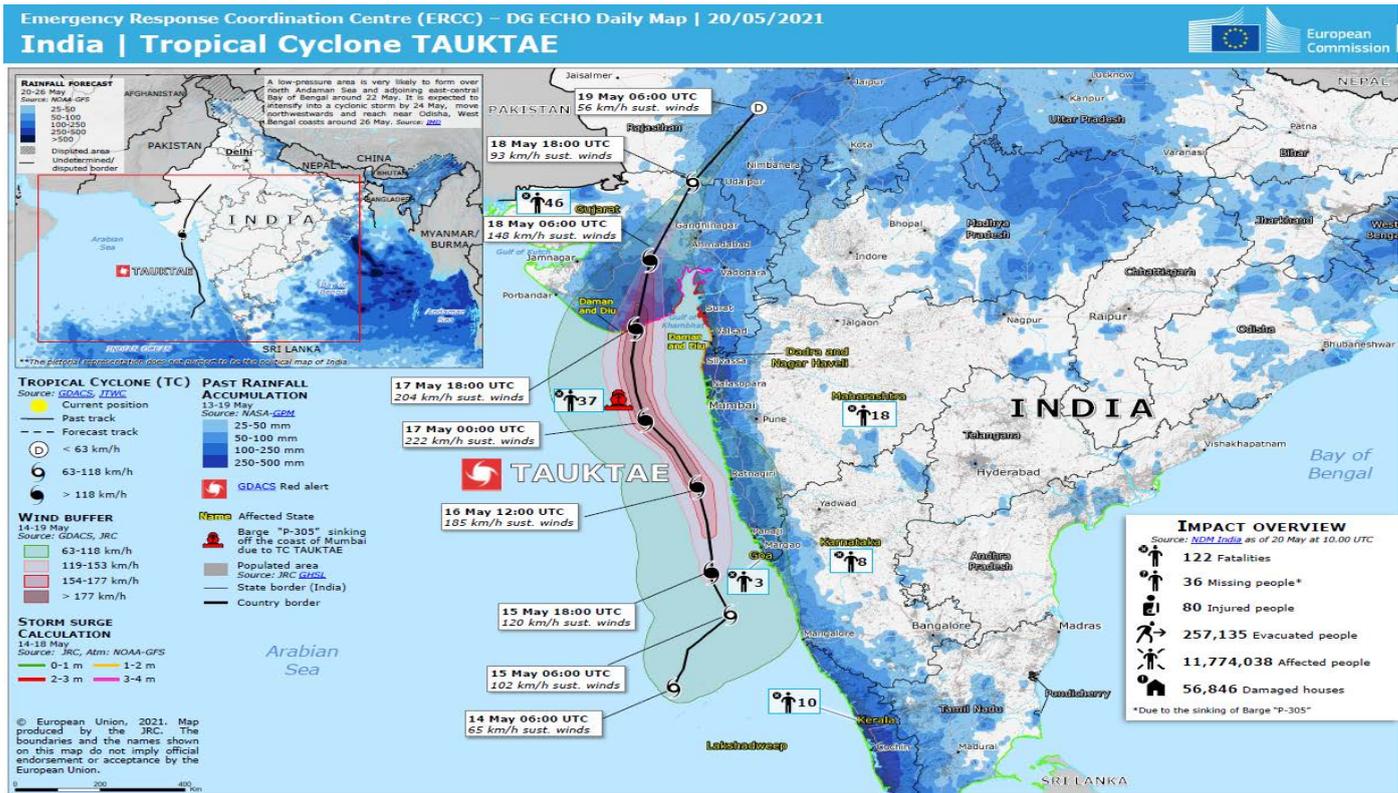






# CYCLONE “TAUKTAE JOINT RAPID NEEDS ASSESSMENT REPORT

In the aftermath of the Cyclone in Gujarat -May 2021



**Disclaimer:**

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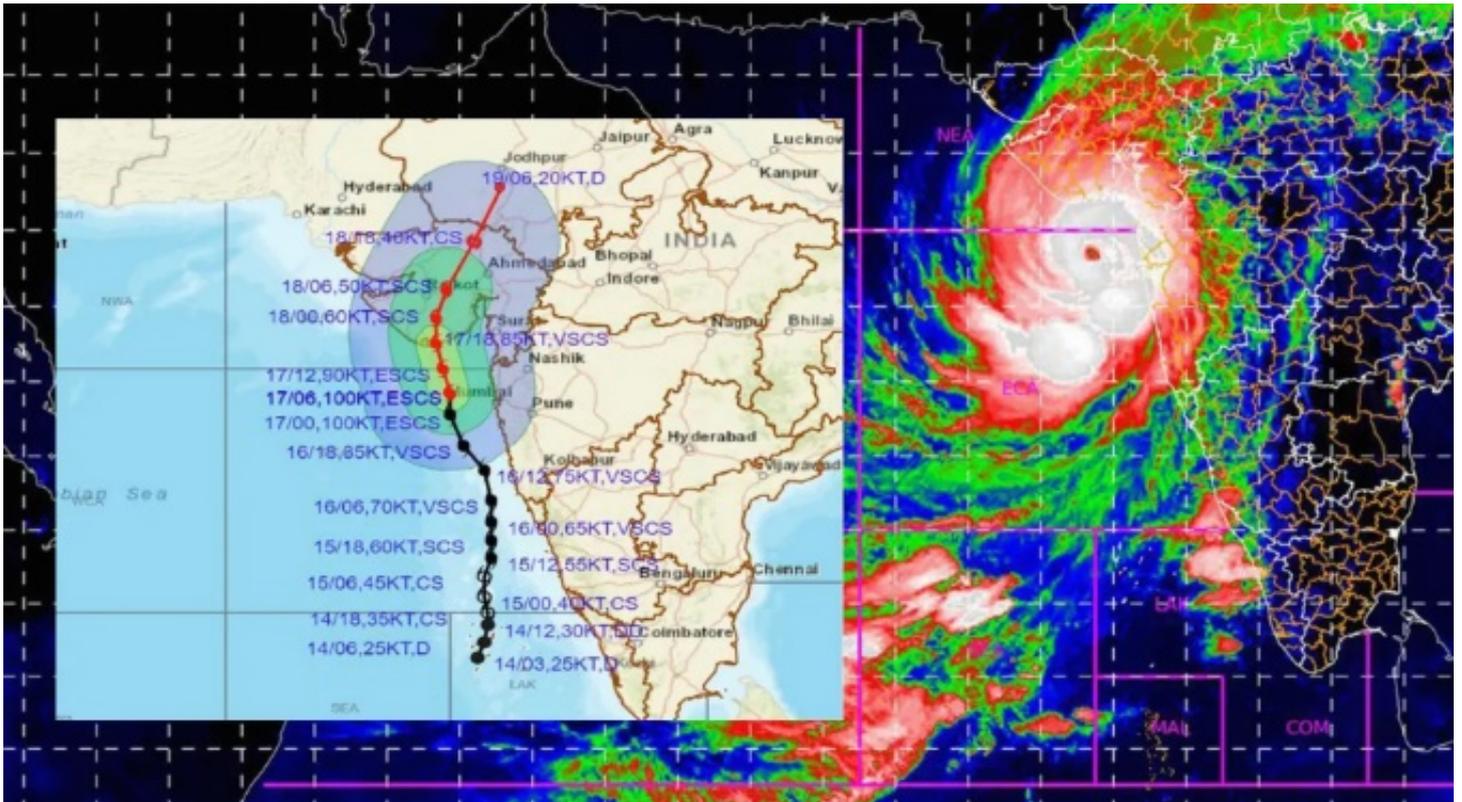
## 1. Introduction & Background

Gujarat lies on the western coast of India between 20°06' N and 24°42' N and 68°10' E to 74°28' E. The length of Gujarat from north to south is approximately 590 km and width from east to west is approximately 500 km. The State is spread across an area of 196,024 sq. km, which is just six per cent of the total geographical area of India, and it has the longest coastline (1,663 km) among Indian states. Gujarat Population Census Data shows that it has Total Population of 6.4 Crore which is approximately 4.99% of total Indian Population. Literacy rate in Gujarat has seen upward trend and is 79.31% as per 2011 population census. Of that, male literacy stands at 87.23% while female literacy is at 70.73%. Urban Population of the State is 42.6%, which used to be at 37.4% in 2001. Rural population in the state in 2011 fell to 57.4% from 62.6% in 2001. Ahmedabad is the most populated District in the State, with 7.20 million people, up 11.94% from 2001 census, followed by Surat with 6.07 million people, up 10.07%, as per Gujarat's Directorate of census operations. The state is divided by 33 administrative districts and Gandhinagar is the state capital. In Gujarat 60 Talukas out of 249 talukas in the state are at high risk to cyclonic pressure/wind > 50-55 m/s where 16 million people lives along with the 1600 km coastline in the state. The child population of 0-6 years consists of nearly 2.04 million which would be impacted directly due to a severe cyclonic storm in these regions.



