information and training for handling an epidemic

It was observed that the caseload in the first wave was manageable and there was time to leverage other resources such as payments through MGNREGS. For instance, people were employed under the scheme to paint school walls and then immediately paid for their work. NGOs across Karnataka reported that the problem during the first wave was that no one was equipped to deal with a pandemic or a public health emergency. Two NGOs mentioned that they had prior experience in responding to natural disasters, such as the 2018 Kerala floods. However, there was a lack of knowledge about the COVID-19 pandemic across stakeholders, and therefore, it was difficult to formulate any emergency response quickly. Additionally, as cases and stressors had settled down in the 3-4 months preceding the second wave, multiple networks and actors had switched their areas of focus and operations.

FATIGUE WITH RELIEF EFFORTS

During the second wave, there was no complete lockdown, and the need for relief was highest with respect to providing medical care. Doctors and healthcare professionals were overwhelmed with the unexpected and sheer speed at which the second wave progressed. Some state government officials reported fatigue within the departments, given the continued pressures faced. Volunteers also reported that after a point, fatigue set in and it was difficult to sustain momentum. NGO functionaries corroborated that there was fatigue within their teams, and in the relief ecosystem more generally.

LACK OF INFORMATION

Due to the overwhelming demand for relief measures during the second wave, there were several issues related to information sharing and the availability of information that contributed to making the relief efforts more challenging. Below, we have documented some major issues as identified by different stakeholders.

Verification of circulated information

During the second wave, information was regularly required about the availability of oxygen, medical equipment, and hospital beds. Given the changing supply situation of these resources, verification of available relief supplies proved to be an immense effort for both government officials and NGOs.

Sharing of misinformation

Channels of communication during the relief work were largely informal, using platforms such as WhatsApp, Telegram or phone calls. Many NGOs reported that there was a high rate of misinformation being circulated across the network. During the first wave, the misinformation was mostly about the virus and the symptoms. Whereas during the second wave, it was about the treatment techniques, vaccination programme and resource availability. Two NGOs reported that the spread of misinformation on WhatsApp also led to greater vaccine hesitancy in their target regions.

Information deluge

During the second wave, multiple platforms, tech-enabled and otherwise, were created by different citizen groups and individuals to help make information accessible to people in need. However, as these groups did not have processes to verify and validate information, it led to situations where a person in need found it difficult to negotiate between competing information sources, and actors conducting relief operations had to deal with information deluge.

Extended time taken in validating information

While it was recognised that validating information before publication was crucial, the consequent delay in circulation led to a gap in real-time information, especially for critical data such as the availability of hospital beds or oxygen cylinders.

INFORMATION ASYMMETRY

Duplication of relief efforts

Due to the asymmetry of accessible information, there ended up being a lot of duplication of relief efforts. In a few instances, multiple NGOs reported concentrating efforts in the same areas because the same request had been made to more than one NGO. Even for sharing information regarding the availability of beds, the government had its own portal and private hospitals had their own (PHANA: Private Hospitals and Nursing Homes Association). However, during the second wave itself, there were some efforts to improve coordination and reduce the duplication of efforts. In one district, an MLA took up the role of coordination and tried to prevent the asymmetry of information that was available to different NGOs.

Lack of intra-government information sharing

It was noted that information between different government departments could be shared further to reduce duplication and increase the speed of response. Further, there was also a gap in the information shared with the helplines regarding the availability of resources. Some doctors reported that they observed that different institutions in Bangalore, such as the BBMP, triage centres, and medical staff, all had conflicting information available to them. Another instance was the failure on part of the panchayats to share information with *anganwadis*, as a result of which relevant awareness material could not be passed on to parents of vulnerable children. However, they pointed out that this gap reduced towards the end of the second wave, when certain protocols regarding information sharing were put in place by the RDPR department.

During the second wave, it was observed that the nature of challenges in providing relief was different from that during the first wave. This was primarily due to two factors. One, the lack of time to prepare adequately, given the rapid increase in caseloads. Two, knowledge of the pandemic and the virus, which was substantially higher during the second wave.

RESOURCE AVAILABILITY AND ASYMMETRY

Onerous approval process

Many small NGOs offered help in creating content and doing translations for awareness campaigns, but they were not brought on board due to the time required in obtaining official approvals. Due to the extent of administrative permissions required, organisations performing multiple roles or operating at larger scales were preferred.

Unequal access to crematoriums

All government crematoriums in Bangalore were filled to capacity and private crematoriums were expensive for those in need. Given the requirement during the peak of the wave, the state government had to reach out to NGOs to gain access to private crematoriums and provide public access to them.

Shift in the scale of relief required

During the first wave, the quantum of medical relief required was in small quantities, all of which was gradually supplied by different organisations. However, during the second wave, large quantities of equipment (many of which had short shelf lives) were being constantly supplied from a large number of manufacturers. Due to these high volumes, it was a challenge to manage these resources and ensure their efficient distribution. For example, one company was responsible for procuring 1000 oxygen concentrators cans and 5000 oxygen cylinders worth 150 to 200 crores. It was difficult to track the details of the equipment and their distribution until the final delivery stage.

