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Rescue to relief and beyond
- Stories from Kerala Floods 2018

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-A collation of stories from Kerala floods 2018

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1. Background

In August 2018, Kerala experienced the worst ever floods and landslides since 1924. Close to 5.4 million people in 11 out of 14 districts were affected. Over 483 people died, and 140 went missing. About a million people were evacuated from 7 most affected districts. Government of Kerala led Post Disaster Needs Assessment (PDNA) estimated total recovery and reconstruction needs at Rs. 31,000 crores (US$ 4.4 billion). According to the Kerala government, one-sixth of the total population of Kerala had been directly affected by the floods and related accidents. The Indian government had declared it a level 3 Calamity, or "calamity of a severe nature". Thirty-five out of fifty-four dams within the state were opened, for the first time in history.

(Source: Stock images, Internet)

2. Causes

Kerala received heavy monsoon rainfall, which was about 116% more than the usual rainfall in Kerala, on the mid-evening of 8th August, resulting in dams filling to their maximum capacities; in the first 48 hours the state received 310 mm of rain. For the first time in the history of the state, 35 of its 54 dams had been opened. The deluge has been considered an impact of the global warming. A report by Jacob P Alex, an amicus curiae appointed by the Kerala high court, said the devastating floods of 2018 was the result of bad dam management by the state. To their defense, government quotes the incessant rainfall received in a very short duration led to the filling up of the dams and release of which led to the deluge.

RAINFALL	AUG 8 TO 15, 2008	AUG 16, 2018	AUG 17, 2018
NORMAL RAIN	98.44 mm	13.5 mm	14.5 mm
ACTUAL RAIN	349.7 mm	137 mm	76 mm
EXCESS RAIN	255%	915%	424%

(Source: IMD)

3. Stories

Following is a collation of flood related stories collected from various online media and paper cuttings that were collected by me personally post deluge of 2018. Most of the quotations used in this are represented as reported in the news articles.

1. The hash tag relief workers and local groups

Using a viral hash tag #doforKerala, #KeralaFloods and #NavaKerala many volunteer groups emerged like Anbodu Kochi, Do for others and compassionate Kozhikode from Kochi, Trivandrum and Kozhikode respectively which collected supplies from across the country and disseminated supplies and services to the affected population.

1.1 Anbodu Kochi:

Anbodu Kochi – "Kochi, With Love" - a Facebook group born in 2015 in the backdrop of Chennai floods 2015. Back then, floods brought Chennai in neighboring Tamil Nadu to a standstill. Since then, this group has been engaged in a host of local activities. Anbodu Kochi's initial nine-member team swollen to a 2,000-strong volunteer force and started working across Kerala, which was ravaged by torrential monsoon rain and floods. In the Kochi Indoor stadium, 500 volunteers pack relief materials into cartons destined for relief camps. But not all the material went directly to relief camps; Anbodu Kochi put together packages of food and clothes, wrapped in plastic cling sheets, for the Navy to airdrop.

In July 2018, Anbodu Kochi distributed relief material in Kuttanad, one of the first places in Kerala affected by rains. "For the first time, our volunteers were on the ground for distribution," says Soman, coordinator. The Chennai experience came in handy when the collective resumed statewide operations on 11 August 2018, after Wayanad was flooded. With #doforkerala, the group called for material donations (it doesn't take monetary contributions) to be delivered to centers in Thiruvananthapuram, Chennai, Bengaluru, and Mumbai. The material was to be distributed to relief camps, or via the district administration. The navy and

Coast Guard also stepped in, airdropping supplies. By 20 August, the group had sent 1,654 tons of relief material to 120,000 people. According to Soman, 300 volunteers were involved in unloading, sorting and preparing material for distribution.

"The first phase of operations almost got over and we went on to the rehabilitation phase," says Soman. As people return to their homes, they needed cleaning material, clothes, other items to rebuild their lives. The volunteers were then focusing on the bulk donation of such material. The operation wasn't without its challenges—Soman reveals how some supplies were taken by people who seemed to be in need and sold. "We had a system to limit such incidents, but we also wanted to make sure that people get the help they need," he says.

Pic: Anbodu kochi -logo

Source:

https://www.thenewsminute.com/article/facebook-group-full-fledged-relief-management-anbodu-kochi-story-87627

https://www.indiatoday.in/india/story/kerala-floods-anbodu-kochi-1318450-2018-08-19

1.2 Do for others (DFO):

Kochi-based businesswoman Bindu Sathyajith decided to dive right in, quite literally, into rescue and relief work during the floods. Today, her group, called – Do for Others (DFO) has over 300 people working on the field and several others from across the globe providing technical support. Among DFO's notable efforts was the setting up of 72 bio-toilets in 72 hours in Kuttanad, Alappuzha region. Later on they had plans to rehabilitate the people in the tribal villages in Wayanad and Kuttanad who were in dire need of support. Bindhu Said – " They have lost everything. Their houses have been completely destroyed."

Bindu Said - "I was not concerned about my safety but was worried about the countless number of people who were suffering due to floods that made me act to the situation."