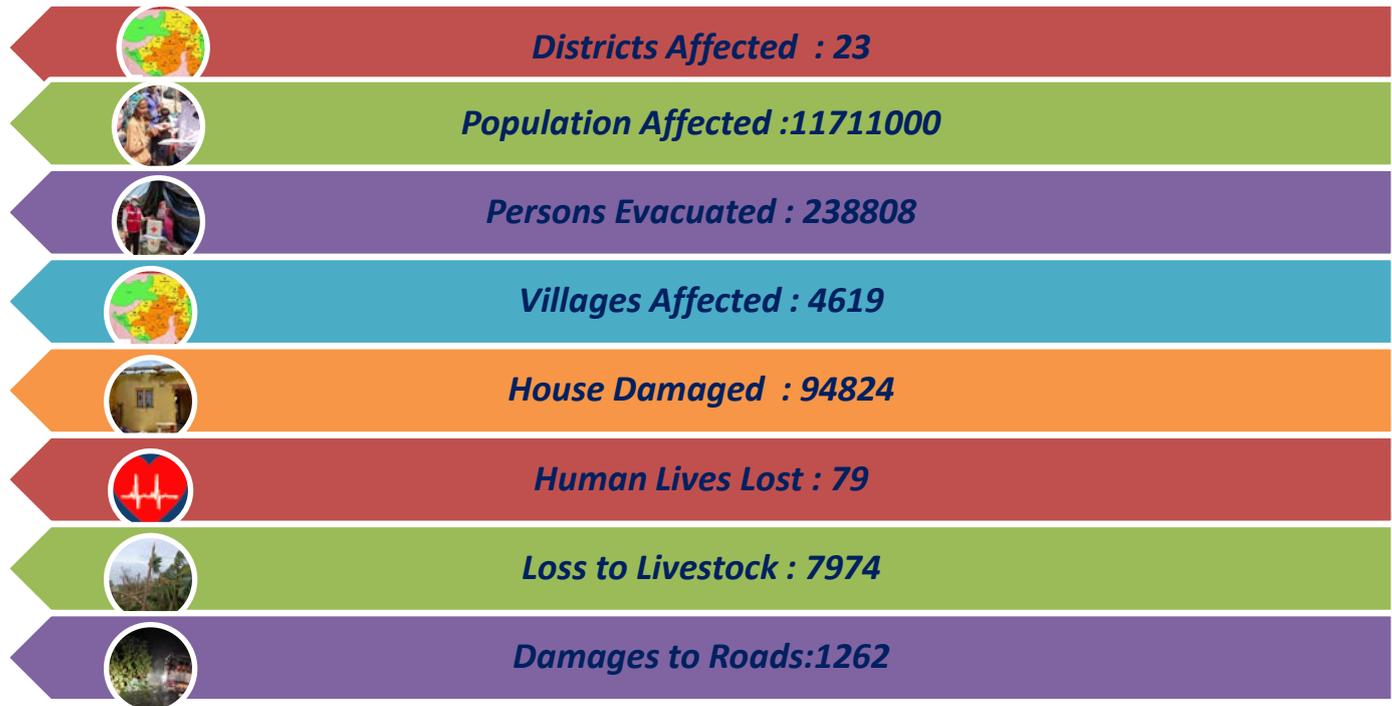
## Cyclone Tauktae

A low-pressure area was formed over southeast Arabian Sea & adjoining Lakshadweep area on 13<sup>th</sup> May morning (0830 hrs IST). Which subsequently intensified into Extremely Severe Cyclone on 17<sup>th</sup> May. The Extremely Severe Cyclonic Storm's landfall process started on 17<sup>th</sup> May evening continued till 18<sup>th</sup> May. It made a landfall on the Gujarat coast in Una Taluka east of Diu at 2030 hours as a Very Severe Cyclonic Storm with a maximum sustained wind speed of 150-175 kmph. It crossed Gujarat & Diu coasts in Morning, further started to weakened into well marked low pressure in evening of 19.05.2021. IMD issued **last bulletin** pertaining to this system on **19<sup>th</sup> May 2021 at 19:45 hrs**. Winds have ravaged coastal areas in the western state of Gujarat, uprooting trees and electricity poles. In Saurashtra district, electricity supply has been cut as a precautionary measure. About 200,000 people were evacuated across several states as the cyclone approached, bringing with it heavy rains and gusty winds. The storm has hit the region amid a devastating second wave of Covid-19 that has overwhelmed Gujarat hospitals.



In Saurashtra, storm surge estimated up to 3 m (9.8 ft) was recorded in the coastal districts. Electricity supply was disrupted due to high winds in parts of Amreli, Gir-Somnath, and Diu.

Over 100 anchored ships were sent back to the higher grounds due to fears of storm surge. The districts of Junagadh, Gir-Somnath, Bhavnagar, and Amreli were battered by heavy rainfall and winds up to 100 km/h



(62 mph) by noon of May 17, also being accompanied with dust storms in other regions. The coastal highway

near Kodinar was blocked by uprooted coconut trees. A mobile tower and approximately 200 trees fell in Una. Many areas were affected by power outages.

Ahmedabad recorded 114 mm (4.5 in) of rainfall within 24 hours, nearly breaking a rainfall record of 138.3 mm (5.44 in) which was recorded on May 9, 1982. The cyclone caused downpours that began in the afternoon and ended at midnight without stopping. Gusty winds reaching up to 60 to 70 km/h (35 to 45 mph) were recorded in the city.