Lack of Covid Care centres

While the state government decided to set up COVID Care Centres (CCCs), they were unable to establish sufficient centres in time for the peak of the wave. NGOs reported that people did not have access to affordable medical support and had to rely on private healthcare. As CCCs increased, families started shifting from expensive private hospitals to CCCs. Volunteers with the RDPR department reported that many patients passed away during the shifting process.

Lack of care for marginalised and vulnerable groups

In Karnataka, it was observed that there are many single senior citizens and isolation for them is not possible, since there is no one to procure goods for them from the markets, to render medical help, etc. Also, they cannot afford to hire caregivers. Counsellors may also be necessary to support children who develop COVID-19 infection. Since schools are starting now, they will need specialised support from the government. Further, many children during the second wave were orphaned. In addition to the lack of medical health infrastructure and support for economically weaker sections, the challenge of loss of livelihood and lack of financial support for healthcare costs was observed.

ADMINISTRATIVE CHALLENGES

Administrative delays

Content for awareness campaigns was being regularly produced. As a result, volunteers reported that the time taken for information publication was high given the volumes involved. Even when the information had been taken from content approved for publication by the state government in Tamil Nadu, the government of Karnataka had to undertake their own procedures before permitting publication.

Extensive red-tape

During the second wave, many Indian missions abroad collected funds and relief efforts donated for specific regions in India. However, all resources that were being donated from abroad were first required to go to Delhi and only then allocated to Karnataka. This caused a delay in making resources such as oxygen concentrators available.

As with any disaster-like situation, relief providers faced a number of challenges throughout the crisis period. At the beginning of the second wave, the lack of preparedness prominently stood out as institutions struggled to respond in time. As the wave continued, the sharing of information and resources remained tough due to protocols altering or taking time to be formalised. As the crisis showed no sign of waning, fatigue within the volunteers started to set in and it was difficult for them to continue, especially on being personally affected. To ensure better preparedness for any future crises caused by COVID-19, it would be critical to develop measures that further the social protection of vulnerable groups and enhance the timely availability of resilient infrastructure. This must be supported by stronger institutional processes within the government as well as improved interactions between government and NGOs

Chapter 5

RECOMMENDATIONS FOR FUTURE PREPAREDNESS

BUILDING RESILIENCE

PROTECTING VULNERABLE GROUPS

- The information on the children affected by the COVID-19 crisis should be linked with the Panchatantra platform and made available to the District Child Protection Units across the state. Follow-up measures should be undertaken in terms of support and services.

IMPROVING DISASTER PREPAREDNESS

- SOPs must be developed specifically for public health emergencies to activate communication channels for better disaster preparedness.
- Statutory features under DDMA can be leveraged by the DCs to increase the efficacy of relief measures in urban areas.

INCREASING FINANCIAL ASSISTANCE

- Dedicate a portion of CSR expenditure for disaster preparedness to cater to immediate relief requirements and long-term infrastructure development.
- Digital support systems such as the Sankalpa should be integrated into the ecosystem of the ITBT department of the state government to ensure its regular maintenance and sustainability.
- There is a need to increase the annual state expenditure towards healthcare to develop a resilient healthcare system.

EXPANDING HEALTHCARE SUPPORT

- Prioritise capacity augmentation of PHCs through investments in operation and maintenance of existing PHCs.
- Comprehensive training in public health approaches to medical officers such as deans, directors of medical colleges and District Health Officers (DHOs).
- Regular updation of health vulnerability plans at the panchayat or district level to identify emerging vulnerabilities of the people in that area.
- Mental health and counselling services should be made available for functionaries in the departments.

PROTECTING AND SECURING LIVELIHOODS

- Adequate protection of livelihoods should be ensured through prompt release of funds announced as part of relief measures. Formalisation of livelihoods should be undertaken as a long term measure to improve the social protection of people in the long term.

STRENGTHENING INSTITUTIONAL PROCESSES AND INTERACTIONS

IMPROVING ACCESSIBILITY OF INFORMATION AND RESOURCES

- Through a combination of ontologies and tag-based systems, the database of information gathered during the relief efforts should be made accessible across the institutional network.
- Information from the state government should be standardised to avoid any spread of misinformation and ensure that the information disseminated is uniform and consistent.
- Vaccine shots can be combined with free grocery packages to increase the accessibility and uptake of the vaccines. Accessibility to vaccines can also be improved through coordination between the DHOs and the GPs so that it is available through ASHA and Aanganwadi workers.
- Resources need to be decentralised such as setting up of local triage centres and fever clinics in the neighbourhood for easy access to primary care. There also should be better allocation and reservation of funds which can be used to strengthen the PHC systems and procure required equipment during a crisis.
- Real-time information on resource availability should be maintained by the state government to track demand and relief allocation. A single window system to coordinate all requests and resource allocation will also be helpful to avoid any duplication of efforts.
- Information should be made accessible in different languages and different formats so that it could be consumed by people from different backgrounds and by persons with disabilities respectively.