Pic: Bindu Sathyajith, Founder - DFO

Source:

https://www.thehindu.com/news/national/kerala/how-a-group-of-kochi-women-risked-their-lives-to-help-during-the-kerala-floods/article24751371.ece

https://www.indianwomenblog.org/businesswoman-bindu-sathyajith-became-the-very-definition-of-humanity-during-the-kerala-floods/

1.3 Compassionate Kozhikode:

In the aftermath of the Kerala floods, every person's Facebook, Twitter and Instagram timelines were possibly filled with people doing some form of rescue work or donation and posting selfies of their 'humanitarianism' and listing how much cash they'd donated. Well, this website www.compassionatekeralam.com is solidly against both: cash and selfies. Through the website, you can donate things to people in need, register yourself as a volunteer to identify and reach out to affected families, offer help, adopt a family or request for help. With the help of district collector Prashanth Nair, IAS or people call him – "Collector Bro" the group started donation campaigns through their website post floods.

Pic: Compassionate Kozhikode -logo

Source:

https://www.edexlive.com/beinspired/2018/aug/23/no-cash-no-selfies-how-collector-bros-compassionate-keralam-is-setting-donationgoals-3763.html

2. Fishermen Rescue:

2.1 Sons of Sea:

Fishermen in their country boats saved thousands of people stranded in Alappuzha district, becoming heroes overnight.

On 18th August 2018 rising floodwaters had turned large stretches of land there into small islands in Chengannur, Alapuzha leaving tens of thousands stranded. For those who couldn't be rescued despite the three-day-long government-led mission using air force choppers and navy boats, fishermen like Fernandes turned saviours. They came in droves, sailing their country boats into the rising waters to save lives, and at the risk of damaging their equipment—their only source of income.

"A significant majority of the fishermen are church-going Christians", says Johnson Jament, coordinator of the Kerala Independent Fishermen Society, a local educational group.

"When the government realized it was short of boats, and that military men lacked the

knowledge to navigate local waters, they contacted the local churches", he says. Once the local priests called, hundreds of fishermen signed up for the government's rescue operations. Under the guidance of the fisheries office, they boarded lorries with their boats and were transported to inundated areas.

Pic: sons of sea set out on rescue activities.

They rescued 21 people by noon on 18 August, including a pregnant woman. Once they were brought safely to a relief camp, they set out again without even having tea. By the end of the day, they had saved about 50 people. Jament says "100,000-150,000 lives have been saved by the fishermen since 18 August". "While the air force helicopters saved seven lives on Saturday (18 August), 500 fishermen's boats saved thousands of people just on Saturday," says a police official, who did not want to be quoted. The government has offered to pay the fishermen diesel charges and a daily bata (per diem) of ₹ 3,000, but some of them politely refused, saying it demeans their humanitarian spirit. According to the state fisheries department, 750 fishermen will now be trained to become disaster responders at the Mumbai maritime training institute.

Source:

https://indianexpress.com/article/india/kerala-floods-fishermen-relief-rescue-operation-5317511/

3. The Visual/Audio media:

Local media sets an example in how to respond to a crisis responsibly

The government was doing its best. This was not the time for complaints or blame. The situation was unusual and unprecedented. Each citizen volunteered to enroll themselves in rescue and relief measures. This call for action did not come from a politician—this is how television anchor Shani Prabhakaran of Manorama News began her show, Counterpoint, on 16 August.

The Kerala news media, including newspapers, TV channels, and websites, responded to the crisis in an exemplary way, with a balanced blend of civic responsibility, honesty, and positivity. "We took some decisions early on, and one of the first was to not use these three words in any story: bheethi, pedi, aashanga (fear, terror, apprehension)," – Shani Prabhakaran.

Networks had to cope with their own internal trauma—reporters and loved ones stranded, missing or dead; lost equipment; reporter movement at a standstill. Despite this, TV channels acted like 24x7 live display boards without the attendant hysterics and blame game prevalent

on national television. They opened their own helpline numbers, received SOS calls, connected stranded people to rescue operations and vice versa.

Pic: News channels dropped commercials and went on to become control rooms

Asianet News decided to drop ads for non-stop flood coverage, despite the peak Onam festival season. On 15 August, News18 Malayalam started a 24x7 helpline, staffed by people with bilingual skills, and later initiated the "open your hearts, open your homes" campaign to bring together volunteers to accommodate affected people in their houses. Despite their printing presses, staffers and equipment being under siege, Malayala Manorama and Mathrubhumi were published every day. In Pathanamthitta district, one of the worst affected, the Manorama desk operated from a staffer's residence.

Radio channels became the last touch point. Radio Mango did live coverage for three days, shelving recorded programs. Each journalist did take hundreds of SOS calls, worked nights, helped out at relief centers, and raised donations—all while doing their core job as journalists. "Nobody has asked me for leave yet," says Prabhakaran, Radio Mango.

Post disaster, community radio stations also joined hands to co-produce and broadcast a radio series under the banner - Janakiya Pankalithavum Punar Nirmanavum – JPP (People's participation in reconstruction) initiative of the state government. It was one of its kind initiative in the country. It aimed to sensitize the people on their needs and rights as well as entitlements to recover from impacts of the floods.