By 19 May, mobile phone networks were still down in several areas after the storm hit the state. Over 600 roads were blocked. A major mango growing belt was damaged

## Cyclone Tautkae (preparedness, landfall, response, relief and impact)

### Preparedness by Central Government Agencies:

- Situation was monitored 24x7 by State and Central Government at the highest level.
- Cabinet secretary took a meeting of **National Crisis Management Committee (NCMC)** on 16.05.2021 reviewed the preparedness measures in wake of cyclonic storm TAUKTAE and on 20.05.2021 to reviewed the relief and restoration efforts made by the State Governments/ UT Administrations and Central Ministries/Agencies in the aftermath of Cyclonic storm 'Tautkae'.
- Both Control Rooms of Ministry of Home Affairs are monitoring the situation 24X7 and all possible help is being provided to the concerned States/UTs.
- Regular advisories issued to all coastal States and UTs since the onset of the low pressure, for preparedness measures and for issuing warnings to fishermen.
- Ministry of Power has activated emergency response systems and is keeping in readiness transformers, DG sets and equipments etc.
- MHA has already released first instalment of SDRF in advance to the States.
- Men and resources of NDRF, Coast Guard, Army, Air Force, Indian Navy and Coast Guard were alerted/ mobilized. Their efforts are as under: -

### NDRF Deployment/Response:

- 20 teams of NDRF have been deployed in mostly at Junagarh, Gir Somnath, Amreli, Bhavnagar and Botad districts in the state.
- **NDRF** Teams assisting State administration in mass evacuation of persons & evacuation of livestock. NDRF has cleared 649 Kms road, removed 5350 Nos. fallen trees& 1022 Nos Electric Poles and evacuated 05 livestock. NDRF also assisted State administration in distribution of food.

### Indian Army/Indian Coast Guard (ICG) preparedness:

- 517 fishing boats have been brought to sea shore.
- Six additional Army teams have been staged forward to Junagarh to deal with after effects of cyclone at other cyclone hit places like Botad, Amreli and Bhavnagar.
- All columns and Engineer Task Forces positioned close to impact areas and are ready for deployment.
- Assistance provided for creating Power back up and other contingencies for COVID Hospitals including Dhanvantri Hospital Ahmedabad.

### Preparedness by Government of Gujarat:

- Government of Gujarat shifted 2,38,808 people of 23 coastal and adjoining districts to safer places/relief camp.
- Operations at Ahmedabad's Sardar Vallabhbhai Patel International Airport remain suspended from 7:30 pm on May 17 to 5 am on May 18.
- Gujarat CM Shri reviewed the situation in the coastal Valsad and Gir Somnath districts through telephonic hotline from the State Control Centre late in the night and directed the collectors to deal with the situation with 'Zero Casualty' approach. PM spokr to CM on the related situation and preparedness in the State and assured all assistance and support from the Centre.

- In the wake of Tauktae, CM announced the suspension of Corona vaccination drive for the next two days i.e. May 17 & 18 - Monday & Tuesday, and urges citizens to remain indoors considering the possibility of heavy rains along with cyclone in the state.
- 10445 hoardings have been removed from urban areas and 1519 hoardings have been removed from rural areas and 668 temporary structures have been removed.
- 287 restores teams of B&R Department, 276 of Forest Department and 531 restoration of Health department and 367 restoration of Revenue department have been deployed and engaged in restoration.
- 508 dewatering pump employed at possible affected districts in the state.
- Loss of power has been reported in coastal area in around 5364 villages, out of which power has been restored in 2092 villages and for remaining villages power restoration is under process.
- There are 1489 power backups deployed in all hospitals in affected districts. 178 ICU on wheels ambulance and 636 numbers of 108 ambulances have been deployed in affected districts.
- All 4566 fishermen along with boats have returned from sea as part of a precautionary measure .
- In view, ongoing COVID pandemic, arrangements made as per MHA Advisory.
- Teams along with resources kept ready for immediate restoration power supply, water supply.
- Teams of Engineers deployed for road clearance and repair.

## Extent of Damages Overview:

No. of Districts affected – 23

No. of Villages affected – 4619

Total Population affected – 1,17,11,000

Human Lives lost – 64 (Tree Falling-06, Wall collapse-33, Building collapse- 10, Lighting-06, Ceiling Falling-06, Tower Falling-01, Power pole-02,)

Injured- approx. 200

House damaged - Kuchcha – 93231 and Pucca- 1593

Loss of Livestock – 3090

No. of Persons evacuated – 2,38,808

No. of Persons stayed in Relief Camps –

Crop area affected - Horticulture and summer crops were destroyed in 2 lakh hectares in 86 talukas of these nine districts.

Infrastructure damaged - Electric Pole-104024 Fallen tree- 91400 Road Damage-1262 Govt Building – 543

### Human lives lost and injuries

- 64 deaths have been reported and approx. 200 people been injured due to the cyclone.

### Electricity:

- Power supply snapped due to uprooting of electricity poles, damage to substations and transmission lines.
- 104024 Electric poles were damaged resulting in loss of power has been reported in coastal area in around 5364 villages.
- 2101 Street light posts were affected due to falling of trees and heavy wind velocity.