BUILDING CAPACITY OF RELIEF PROVIDERS

- Regular training programmes should be introduced for young civil servants to train them on how to handle high-pressure emergencies and create communication SOPs for implementation during such crises.
- Volunteers can be motivated to join the workforce by providing certification and accreditation for their skills and work.

BOLSTERING INSTITUTIONAL MECHANISMS

- Information systems such as hospital websites, cremation portal etc. need to be operational and actively functioning for better provisioning of relief efforts. This would also reduce the pressure on the functionaries providing relief.
- Formal channels of engagement should be established between the NGOs and the government officials to ensure transparency and better coordinated relief provision without biases.
- A task force consisting of medical professionals, civil society actors, community leaders and technical experts should be created by the state government to develop strategic responses to public health issues.

ENHANCING THE USE OF RELEVANT TECHNOLOGY

IMPROVE THE SANKALPA PLATFORM

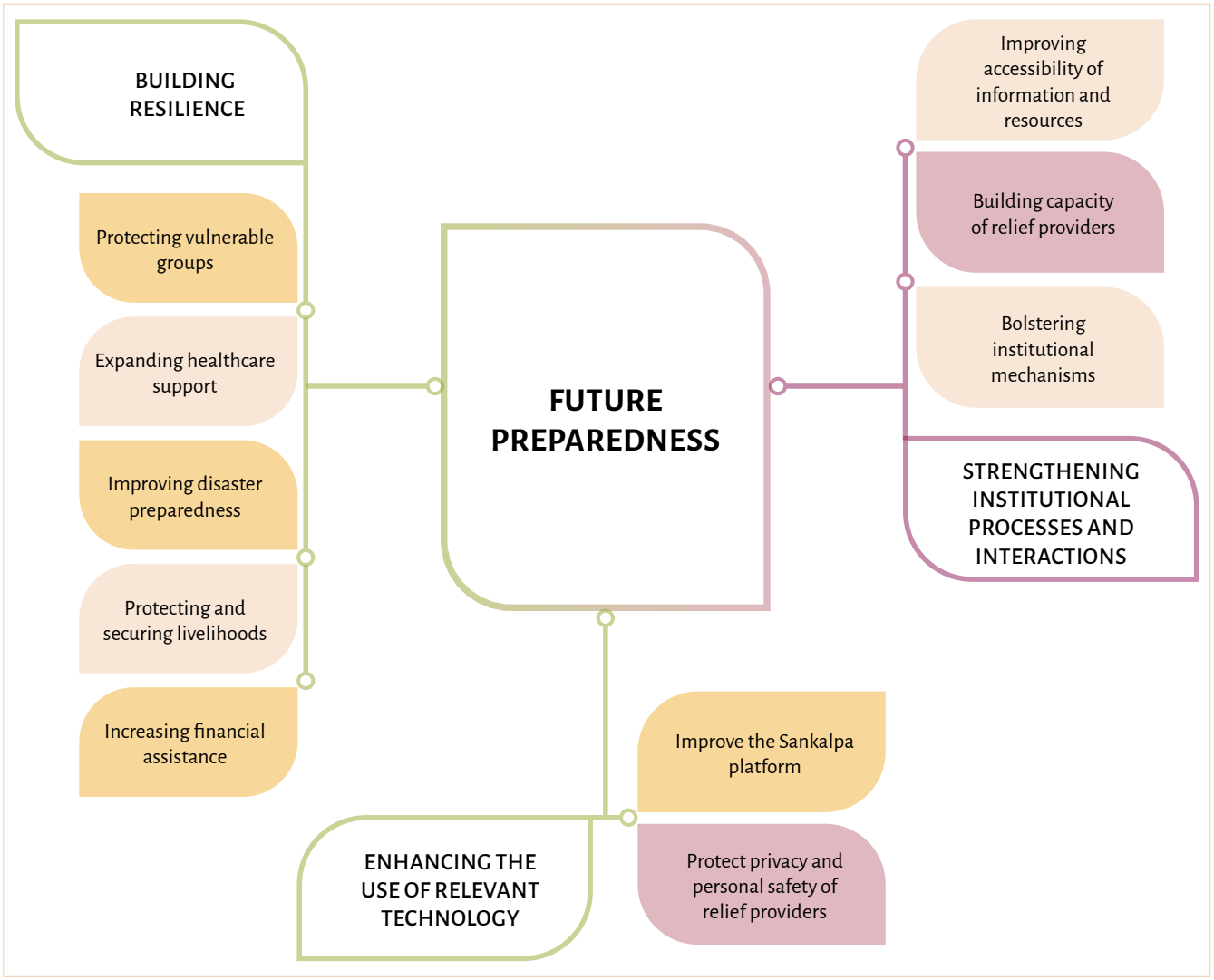
- Information on the platform should be updated in real-time and the design should be made more user-friendly and accessible in different languages.
- Decentralisation of the coordination chain through replication of a platform similar to Sankalpa at the district level was also suggested as a strategy during the interviews.