Pic: Radio channels and other FM channels started programs to bring in awareness and precautions

Source:

4. Individuals who stood up to take the response activities to next level

4.1 Commander Vijay Varma and his angels

An Indian Navy commander and a captain were among those honoured at the 'Asian of The Year' awards this year, acknowledging their selfless service and bravery in rescue operations during the devastating floods in Kerala. A life-affirming story is of a commander's and his crew who airlifted over 100 locals in Aluva.

Commander Vijay Varma's rescue of 25-year-old Sajitha Jabeel. His team flies the lightweight Chetak helicopters and is nicknamed "God's own angels" in Kerala. On 17 August, Jabeel went into labour and sent out a distress call. Commander Varma responded immediately. "The nature of the operation was challenging. Jabeel was in a small balcony of the mosque in the middle of a thickly congested neighbourhood where there was no place to land and hardly any room to winch up and down," says Varma, adding that this was the toughest mission in his 18-year career as a pilot. When they identified the mosque, they still found it hard to locate Jabeel as the roof was covered with plastic. She couldn't be spotted easily on the balcony on a lower floor. After communicating with people on different roofs through sign language, Varma's team discovered that there were not one but two pregnant women in adjacent buildings.

Pic: Com. Vijay varma, the airlift and Jabeel with her son

Since Jabeel's case was urgent, she was rescued first, and the other woman a few hours later. When they reached Jabeel's coordinates, it was a task for Commander Varma to lower his craft amid gusty winds and space constrictions to send the onboard doctor down to check on her. He held the craft steady as his winch operator lifted Jabeel on board. Jabeel was airborne in 30 minutes and taken to Sanjivani hospital in Alappuzha district, where she gave birth to a baby boy.

Jabeel's story is one of almost 100 rescues and countless food and medicine airdrops undertaken by Commander Varma and his angels. On 20th August, a few days after the evacuation of two women stranded on a roof in Aluva, Varma spotted a large "Thanks" shaped out of bed sheets at the same spot, a message for him and his fellow pilots.

Source:

https://www.thenewsminute.com/article/toughest-rescue-op-navy-commander-who-airlifted-pregnant-woman-kerala-floods-87067

https://economictimes.indiatimes.com/news/defence/indian-navy-commander-captain-win-asian-of-the-year-award-for-kerala-flood-rescue/articleshow/66850703.cms

https://www.indiatimes.com/news/india/commander-vijay-varma-who-in-a-daring-operation-airlifted-a-pregnant-woman-during-kerala-floods-gets-nao-sena-medal-361051.html

4.2 NDRF - Crossing the bridge over troubled waters

NDRF launched the biggest-ever operation in flood hit Kerala; 58 teams were deputed. An NDRF constable saved a child in a heroic move across a flooded bridge. When the shutters of the Cheruthoni dam in Kerala's Idukki district were opened on 14 August—for the first time in 26 years—the water level rose steadily, inundating roads, flowing over bridges and entering homes. The National Disaster Response Force (NDRF) was going about its rescue operations on a war footing as a young father stood across a bridge in Idukki, an ailing child in his arms, uncertain whether he would be able to cross the bridge that was barely minutes away from being submerged in the rising waters.

Pic: NDRF teams in Pathanamthitta district.

Kanhaiya Kumar, a constable with the NDRF's fourth battalion, dashed across, grabbed the child from the man and ran across the bridge just as the slope alongside gave way. The man followed him. Kumar, who has been serving with the NDRF for six years, brushes off the accolades, saying: "This is my job. I didn't look left or right and just did what I had to do. I was lucky that we made it just as the water hit the bridge. Saving lives in such a situation is my duty."

Pic: NDRF personnel Kanhaiya kumar running with the child. This bridge was later collapsed.

Source:

https://timesofindia.indiatimes.com/city/kochi/ndrf-man-rescues-child-brave-act-wins-praise-on-social-media/articleshow/65374289.cms

https://timesofindia.indiatimes.com/india/ndrf-launches-biggest-ever   operation-in-flood-hit-kerala-58-teams deputed/articleshow/65451947.cms

4.3 The man who saved a village – M.A.Chacko

Panchayat member M.A. Chacko's night vigil ensured a dramatic rescue of Panamaram villagers in Wayanad district.

After a couple of weeks of heavy rainfall, Banasura Sagar—India's largest earthen dam, in Kerala's Wayanad region —was on the verge of overflowing. In the early hours of 9th August, employees of the Karnataka State Electricity Board (KSEB) made the decision to open the gates. But they did so without consulting the district disaster management authority or giving advance warning to residents of the villages nearby. There was no alert, even as hundreds of thousands of liters of water rushed into the Kabini River. Downstream, over 120 families in Panamaram village were sleeping peacefully in their homes, unaware of the impending deluge. But M.A. Chacko, a member of the Panamaram panchayat who lives 2km from the village, was on vigil. The 52-year-old had spent the past four nights awake, worried that the relentless rain would cause the river to overflow. But even he hadn't imagined the scale of the disaster that was rushing towards the village.