### Infrastructure:

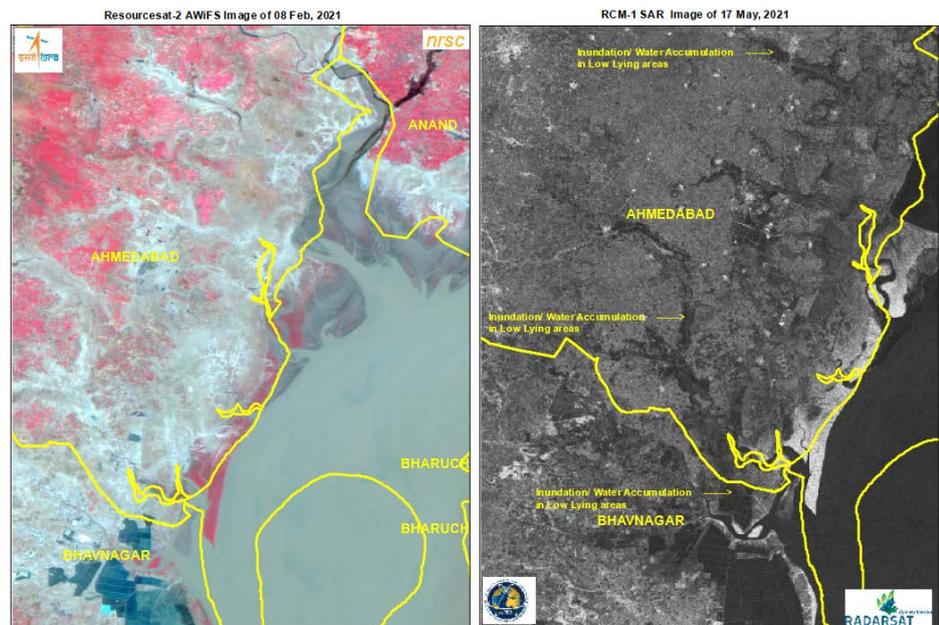
- Major damages to 1262 private buildings and 543 government infrastructures were reported due to cyclone and heavy rainfall.
- Minor damages were reported for 130 Covid hospitals in 5 worst affected districts.

### Communications:

- Huge numbers of trees have been uprooted resulting in disruption of road communication.
- 1768 Telecom towers have been affected resulting in cellular and telephone network down in wide area. All telephone and cell phones are down in 5 worst affected districts in the state.

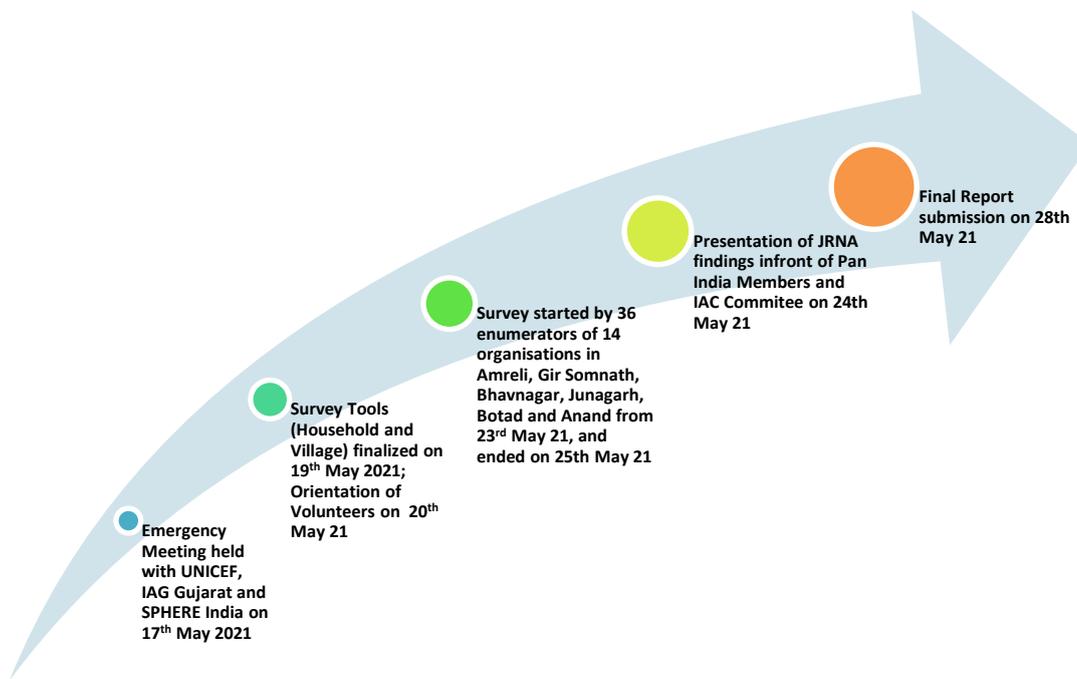
## Relief and restoration measures by Government and CSOs