PROVIDE PRIVACY AND PERSONAL SAFETY OF RELIEF PROVIDERS

- Official contact numbers should be provided to protect the privacy of the volunteers involved in the relief efforts.

As the crisis showed no sign of waning, fatigue within the volunteers started to set in and it was difficult for them to continue, especially on being personally affected. To ensure better preparedness for any future crises caused by COVID-19, it would be critical to develop measures that further the social protection of vulnerable groups and enhance the timely availability of resilient infrastructure. This must be supported by stronger institutional processes within the government as well as improved interactions between government and NGOs.

Figure 6: Summarising recommendations for future preparedness



Typical responses to pandemics rely on preparedness, mitigation and resilience building measures for long-term stability. However, due to the mitigation strategy of nationwide lockdowns employed during the first wave, it was difficult for various actors involved in relief operations to prepare for the second wave. There was a significant increase in the requirement of medical equipment and healthcare support. And this had to be provided in a very short period of just 60-90 days when demand for relief was at its peak. At the same time, the availability of information and the prior experience of

Engaging with local influencers to target people specifically in rural areas before the third wave will be crucial to fight hesitancy and ensure greater vaccination rates.

coordination during the first wave ensured that institutions had developed certain, both formal and informal, protocols to rely on during the second wave. There was an improved understanding of the relationship possibilities between government and civil society actors. As a result, we have observed some of their interactions evolve through communication, cooperation, coordination and collaboration, and in some cases, disaster relief being hindered when the relationship was unable to sustain itself beyond communication.

In the light of this experience, the stakeholders involved in relief efforts reflected on the challenges faced during the previous 18 months and identified measures to be taken for better preparedness going forward. These measures are crucial as they will allow institutions to plan for resilience to such disasters or public health emergencies in the future, including any potential re-emergence of the crises caused by COVID-19. Also, these measures capture the data-driven plans and processes that must be put into action in order to make the sharing and access to information and resources more equitable. Finally, suggestions must also contribute to ensuring that interactions between different actors deepen collaboration and jointly mitigate the effects of any such future disaster.

5.1 BUILDING RESILIENCE

PROTECTING VULNERABLE GROUPS

The National Informatics Centre (NIC) has developed the Panchatantra software for the Government of Karnataka. The portal contains information related to children, including those who are vulnerable and need State support. Information of children made vulnerable owing to the effects of the COVID-19 crisis was collected by volunteers during the second wave. This should be linked with the Panchatantra platform and made available to the District Child Protection Units across the state, and follow-up measures undertaken in terms of support and services.

EXPANDING HEALTHCARE SUPPORT

Develop sustainable infrastructure

Although the government has built and added a lot of infrastructure, such as beds and ventilators etc., they should ensure that all equipment and infrastructure is working, well-maintained, and ready for use. At the same time, investment is required in developing supporting infrastructure for the long term, such as appropriate and effective supply chains for PHCs in rural areas. Presently, the capacity of PHCs is limited, with only one PHC for 10-15 villages. This needs to be augmented with a stronger PHC system wherein investment in the operation and maintenance of the existing centres be prioritised over setting up newer facilities.

Train experts in public health approaches

Existing healthcare systems were overwhelmed in responding to the public health emergency presented by the COVID-19 second wave. This is because even expert medical officers, such as deans, directors of medical colleges or District Health Officers (DHOs), are not trained adequately in public health theories and methods. In order to effectively reach out to an entire population, they must be trained more comprehensively in public health approaches.

Prepare health vulnerability plans

At the panchayat or district level, health vulnerability plans must be regularly updated to identify emerging vulnerabilities of people in the area. This should be done with the help of the existing panchayat and village task forces. To encourage sharing of sensitive information, this has to be combined with trust-building exercises between the panchayat and ASHA & Anganwadi workers.

Processes for addressing mental health issues and fatigue among stakeholders engaged in relief and rehabilitation

Fatigue was identified as a major issue amongst government officials as well as volunteers. Departments must formally make available mental health and counselling services for functionaries, particularly in the aftermath of the crisis.

IMPROVING DISASTER PREPAREDNESS

Develop SOPs for future responses

Based on learnings from both the first and second waves, specific SOPs with respect to public health emergencies must be developed. Standard and accepted SOPs could be relied upon to activate communication channels between different stakeholders for better disaster preparedness.

Build decentralised capacity for response through DDMA in urban areas

DCs can leverage the statutory features available under the DDMAs to collectively act with local stakeholders. Doing so across highly dense areas will increase the efficacy of response in urban areas as well.

PROTECTING AND SECURING LIVELIHOODS

Throughout the COVID-19 affected period in Karnataka, the loss of livelihoods has been a continuing problem. While the lockdowns were the main cause during the first wave, the regional lockdowns and the extensive spread of the disease during the second wave rendered many industries and jobs untenable. For instance, many self-employed workers, such as delivery partners and cab drivers were unable to go out for their work. Further, industries such as garment factories stopped operations leading to loss of pay for women workers[17].