Pic: Chako with the rescued family members

"In a matter of minutes, I realized that water had come up to my shins," Chacko told the online news portal The News Minute. "I went door to door in my ward and woke up the residents, urging them to leave."

Once the village had been alerted, he arranged for jeeps and large vehicles to transport people to the nearest camp and boats to take livestock to a safer area. One of the last to leave, he had to swim through the snake-infested waters to safety. His prompt action saved around 25-30 families in the Panchayat.

Source:

https://www.thenewsminute.com/article/meet-lone-ward-member-whose-quick-thinking-saved-over-120-families-wayanad-86852

https://www.ucnews.in/news/A-Ward-Members-Quick-Thinking-Saved-120-Families-in-Wayanad/554871540585007.html

5. The corporate crusaders

Rescue operations were winding down in Kerala, and the focus now shifted to relief and rehabilitation, with over a million citizens in relief camps. As people all over the country scrambled to get food, water and supplies to those affected, E-Commerce sites and corporate companies contributed considerable technical, logistical and financial resources to the relief effort, with Amazon India leading the charge.

The e-commerce giants Amazon and flipkart joined hands with NGOs like Habitat for Humanity, World Vision India, Goonj, and Oxfam India to set up a microsite that makes it convenient for people to donate essential products for relief camps. People could pick items from each NGO's list of essential products and Amazon coordinated with them to ensure that they're delivered where they're needed the most. "In addition, the Amazon Operations team was working to provide relief kits to the impacted areas, and provided drinking water to their impacted service partners, associates and immediate communities," the company said in a statement.
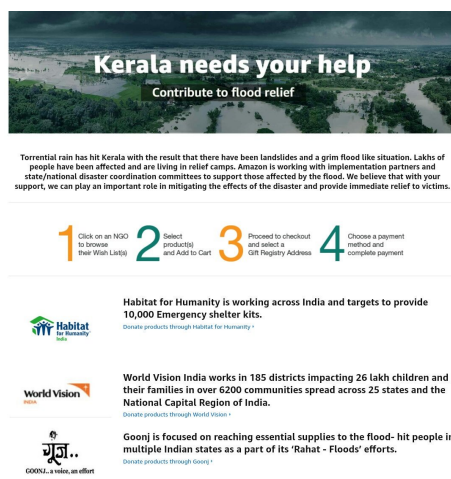
Pic: E-Commerce platforms front page set to support Kerala floods.

Online payment services PayTM, MobiKwik, and Simpl allowed their users to donate to the cause through their apps, which also gave a matching every donation with a rupee to 5 rupees

for every donations made to Kerala Chief Minister's Distress Relief Fund (CMDRF). Google through their payment app Tez/google pay, allowed users to directly donate to the CMDRF account. Even crypto currency exchange platform pocket bits was collecting digital tokens like Bitcoin and Etherium, which was then converted to INR, with half the proceeds going to CMDRF and rest to Goonj for supplying relief materials.

Pic: Simpl and Mobikwik - logo

Amazon India used its on-the-ground resources to deliver supplies, as well as collect donations from customers and ensures that the necessary items are in stock. In addition, Amazon employees also donated lakhs of rupees through the Amazon Cares employee-volunteering portal. "Our thoughts are with those affected by the recent floods in India," the statement said.

Companies like Zomato, RedBus, Uber and Porter took more innovative approach to help Kerala. Zomato in partnership with NGO Akshaya Patra Foundation enabled their customers to pay for meals of the flood victims, purchasing meal bundles, which was delivered to relief camps in vans and boats. Redbus and Porter made use of their available infrastructure and expertize, working with their logistics partners like bus operators and delivery personnel to collect and transport relief materials from several cities to relief camps. Uber in Kochi gave the option to book an Uber for free to transport relief materials locally.

Caletal Developers a Thrissur based organization came in which coordinated the organizations that came forward to help clean up flood-affected households and localities when the water started receding. Guardians of Dreams, a social sector organization working for underprivileged children, worked in making use of their volunteer network to make the orphanages and shelter homes they work with inhabitable again.

https://www.pinkerala.com/news/a-made-in-india-story-how-kerala-flood-relief-effort-became-a-shining-exam

6. The red-tape radicals – IAS Officers on Ground.

With the state going through never before deluge, IAS officers were taking quick, pragmatic decisions to save the day.

"You are making history," K. Vasuki, an IAS officer and district collector (DC) of Thiruvananthapuram, told people at the Cotton Hill collection Centre in the state capital on 19 August. A video clip of her impromptu speech, less than 3 minutes long, went viral—making Vasuki a public hero for her work in mobilizing relief.

Reports say that Vasuki had warned residents of the consequences of the heavy rain. When it started turning lethal, she began mobilizing youth by putting out a call on social media.

Heeding her call, college students came together to collect money, buy provisions and deposit them at collection centers. As the relief material started flowing in, Vasuki opened additional centers to store the items. Under her direction, the sorting, repackaging, and distribution of material was streamlined. The system has been functioning with machine-like precision.