- Honorable Prime Minister has announced the financial assistance of Rs. 1,000 crore for immediate relief activities in the State and Rs. 2 lakh Ex gratia for the next of kin of the dead and Rs 50,000 for the injured due to Cyclone Tauktae.
- Teams assisting State administration in mass evacuation of persons & evacuation of livestock.
- NDRF has cleared 338 Kms road, removed 472 Nos. fallen trees & 71 Nos Electric Poles and evacuated 05 livestock.
- NDRF also assisted State administration in distribution of food.
- Out of 130 Covid hospitals affected, 98 have been restored.
- Out of total 1768 mobile towers affected, 1177 restored.
- Out of 18 Oxygen plant affected, 10 have been restored.
- Water supply affected 1467, 1031 have been restored.
- Out of 2101 street light affected, 1542 have been restored.
- Out of 5318 Feeder affected, 2836 have been restored.
- 143381 food packets have been distributed.
- 287 restores teams of B&R Department, 276 of Forest Department and 531 restoration of Health department and 367 restoration of Revenue department have been deployed and engaged in restoration.
- 508 dewatering pump employed.
- Loss of power has been reported in coastal area in around 5364 villages, out of which power has been restored in 2092 villages and for remaining villages power restoration is under process.
- There are 1489 power backups deployed in all hospitals in affected districts. 178 ICU on wheels ambulance and 636 numbers of 108 ambulances have been deployed in affected districts.



### IAG initiative in collaboration and support with UNICEF and SPHERE

IAG Gujarat along with its members Human development resource Centre (HDRC), Sikhane Samaj Kalyan Kendra (SSSK), Utthan, Agan Khan Agency for Habitat, Bhagirath Kelvani Mandalay has concluded the JRNA, assessed urgent need of community related to Food, Health, Shelter, WASH, Protection. Many members have initiated the response as per identified needs. The major needs have been identified related to WASH, Food, Shelter and Health.



## Overview of the report (along with the objectives of JRNA)

The report provides an overview of the results based on the Joint Rapid Need Assessment, the methodology and the context in which the survey was undertaken. The findings in this document reflects an understanding of impact on the services and infrastructure, immediate, short term and long term needs of the community.

### Methodology:

The Joint Rapid Need Assessment in Cyclone Tautkae affected areas of Gujarat has been conducted to identify the urgent, mid-term and long-term needs of affected community based on Food & Nutrition, Health, WASH, Shelter, Education, Livelihood and Protection, and to flag out the vulnerability of affected community to access the basic services and entitlements.

It was done through joint efforts from Inter-Agency Group Gujarat, UNICEF field office for Gujarat, Sphere India with the field support from local organizations Human development resource Centre (HDRC), Sikhane Samaj Kalyan Kendra (SSSK), Utthan, Agan Khan Agency for Habitat, Bhagirath Kelvani Mandalay. GSDMA and concerned District Administrations were providing support and necessary information & data.

During JRNA, urgent needs of affected communities have been identified through direct data collection from the field, government’s damage assessment reports, pre-cyclone information from respective line departments, secondary data from various sources, media reports and discussions with grassroots functionaries.

Data was collected based on the indicators of the specific tools/questionnaires used during the interviews/discussions/ FGDs.

The methodology was based on:

- a) Structured interviews done with affected 5% households (ensuring prioritise random households from all 98 most affected villages).
- b) Structured village level information gathering from most affected 98 villages based on Food & Nutrition, Health, WASH, Shelter, Education, Livelihood, Protection and accessibility of community towards basic services and entitlements.
- c) Brief discussions with Gram Panchayat Members, Ward Members, local self-help groups, local CSOs & NGOs who had pre-disaster existence in the area and also assist community with relief post disaster.
- d) Individual interviews with mixed group of Gram Panchayat members, local leaders and outreach workers and community members to capture more qualitative information and the information which might missed in structured data collection.

Secondary data to examine the observation and facts.

### 1.1 Rational behind the Sampling for Assessment:

To validate the findings and observations and to capture the quantitative and qualitative impact of the disaster on households living in affected areas, the sample for the assessment included the affected households, affected villages, feedback from various stakeholders, and feedbacks from local CSOs & NGOs who had pre-disaster existence in the area and also assist community with relief post disaster have been recorded.

Accordingly, out of 4619 affected villages and 1960 most affected villages, 98 villages have been taken as sample of 5% representation of most affected community. 500 families from 98 villages have been assessed and documented based on the instruments/tools/questionnaires.

By Organizations' Team Leaders and Unicef's deployed team in field few individual interviews with mixed group of Gram Panchayat members, local leaders and outreach workers and community members to capture more qualitative information and the information which might missed in structured data collection.

Secondary data analysis based on information disseminated by government departments, media reports, reports from other national or local organization also has added the quality and authenticity to this need assessment process through opportunity to investigate questions using large-scale data sets that are often inclusive of under-represented groups.

### 1.2 Primary Data Collection

The data collection process was initiated by documenting interviews of 500 Households and filling the 98 village forms based on exhaustive questions consisting Food & Nutrition, Health, WASH, Shelter, Education, Livelihood, Protection, and geographical challenges. These both questionnaires have been filled through KoBoCollect Tool, wherein format designed by national level experts and incorporation of suggestions from local humanitarian actors done.