17 Workers in the Second Wave: The Impact of COVID-19 Pandemic and Lockdown on Local and Migrant Workers in Bengaluru, All India Central Council of Trade Unions (AICCTU), Garment and Textil Workers Union (GATWU) and Domestic Workers Rights Union (DWRU), May 2021, https://bit.ly/workersin2ndwave (last accessed on November 10, 2021).

In the short term, the state government promised an ex-gratia payment to certain vulnerable groups. This should be released promptly to ensure adequate protection. Further, the release of funds through the MLA quota should also be formalised so as to introduce accountability and transparency in the process. Formalisation of livelihoods is one approach through which the social protection of people can be improved over the long term.

INCREASING FINANCIAL ASSISTANCE

Dedicate CSR funds for disaster preparedness at the local level (wards and GPs)

A portion of CSR expenditure should be reserved exclusively for disaster preparedness. This would include both immediate relief requirements as well as funds for long-term infrastructure development.

Allocate funds for active back-end functioning of digital support systems that have been established

Web portals and software such as the Sankalpa platform cannot be run entirely by volunteers. The ITBT department of the state government must incorporate the functioning of the portals as part of their ecosystem. This will ensure adequate funds for its sustainability and ensure that it continues to run smoothly with regular maintenance.

Increase state expenditure under health heads

In the long-term, the state government must increase its annual expenditure for health to ensure greater healthcare support not only for health emergencies but for a more resilient healthcare system.

5.2 STRENGTHENING INSTITUTIONAL PROCESSES AND INTERACTIONS

IMPROVING ACCESSIBILITY OF INFORMATION AND RESOURCES

Make data searchable and discoverable

The database of information available to different government departments must be made accessible across the institutional network. This data, through a combination of ontologies and tag-based systems, must be made searchable and discoverable for users. Only then can the data be effectively used in decision-making as well as dissemination.

Standardise communication material

Information to be disseminated by the state government must be standardised to ensure that there is no misinformation, incoherence, or contradictions in the information put out by different departments. This will also ensure that the knowledge being shared is consistent across audiences and media platforms. This will also help to overcome the challenge of delays in obtaining approval.

Address misinformation and vaccine hesitancy

During the second wave, there was a paucity of clear information and a lot of misinformation was floating around. In order to encourage treatment, the government must ensure rapid verification of data to counter misinformation. Doing so in advance will also prevent hysteria and panic setting in regarding the disease or its treatment.

A major issue faced during the second wave was hesitancy towards taking vaccines for COVID-19. A lot of misinformation was being circulated that contributed to lack of confidence in the vaccines. At the same time, there were a number of other factors such as proximity of dispensing centres and trust that

Strengthening the PHC system through greater resource allocation will reduce the load on specialty hospitals for non-critical patients.

were relevant to vaccine uptake. To address these issues, a combination of methods may be used, such as the following:

- Vaccine doses should be made available closer to all communities, including in urban poor communities. Officials should be more skilled in promoting the vaccine and conducting appropriate awareness camps in the areas. There are government schemes for free/subsidised groceries. Combining the vaccine shots with free grocery packages could help uptake. Another initiative could be to facilitate collaboration between DHOs with GPs so that vaccines can be easily accessed through ASHA and anganwadi workers.

- Engaging with local influencers to target people specifically in rural areas before the third wave will be crucial to fight hesitancy and ensure greater vaccination rates. Influencers need to go into the communities and also reach out through multiple offline media.

Decentralise allocation of resources

Before patients may be taken to large public or private hospitals, the first level of support is necessary to manage the healthcare load as well as provide primary assistance. Designated spaces such as local triage centres or fever clinics need to be created so that even if hospital beds are not available, primary care can be provided. Further, strategies that help to quickly adapt must be developed. For example, MLALAD funds should be partially reserved so that urgent infrastructure or equipment may be procured in a crisis. Strengthening the PHC system through greater resource allocation will reduce the load on specialty hospitals for non-critical patients. Also, the government must ensure regulation of billing in private hospitals. To ensure equitable accessibility, strict enforcement of price caps must be done.

Share data in real-time to prevent duplication

Real-time information on resource availability should be maintained by the state government, particularly with respect to medical equipment such as oxygen. Technology may be used to determine the demand and plan allocation in terms of time and location. During such times, requests tend to come from all regions simultaneously and hence they could get duplicated. An automated single window to coordinate all requests will be helpful in preventing duplication and also monitoring the status of the support being provided.

Accessibility in different languages and on different platforms for diverse audiences

It must be ensured that information, which has been standardised, is available in different languages in use in Karnataka. This includes Kannada, English, Hindi, Kodava, Tulu, Konkani, Tamil, Telugu, Bangla, and Urdu amongst others. Such information can be disseminated through social media and local TV media. Further, information being shared digitally must be available in different accessible formats so that it can be consumed by persons with different disabilities. Accessibility features on websites can contribute greatly to preventing emergency services from being overwhelmed as far as possible.