Pic: T.V. Anupama(Left), K Vauski(Right)

Other bureaucrats in Kerala also feted for working day and night to restore order in their devastated districts. Among them were Dadra and Nagar Haveli Collector – Kannan Gopinathan; Sub-collector of Alappuzha – Krishna Teja Mylavarapu; Thrissur collector T.V. Anupama and Prasanth Nair, an IAS officer and former collector of Kozhikode, under whose watch an army of volunteers (Compassionate Kozhikode) including social media cell were working tirelessly to arrange relief material for millions of people.

As Vasuki said in her speech, this collective effort was a historic moment. "You are showing the world what Malayalis can do. In my opinion, you are working like soldiers who fought for freedom," she said.

Pic: Krishna Teja distributing relief materials.

Krishna Teja said, "Around 10:00 p.m. we received information that the water levels in the district have been abruptly rising because of the opening of the dams, and within 24-48 hours of this, the water would reach Kuttanadu. We immediately called a meeting of all district level officers who were available. When we conducted the meeting, most district officers were skeptical of whether we could evacuate 2 lakh people. We didn't wait, we went forward and succeeded – Says Krishna Teja.

Pic: Kanna Gopinathan getting involved in relief activities

The former Dadra and Nagar Haveli collector – Kannan Gopinathan taking a leave from service was actively involved in the Kerala floods relief centres, including loading and unloading of relief materials.

Source:

https://www.thebetterindia.com/156705/kerala-floods-ias-heroes-women-news/

https://www.thenewsminute.com/article/ias-officer-rushed-kerala-toiled-flood-victims-without-letting-anyone-know-87877

https://www.thebetterindia.com/157052/kerala-floods-ias-hero-rescue/

https://www.thebetterindia.com/156568/news-kerala-floods-prasanth-nair-ias/

https://www.scoopwhoop.com/kerala-floods-ias-officer/

7. The animal savers

A four-member team, comprising Dinesh Babu, Nishanth Ravi, Arjun Shan, and Albert Peter, started their rescue mission in Idukki before moving to Kottayam, Chengannur, and Thiruvalla. "More than the flood, Idukki was badly affected by landslides. Most of the animals we found there were dead or badly injured", Said Dinesh.

Among the most heartwarming rescue stories has been that of 18 dogs saved on 19 August. "The incident took place on a riverbank where the water level had risen to three times its height," says 26-year-old Nishanth Ravi, whose team was responsible for the operation. "A local breeder had kept these dogs inside her house and we had to get into the water and rescue them by boat. "Ravi heads a team of six specially trained individuals—all under the age of 30—which has been working tirelessly in Kerala, rescuing animals caught in the calamity. The Chennai-based Cloud No. 9 rescue team also did a commendable work for the last six years in disaster-struck regions, including the 2013 Uttarakhand floods, the 2015 Chennai floods, and the 2017 Kaziranga deluge. The team was prepared to reach Kerala earlier, but couldn't since routes were either blocked or unusable. Finally, after 4-5 days to the deluge they were able to negotiate densely forested, landslide-ridden Idukki to reach Kottayam. Since then, they have carried out 20 successful rescue operations—saving over 75 animals—across Thiruvalla, Kottiyam, Kochi, and Chengannur.

"We receive 14-15 calls every day, and we try to attend to as many as possible. We had to rescue some cows that were tied up in neck-high water level...we managed," says Ravi.

Also helping out with the rescue work for animals was Animal Warriors India, a group of animal activists from Hyderabad, which arrived in Kerala a week after the deluge. Started by Pradeep Nair, members of Animal Warriors India are trained in the tactical rescue of animals. Twelve members of the organization went to Alappuzha and helped out in rescues in the Kuttanad area of Alappuzha.

Also there were activists to the rescue of animals in Kerala after floods - The Humane Society International (HSI) India. Volunteers and activists were on ground zero doing their best to save the animals in the state. Team of 6 HSI India experts was operating in Nilambur and Tirur, in Malappuram district - Kerala's worst affected regions for four days. They were working with NDRF to locate and rescue dogs, cats and other animals left behind. The team also provided medicines, shelter and food for sick and injured animals.

Pic: Sally with a rescued dog

According to HSI Eranhimangad relief camp, Malapuram district had maximum animal deaths. "Our team encountered with many animals who have perished. However we were still finding abandoned dogs and were able to rescue dogs and kittens found trembling as floods raged around them" – Says Sally Varma, HSI Volunteer.

Source:

https://timesofindia.indiatimes.com/city/chennai/activists-from-chennai-set-out-for-kerala-to-help-in-relief-work/articleshow/65432712.cms

https://timesofindia.indiatimes.com/city/kochi/how-a-team-from-chennai-rescued-18-dogs-during-kerala-floods/articleshow/65515400.cms

https://www.indiatoday.in/fyi/story/kerala-floods-humane-society-international-animals-rescue-1317376-2018-08-18

8. Digital disinfectors

Natural disasters are also a breeding ground for misinformation and digital chaos. In fact, the Kerala chief minister had to take to Twitter, requesting people to "abstain from spreading misinformation on WhatsApp & social media networks".