In this process, a team of experts have transferred final questionnaires to KoboCollect Tool and trained the

data collectors about its usage.

For collecting more authentic information, data have been collected from approx. of 5% of most affected population. In this process 500 household-based respondents were interviewed, and 98 most affected villages have been assessed through village form and documented based on the instruments/tools/questionnaires.

### 1.3 Quantitative Data Analysis

Two sets of questionnaires i.e. Household level and Village level Interviews of Stakeholders were developed, which were sample tested by existing field team, and as per their feedbacks formats were modified and finalised. For optimizing the resources, proper use of advance technology was followed during the survey. All sets of questionnaires were used through mobile based application KoboCollect Tool. Which provided sufficient opportunity to the data collectors to access the data immediately transfer on spread sheets.

In order to keep the assessment neutral and unbiased, local volunteers were engaged physically visits and record the responses, for this 8-10 civil society group members of Inter-Agency Group Gujarat, Field visits were also made to 3 worst affected district to assess the situation and to provided supportive supervision to the partner staffs working in the JRNA. These volunteers were trained to efficiently use the Mobile based Application KoBoCollect Tool, and provided inbuilt forms to fill during interview of responders.

Inter-Agency Group Gujarat is the coordinated platform of 150 members and active in the state to support community in preparedness and emergency response. This group is working closely with Gujarat State Disaster Management Authority, respective District Disaster Management Authorities, Gujarat Institute of Disaster Management and Unicef field office for Gujarat.

For keeping interview process more open, other than assessment related questions, participants were encouraged to provide insights from their own experience, learning and perspectives about vulnerability of their area and immediate needs of affected community.

Once data was collected from KoBoCollect Tool, an internal team cleaned the data under the supervision of experienced Manager. And responses were analysed and highlighted in form of graphs and charts for proving better clarity to readers.

A trained Report Writers' team from from Inter-Agency Group Gujarat, Unicef field office for Gujarat, Sphere India was engaged since the initial stage, which prepared report based on received information, interviews, FGDs, secondary data analysis, and general observations of surveyors. Two layered Report Writers' team has been engaged, wherein two members; one field expert and one national level expert per sector have been engaged to articulate the information not just based on collected information but to use their vital experience of humanitarian sector to give proper justice to report.

This Joint Need Assessment Report has been prepared with the structure consisting immediate, mid-term and long term sectoral needs of community, their existing capacity to cope -up with the situation, attention required for preparedness and issues which required urgent attention of advocacy.

## Assessment Findings



# WASH

### Situation Analysis:

The Cyclone Tauktae has ravaged the houses, shops, fields, electricity infrastructure etc in the coastal districts of Gujarat.

A large group of population had lack of access to drinking water and sanitation system, which increases the threat especially during the COVID-19 emergency.

At normal times, these affected villages mainly depend on ground-water sources for the provision of drinking water. As the cyclone affected the power-supply network, the water supply system failed and consequently the sanitation systems failed. People continued to depend on untreated water, or had to walk far distances to collect water and had to rely on open defecation. However, in the past week it is observed that power-supply has been restored in most of the affected areas, especially towns. While most villages have made arrangements of generators that help them fill their tanks once during the day. Due to this limited supply, the result has been that such affected groups have started cutting down their use of water. For instance, taking bath once in two days or reusing clothes and delaying the washing of clothes are some of the ways by which communities are ensuring there is no wastage of water. This in turn has had an impact on the overall hygiene and sanitation at the rural level. Moreover, there are issues in provision of water for livestock purposes as well. The lack of water supply again aggravated the issues on the importance of hand hygiene as people. Such break in the basic services for a longer time could cause health risk to the society.

In terms of water quality there is no contamination caused due to the cyclone. Around 80% of the population now uses toilets instead of open defecation which can be credited to the Swachh Bharat Abhiyan. However, in coastal areas, those who live in unorganized settlements still defecate in the open but this would not lead to a situation where an outbreak will arise. A major issue arising in sanitation and hygiene can be found in children. Schools especially in rural areas, ensured and monitored that a child coming to school has followed basic hygiene measures (ear cleaning, nails and haircutting etc.). Since these schools have been closed since a year due to the pandemic, these measures are often ignored in children. In addition, people in rural areas do practice hand washing but these are not following the Covid-19 protocols. Although such impact has no relation to the recent cyclone, in the long run it is necessary to create awareness about hygiene and sanitation especially in the emergency context.

	Urban	Rural	Total
<b>Population living in households that use an improved sanitation facility<sup>1</sup> (%)</b>	89.3	63.3	74
<b>Population living in households with an improved drinking-water source<sup>2</sup> (%)</b>	99.4	95.7	97.2

<sup>1</sup> Piped water into dwelling/yard/plot, piped to neighbour, public tap/standpipe, tube well or borehole, protected dug well, protected spring, rainwater, tanker truck, cart with small tank, bottled water, community RO plant.