BUILDING CAPACITY OF RELIEF PROVIDERS

Conduct regular and relevant training programmes

The government should invite volunteers in advance and train them in coordinating requests and documenting demand and supply requirements. They must have at least a day-long orientation programme before being asked to help. In fact, untrained support might lead to Inappropriate or sub-optimal assistance and create further problems. Workshops for counsellors must also be introduced. Additionally, young civil servants must be trained to handle high-pressure situations and emergent disasters. They must also be trained in implementing communication SOPs during the disaster while maintaining transparency in their decision-making.

The government must ensure a mechanism of regular engagement with the team of volunteers. Certification or accreditation for their skill and work is one form of recognition. Further, platforms such as WhatsApp or Telegram may be used to ensure activity within the volunteer groups, ensuring that the engagement is low-touch and not overwhelming for the participants.

Set up incentives and motivating mechanisms

The government must ensure a mechanism of regular engagement with the team of volunteers. Certification or accreditation for their skill and work is one form of recognition. Further, platforms such as WhatsApp or Telegram may be used to ensure activity within the volunteer groups, ensuring that the engagement is low-touch and not overwhelming for the participants.

BOLSTERING INSTITUTIONAL MECHANISMS

Address intra-government communication and collaboration

Information systems need to be streamlined for better coordination between different government bodies such as the triage centres, doctors and the BBMP. An excessive load may be taken off the core teams by ensuring that existing systems of interaction are operational and actively functioning. Maintenance of supporting infrastructure, such as hospital websites, cremation portals, etc. would reduce the pressure on functionaries actively providing relief.

There is a need to acknowledge the enormity of the crisis caused by the COVID-19 pandemic and that only a consortium of stakeholders can attempt to address its impact. As the primary responder, the government remains squarely at the interface of regulation and active participation in the delivery of disaster response.

Activate formal channels of engagement with non-govt. institutions

A formal mechanism of engagement between NGOs and decision-makers must be established to ensure that personal biases do not creep in while planning for relief. This will also help make information sharing transparent.

Initially, there was some level of doubt and mistrust between the government and non-government actors. However, by being transparent and involving diverse stakeholders, the RDPR department was able to successfully overcome this trust deficit. By creating this as a standard procedure, the current momentum can be carried forward and this can also act as a model for future collaboration.

A state-wide helpline should be set up for private hospitals that help hospitals plan for requirements and allocate their resources according to joint priorities during future public health emergencies.

Set up dedicated task forces

The current institutional system does not adequately recognise public health as a crisis to be urgently addressed. The state government should create a task force consisting of medical professionals, civil society actors, community leaders, and technical experts to develop strategic responses to address two or three prioritised public health issues in the medium term.

5.3 ENHANCING THE USE OF RELEVANT TECHNOLOGY

IMPROVE THE SANKALPA PLATFORM

The Sankalpa platform, Karnataka Fights Corona (KFC), was a mainstay of the government's efforts to provide relief during the second wave. It allowed volunteers to connect with district administration and provided trust and legitimacy to relief efforts. It must be ensured that information on the platform is updated in real-time. Its design should be made more user-friendly and must also be made available in all local languages. Data on the platform should be classified and made accessible geographically, and on an as-needed basis.

A need for replicating the platform at the district level has been identified by multiple actors. This will help to decentralise the coordination chain and ensure quick turnaround times in supplying relief.

PROTECT PRIVACY AND PERSONAL SAFETY OF RELIEF PROVIDERS

Online and remote working requires the sharing of contact details. However, the personal phone numbers of volunteers should not be published or circulated publicly to prevent any misuse. The state government should plan to provide them with official contact details to protect their privacy and for their personal safety.

SUMMARISING RELIEF EFFORTS IN KARNATAKA DURING THE COVID-19 FIRST WAVE

As the world grappled with the COVID-19 pandemic, India adopted a nationwide lockdown from March 25, 2020, to mitigate the spread of the virus. Various activities came to a halt due to the lockdown. Diverse groups such as those working in the informal sector, daily wage labourers, sex workers, homeless transgenders, senior citizens, urban poor communities, migrant workers etc. were faced with a multitude of challenges and hardships. In Karnataka, as in many other states, the shutdown of economic activities during this period led to a massive loss of livelihoods, exacerbating homelessness and impoverishment. In response, various NGOs, CSOs and volunteers in Karnataka, along with local and state-level government departments, took on the critical task of providing relief measures to vulnerable groups.

The different types of relief provided included shelter, provision of ration kits, cooked food, medicines, masks, PPE kits, and sanitisers, among others. Some organisations were also involved in creating awareness programmes regarding the spread of the virus, social-distancing norms, the importance of using masks etc. Given the nationwide lockdown, organisations were faced with challenges in sourcing, storage, and distribution of

relief materials. Additionally, paucity of funds, transportation and lack of coordination were some other challenges faced by stakeholders involved in relief measures in Karnataka. Despite these challenges, organisations, volunteers and government departments continued their efforts of providing relief measures to different vulnerable groups across the state.