During the rescue, a daunting task of identifying which areas required what kind of assistance, and deploying fast according to the data was a difficult. This task was made easy

by synergizing the power of Internet and the hardware of smart phones. Filtering through the noise and ensuring available resources were utilized most efficiently, to mapping drowned localities to make sure nothing missed out on was made possible with the help of geospatial mapping and data services, and three home grown startups mentored by the Kerala Startup mission (KSUM)'s efforts.

Strava Technologies, based in Trivandrum and Kerala's first "women-controlled IT organization" employed drone mapping and Geospatial Intelligence Services (GIS) through their in-house product – Cyber Monkey, to help rescue forces map the state and consolidated distress calls from multiple platforms to provide intelligent date to the forces.

Riafy Technologies, based in Kochi, helped in converting physical addresses to GPS coordinates, which was helpful in conducting rescue operations where physical landmarks had been submerged, and sorting rescue, food, water and medicine, requests by coding them and in the process, eliminating duplicate requests as well.

Pic: Logo of digital disinfetors who rose to the occasion and helped during floods.

Social media platforms were used to reach out to the people, to spread awareness, and also to curb the spreading of fake news. Social media platforms became control rooms overnight for relief coordination needs of the state. A local start-up fights fake news and misinformation with its social networking app. Kozhikode-based social networking app QKopy was helping the city traffic police and other authorities to curb the spread of wrong information. They collected verified informations regarding the conditions of roads, communicated directly from the administration. This came at a time when the social media majors like WhatsApp were bringing in restrictions to fight the menace of fake news.

"It's like a digital communication broadcast solution," says Rajiv Surendran, one of the co-founders of Qkopy. "As far as the user is concerned, their mobile number is like a unique ID. If you create a post or an update on the QKopy platform, people who have your mobile number will get those updates (on the app). We were controlling fake messages and forwarded content from other social media (platforms). Nobody can make a fake account on QKopy since the number acts as an ID and address for the propagation (of information)," explained Surendran.

The Kozhikode traffic police also created an account on QKopy to disseminate important information. When the department creates a post, every user who has saved its number gets an update on the app, which was being used by roughly 20,000 users in and around Kozhikode. Organizations like the National Health Mission and Life Mission Kerala are also using QKopy in different districts of the state.

QKopy Online Services Pvt Ltd, a bootstrapped startup incubated by the State government's Kerala Start-Up Mission (KSUM), released the networking platform to the public in May 2018 with an idea to tap the Business to Customer (B2C) market targetting the neighbourhood stores and small business units which can communicate with target

customers.

9. HAM Radio Networks:

When the world was looking to floods, a major landslide occurred at Pancharakolly in Mananthavadi, Wayanad late night on 18th August that wiped away four houses and destroyed acres of agricultural land. No casuality was reported as all residents in the area were shifted to relief camps earlier in the day. The opening of Banasura Sagar dam shutters was lowered from 265cm to 205 cm on 19th. During this entire event happening, the area was completely isolated as there were no communication services in the area.

Meanwhile, ham (amateur) radio operators stepped in to provide vital connectivity. A master control room was set up at district collectorate and amateur radio units were deployed at three taluk offices in Manathavady, Sulthan Bathery and Vythiri under the leadership of district collector A R Ajayakumar. A ham call sign of the DEOC for flood management at collectorate VU2PDA was opened.

"We received 7400 wireless messages during the rescue period. Whatever information we were getting we were sharing it with district officials and rescue teams. We were having 22 HAM Radio operators were using VHF (Very High Frequency) and HF (High Frequency) spectrum there," – Thampi, convenor of HAM radio in Kerala's Wayanad district said.

Sree Murugan with his HAM Radio station at his residence in Thrissur helped the State Disaster Management Authority in rescue and relief activities. With his experience in rescue mission during Gujarat earthquake and Tsunami, was of great help in the Kerala Floods, 2018.

Pic: Sree Murugan with HAM radio setups at his residence.

He helped pregnant ladies who were stranded by the floods to get into safe shelters. He arranged telephone facility to contact a team of doctors in Kottayam medical college to rescue the women.

Source:

https://timesofindia.indiatimes.com/city/kozhikode/kerala-floods-ham-radio-network-set-up-at-wayanad/articleshow/65446818.cms

https://www.thehindu.com/news/national/kerala/ham-radio-services-help-trace-people-in-flood-hit-kerala/article24745108.ece

10. The amateur dam-builders

Building an embankment on a flowing river is an expert job even with the right equipment. Yet a team of 21 people, supported by local residents, managed it with their bare hands in Arattupuzha, Thrissur. Villagers pitched in to build an embankment in Thrissur

Arattupuzha was one of the worst affected areas. On the night of 17 August, the Karuvannur river changed course to enter a thickly-populated area. Two dams on feeder streams were opened during the torrential rains. The river-flooded houses in villages like Panangulam, Ettumana, Pallissery, Chirakkal, and Kurumbilavu. Only an embankment, difficult to build when the water level is high, could keep further flooding at bay. The Armed Forces were focused on rescue operations, say eyewitnesses. The administration had to find another way. So, 21 people were called in from Kuttanad, a rice-growing region. They sought to block the water with a structure built across the river with palm trees and bags of concrete.