DATA COLLECTION MECHANISMS

Various methods were used to identify those who required relief. With the help of volunteers, organisations carried out surveys to identify people in need. Other sources for data collection included social media platforms such as Facebook, Instagram, Twitter, Telegram etc. NGOs and CSOs also received data on relief requests through the Corona Warriors WhatsApp group, which was initiated by the government. Helpline numbers were also provided for people to contact the government directly through phones and request relief measures.

ORGANISATIONAL INTERACTIONS

Demand requests were identified through organisational networks that included NGOs, volunteers, donors and corporates. Many beneficiaries were identified by organisations due to their presence in the local communities and the ties they had built with them. Organisations traditionally involved in social service and allied activities had local networks which helped them identify the groups in need of relief.

Demand was identified by the government, which then passed on the information to NGOs and CSOs based on their domain of work and location through the Corona Warriors WhatsApp group. The RDPR department worked with the police and ward committee members to identify the people in need of relief. BBMP and the Labour Department were also involved in collating and disseminating relief requests.

CHALLENGES FACED

LACK OF FINANCIAL SUPPORT

While many organisations used their internal funds for providing relief work, others were supported by donors found through their independent networks. In some cases, funding was also provided by the government. However, the financial support received was limited and organisations found it difficult to sustain relief activities. This led to some organisations ceasing relief work during the lockdown.

DIFFICULTY IN DEMAND MANAGEMENT

The biggest challenge faced by many stakeholders was the inability to prioritise demand and identify people who needed the relief the most as the resources for supply were limited. This situation worsened due to the overwhelming demand during the first wave and the urgent needs of a large number of people.

DUPLICATION OF EFFORTS

Challenges with respect to duplication of efforts were also faced by organisations. There were multiple NGOs working in some areas, while other areas remained underserved. However, the process was streamlined and coordination improved through calls and the creation of common WhatsApp groups.

GAPS IN COMMUNICATION

Linguistic problems were faced by various volunteers that were involved in relief work. The digital divide was a challenge, especially in rural areas, which made information collection and dissemination difficult.

DIFFICULTIES IN TRANSPORTATION

The lockdown imposed during the first wave caused difficulties in travelling from one place to another as getting travel passes was difficult and time-consuming. Organisations thus faced difficulty in procuring and distributing relief materials, especially in areas that were designated as containment zones.

GAPS IN COORDINATION

As requirements and demands emerged, the distribution of relief measures was initially fulfilled in a scattered manner. As the magnitude of the issue was unanticipated, there was no system in place for providing relief measures. The relief measures initially began as informal interactions between stakeholders, with processes being formalised much later. Additionally, a lack of trained volunteers also caused an issue in coordination.

Annexure 2

PARTICIPATING STAKEHOLDERS FOR THE STUDY

Civil Society Organisations

- CBR network
- HelloSivi Software Labs Private Limited
- India Cares Foundation
- Makkala Jagriti
- Muslim Industrialists Association
- One Billion Literates Foundation
- Proud India

Volunteers

- Volunteers from the RDPR department
  - IEC team
  - Bed allotment team
  - Data verification team
  - Teleconsultation team
- Volunteers from BBMP
- Volunteer from KSMSCL
- COVID-19 Bangalore Volunteer group on Telegram
- Volunteer from SAP Labs (involved in the development of Sankalpa platform)

Public Health Professionals

- Medical health professionals from the Institute of Public Health, Bengaluru

Agencies

- RDPR Department, Government of Karnataka
- UNICEF India

Annexure 3

QUESTIONNAIRE FOR STAKEHOLDERS

Theme	S. No.	Question
BACKGROUND INFORMATION	1.	Name of the person and affiliation
	2.	Since when have you been engaged with the relief work?
	3.	Which area were you providing relief?
FIRST WAVE	1.	Was the NGO involved during the 1st wave of COVID Lockdown? If yes, What was the type and nature of relief provided during the first wave? Who were the people who needed relief during the first lockdown?
	2.	Were there any learnings from the first wave that helped in the preparation for the second wave?
	3.	Were you also involved during the 1st wave of COVID Lockdown? If yes, what was the type and nature of relief provided during the first wave? Who were the people who needed relief during the first lockdown? How did you get involved in the relief work for the second wave? What do you think were the challenges faced during the first wave?
	4.	What were the challenges in providing relief efforts faced during the first wave?
	5.	What were the challenges you faced during involvement in the relief efforts?
	6.	What were the insights and learning from the first wave that helped in the preparation for combating the second wave?
INSTITUTIONAL INTERACTIONS	1.	Did the organization partner or coordinate with any Government departments for the relief work? How was the coordination/interaction with the government departments?
	2.	Did you partner or coordinate with any Government departments for the relief work? How was the coordination/interaction with the government departments?
	3.	Did you partner or coordinate with any non-government actors for the relief work? How was your coordination/interaction with non-govt actors?
	4.	How did you coordinate for relief work? (Phone, Applications, Platforms, etc.,)

Theme	S. No.	Question
INSTITUTIONAL INTERACTIONS	5.	How was your coordination/interaction with non-govt actors?
	6.	What was the process by which RDPR coordinated with other government departments for relief work?
	7.	What was the process by which you coordinated with non-govt actors for relief work?
PLANNING AND PREPAREDNESS	1.	How are the volunteers trained for their tasks?
	2.	How does the awareness material section work? How are the materials collected and vetted for accuracy?
	3.	How does the donation section work and what happens after one provides you with a donation?
	4.	How does the volunteers' section work and what happens after one register as a volunteer on the website?
	5.	What are the measures that are taken for the third wave? What are the key areas that need to be focused on?
	6.	What are the modifications or additions being planned for preparation for the 3rd wave?
	7.	What are the preparation efforts for the third wave?
	8.	What are your estimates for the requirements for the third wave?
	9.	What would you like to see on the platform in preparation for the third wave?
	10.	Would you like to be involved in such relief efforts in future? If yes, in what capacity? If not, how do you think the processes can be changed for professionals to be involved in such relief efforts?
SECOND WAVE RELIEF EFFORTS	1.	Did the request patterns change over time of the second wave?
	2.	Have you been involved in the relief work full time for the second wave?
	3.	How did the organization prepare for the second wave?
	4.	How did you get information on who needed the relief work?
	5.	How did you get involved in the relief work for the second wave?
	6.	How did you source and distribute the relief material for relief work?
	7.	How did your organization get information on who needed the relief work?
	8.	How was the relief work different/similar in the first and second waves?

Theme	S. No.	Question
SECOND WAVE RELIEF EFFORTS	9.	What efforts were taken in preparation for the second wave?
	10.	What is the nature of the organisations providing help? For example, are they providing information, oxygen support, food support etc.
	11.	What kind of relief work was carried out during the second wave?
	12.	What relief work were you involved in?
	13.	What was the anticipated infection level towards which you were working?
	14.	What was the role of the government in the distribution of the relief materials?
	15.	What were the aspects of the relief work that worked well during the second wave in comparison to the first wave?
	16.	What were the challenges faced in coordination while providing relief during the second wave?
	17.	What were the different functions and relief work carried out by RDPR during the second wave?
	18.	What were the relief efforts you were engaged in during the second wave?
	19.	When did you start preparing for the second wave?
	20.	Where did you source the required relief materials? Did the government have any role in securing the resources?
	21.	Which communities required help during the second wave? What was the nature of the help requested?
	22.	Who were the people who needed relief during the second wave? How many people have you reached out to or have estimated who need help?
USE OF TECHNOLOGY	1.	Did you get volunteers from the platform? How many?
	2.	Did you use the website? To what capacity did you use it?
	3.	How did you access the platform?
	4.	How is the accuracy of the information verified on the platform?
	5.	How is this portal working with the Karnataka State COVID portal and/or the central portals? Are you coordinating information between these departments?
	6.	How many visits has it had during the second wave?
	7.	How regularly is the information on the platform updated and checked?

Theme	S. No.	Question
USE OF TECHNOLOGY	8.	Were you aware of the Sankalpa website that was set up by GoK?
	9.	What are the aspects of the platform that worked well?
	10.	What are the current statistics of work done by the website portal? For example, how many organisations are registered on the platform, how much donation is collected, how many volunteers, etc.,
	11.	What are the objectives for the platform for the 3rd wave?
	12.	What is the feedback from the CSOs after using the platform?
	13.	What is the function of the citizen resource finder? Could you describe the back-end process (from source to the distribution of the information)? How was the quality of information on the website ensured?
	14.	What is the function of the COVID-19 resource directory? Could you describe the back-end process (from source to the distribution of the information)? How was the quality of information on the website ensured?
	15.	What is the roadmap envisioned for the Sankalpa platform for the future?
	16.	What other provisions should the platform provide?
	17.	What was the feedback from the organisations who have used the platform?
	18.	What was the vision and aim behind the Sankalpa website? What are the different functions?
	19.	What was the vision for the Sankalpa platform?
	20.	What were some of the challenges in using the platform?
	21.	With respect to the use of technology during relief work, what were the aspects that worked well during the second wave in comparison to the first wave?

CREDITS

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1. Rural Development and Panchayati Raj Department, Government of Karnataka
2. Makkala Jagriti, Bangalore
3. One Billion Literates Foundation, Bangalore

All figures used in the report, where taken from external sources, have been attributed at their location within the report. The sources are the following:

1. World Health Organisation (WHO)
2. Bharath M. Palavalli, Presentation on Multi-stakeholder Relief Operations, May 2020
3. Martin, Eric, Isabelle Nolte, and Emma Vitolo. 2016. "The Four Cs of Disaster Partnering: Communication, Cooperation, Coordination and Collaboration." Disasters 40 (4): 621–43.

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