"These people are experts in handling such events as Kuttanad has several embankments like this and they can do the job. Once the water is blocked, all the downstream villages can be saved," said state education minister C. Raveendranath, who was overseeing the work on 20 August.

Source:

https://www.livemint.com/Politics/TPcj1djSgu2428hlD1HD4O/Kerala-struggles-to-rein-in-the-river-that-changed-course.html

11. Chekkuty dolls : Memoir of the Kerala flood; Doll turns symbol of resilience in flood-hit kerala

Post disaster, when people were returning back to their homes, onw of the worst hit was their livelihoods, especially the daily wagers, unorganized sector, handloom and grocery market merchants.

The Chendamangalam weavers group was one such affected groups. They lost all their handlooms. Their machineries were damaged. The already made handlooms were all wet and were filled with mud and debris.

The Chekutty Dolls (Cheru – Mud, Kutty – Kid), an initiative started to support Chendamangalam weavers who lost their stocks in the flood. Chekkuttydolls was developed by social entrepreneurs Lakshmi Menon and Gopinath Parayil who became the symbol of hope and resilience for damaged handloom weavers of Chendamangalam in the August floods. The dolls are made from handloom sarees weaved for Onam sales, before the floods damaged them, shattering the livelihood of over 600 weavers, mostly women.

Pic: Lakshmi menon with the Chekkuty dolls.

The revenue from the sale of the Chekkutty Doll was used for the rehabilitation of the weavers. Inmates of women and childcare homes, old age homes and Kudumbashree women was roped in to create Chekkutty lamp wicks (for burning lamps) and lanyard to mobilize funds for rebuilding Kerala, Specifically to support the flood-hit handloom weavers of Chendamangalam. Gopinath says - This could replace the plastic tags wand the lanyards could be used by delegates in a conference or meeting, as decorations in cars, as key chains and for indoor decorations.

Source:

https://www.mathrubhumi.com/women/interview/chekkutty-dolls-made-of-stained-handloom--1.3131383

http://timesofindia.indiatimes.com/articleshow/67563834.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

http://www.newindianexpress.com/cities/kochi/2018/sep/29/chekkutty-dolls-steal-the-show-at-travel-mart-1878530.html

https://www.livemint.com/Politics/6cYaINmWE3TC74OsUUlbVJ/Doll-turns-symbol-of-resilience-in-floodhit-kerala.html

12. Kudumbashree – Self-help groups to Groups offering immediate needs to people:

Kudumbashree- The woman self-help group with its massive workforce across the state provided food and collected relief materials from all possible areas and distributed them in camps. The cleaning drive was undertaken cleaning of 1.13 lakh residential premises and 3100 public spaces across 10 districts. Each cleaning team had about 20 to 25 women equipped with bleaching and cleaning lotions. A total of 320 Community counselors of Kudumbashree offered psychological support to over 11,000 affected people. They also contributed to improved local level coordination. The Kudumbashree members contributed their one-week's savings amounting to Rs.7 Crore to Chief Minister's Distress Relief Fund (CMDRF).
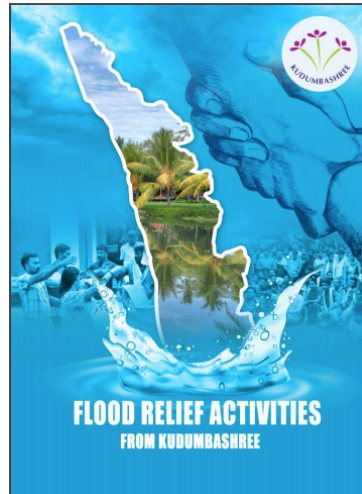
Pic: Kudumbashree led floods relief activities.

Kudumbashree units were involved in a number of activities:

1.   Relief activity

a. Cleaning of more than 1 lakh houses and public offices

b. Providing counseling to more than 10,000 families

c. Conduct of community kitchen in required areas

d. Collecting relief material from all possible areas and distributing in camps

e. Providing assistance to District Collectors for packing of take-home kits

f. Supplying volunteers for various activities

g. The housing of flood victims in Kudumbashree members homes (temporary shelter)

h. Conducting mass cleaning activity in some districts

i. Converging with local self-government department for cleaning and rehabilitation

j. Providing local level coordination

2.   Fundraising

a. Kudumbashree members demonstrated exceptional determination and support for providing a financial contribution to Chief Ministers Distress Relief Fund (CMDRF). An appeal was given from Executive Director to all members to contribute one week's thrift to CMDRF. An amount of Rs. 7.0 crore was received till 29/08 from various districts, and it was handed over to Hon Chief Minister of Kerala on 29/08/2018.

3.   The staff as volunteers

a. Kudumbashree Program Managers from the State office went as volunteers for seven days. They worked in different districts on 22/08 to 28/08, cleaning houses and public officers. Also, the urban team (city mission managers, social development specialists and multi-task personnel) worked hard for 5 days in different municipalities for cleaning of public spaces. The entire district team is in the field coordinating relief activities since August first week. The following table gives the activity sheet of the urban and state team till 31/08.

4.   PIAs in relief

a. Kudumbashree is the state nodal agency for DeenDayal Upadhyay Gramin Kushalya Yojana (DDUGKY), the skill training program envisaged by the Ministry of Rural Development, Government of India. The program is implemented through selected Program Implementing

Agencies (PIAs). At present, there are 120 PIAs in the state, conducting 98 courses (fully subsidized by the government). 34,000 students completed their training (3 month or 6-month courses) and more than 24,000 got placement. On request by Kudumbashree, the PIAs of DDUGKY came forward to assist in flood relief activities. Some of them contributed funds to CMDRF, while others did activities in the field.

5.   Navakeralam Lottery
a. Government of Kerala introduced a new lottery titled 'Navakeralam' lottery to Mobilize funds for flood relief activity. In order to achieve more sales, it was decided to give Casual agency status to Kudumbashree CDS s.

6.   Resurgent Kerala loan scheme
a A new interest-free loan scheme was introduced by Government of Kerala to give loans up to 1 lakh for those who lost their utensils and livelihood during the flood. Kudumbashree was selected as the agency for implementing the loan scheme.

7.   Purchase mela
a. As a part of Resurgent Kerala Loan scheme, Kudumbashree is planning to negotiate with manufacturers/ producers to give household equipment's / utensils / other products in demand at cost price or at a price lower than the market price

Source: http://www.kudumbashree.org/pages/711

13. NIMHANS – Psychosocial support

NIMHANS, Bengaluru deployed a 40-member psycho-social team (Psychiatrists, Psychologists, and Psycho-social workers), one team for each of the 14 districts for rapid psycho-social assessment and community -based psycho-social care.

Pic: NIMHANS team at Kodagu flood affected colony.

Source:http://www.newindianexpress.com/states/karnataka/2019/aug/29/bengaluru-psychiatrists-visit-flood-hit-areas-counsel-victims-2026107.html

14. State-level activities

Post disaster, State authorities initiated a number of preparedness and mitigation measures. One such initiative was to train forces under 'Operation Jal Raksha' which engaged 40,000 police personnel, police boats, coastal police boats, marine commandos, women battalions, coastal police, State Disaster Response Force members who actively participated in immediate evacuation and emergency food aid. Kerala Fire and Rescue Services deployed 3200 members of the force for rescue operations. A 24-hour control room was opened in Secretariat for coordinating relief and rescue activities.

Pic: local volunteers helping in rescue.

14. 1 Kerala Health services

With the history of Nipah outbreak, precautions were taken by Kerala state health services to counter the leptospirosis disease post flood. Besides issuing advisories on best precautionary practices and distributing thousands of antibiotic tablets, the government has reportedly Setup special wards in several hospitals to treat leptospirosis and kept the outbreak under control and stood up to its reputation as one of the country's best healthcare system.

Pic: Doctors were deployed in relief camps

Source:

https://qz.com/india/1377755/after-kerala-floods-leptospirosis-has-killed-nearly-70-in-india/

http://www.newindianexpress.com/states/kerala/2018/sep/04/leptospirosis-cases-are-mounting-66-deaths-till-now-1867181.html

Pic: Army personnel deployed to clean and stop spread diseases.

14. 2 Cleaning drives: Health department and Suchitwa Mission

The Health Department and Suchitwa Mission devised an action plan to clean up the soiled houses and public places and the cleaning drive was undertaken with the assistance of welfare groups from across the districts along with the local self government department.

Source: http://www.newindianexpress.com/cities/kochi/2018/aug/14/kerala-floods-aftermath-clean-up-drive-of-homes-public-places-today-1857489.html

14.3 Restoration of Telecom and Electricity services

Kerala lost around 25 lakh electricity connections across the state. The Kerala State Electricity Board and its employees managed to restore around 24 lakh connections including repairing of 15,032 transformers.

Pic: KSEB staff repairing the essential services within hours

The Department of Telecom (DoT) will consider flood-hit Kerala's response as 'a best practice' and refine the existing Standard Operating Procedure (SOP) for telecom services. The use of Common Alert Protocol-Early Warning Platform (CAP-EWP) helped the

Government Issue early warnings to the public, the meeting assessed. The system developed by DoT and CDOT had helped the State Disaster Management Authority (SDMA) issue early warnings to the public through mobiles.

Source: https://www.thehindubusinessline.com/info-tech/dot-to-consider-keralas-response-to-floods-as-best-practice-refine-standard-procedure-based-on-learnings/article24790698.ece

15. Policy Speedups

Rebuild Kerala plans to skip red tape, bureaucratic blocks

The state government set up a transparent mechanism to avoid red-tapism and bureaucratic hurdles in the Rebuild Kerala Initiative (RKI), a visionary plan launched by the government for the long-term development of the state after the floods. The initiative listed a number of ongoing studies across various departments and was put in for public consultation on what could be improved. Now post one year, the Rebuild-Kerala initiatives are paced with the help of funding from the German funding agency and the World Bank. There's setup a different section in the revenue department to look after the activities of the Rebuild Kerala initiative.

Pic: www.rebuild.kerala.gov.in - RK initiative