<sup>2</sup> Flush to piped sewer system, flush to septic tank, flush to pit latrine, flush to don't know where, ventilated improved pit (VIP)/biogas latrine, pit latrine with slab, twin pit/composting toilet, which is not shared with any other household. This indicator does not denote access to toilet facility.

Source: NFHS-5

### Assessment Findings

The cyclone has affected the water and sanitation condition across all the assessed districts, but with different gravity:

- the villages normally depend on hand pumps, open wells and piped water supply for drinking water needs – some of them have been damaged.
- Most pipes water supply are electric
- the power cut has rendered the fresh water inaccessible
- usage of contaminated flood waters for bathing, cleaning kitchen utensils and other cleaning needs are of concern

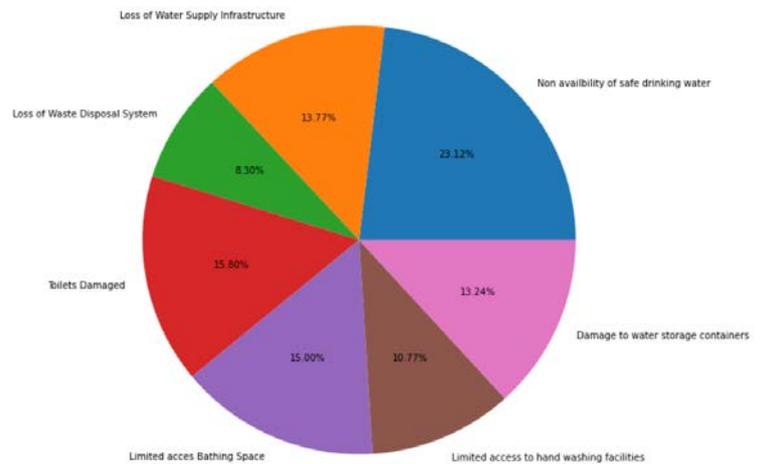
The below tables show number of villages that are impacted by the water supply system.

S. No.	District	Block	Total villages	Affected villages
1	Gir-Somnath	Una	92	92
2		Gir Gadhdha	44	44
3		Kodinar	60	31
4		Talala	67	20
5	Bhavnagar	Mahua	113	95
6		Jesar	48	31
7		Garidhar	38	25
8		Palitana	81	32
9		Bhavnagar	54	25
10		Ghogha	46	21
11	Amreli	Dhari	75	12
12		Bhagsara	34	16
13		Liliya	37	6
14		Babara	57	4
15		Kukavav	45	17
16		Jafrabad	42	10
17		Savarkundla	74	62
18		Rajula	72	12
		Total	1079	555

Based on the table above, around 555 villages of three district have lack of access to drinking water and continue to defecate openly.

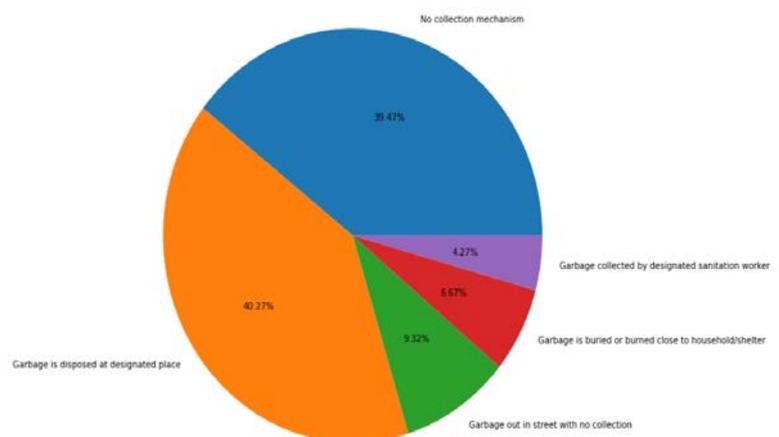
During the assessment on WASH sector impacts, it was found 13.77 % loss to the existing water infrastructure which has further impacted on 23.12% of households facing difficulties in getting clean drinking water. The major issues can be attributes to the lack of standby power generators to lift water for distribution through piped water supply system. Fortunately, there was limited cases of

water inundation and breaches in the five worst affected districts of the state. There were no major reports of damages to WASH facilities and systems because of flooding and water stagnation. However, there were apprehensions of contamination of water sources in some open sources which has been cleared with government intervention to a large extent.



Women reported that they were using sanitary napkins pre-disaster. Sanitary napkins are not available in shelters and nearby markets. They mentioned that access to market is cut off and they are not able to buy.

There is no supply of sanitary napkins from ASHA/AWW. Women are using cotton cloth. Due to insufficient water, women and girls are suffering to wash and dry the sanitary clothes which may pose health threats.



## Recommendations based on real time data and inputs from sectoral experts:

### 1. Immediate Measures

Immediate measures should focus on providing safe drinking water, domestic water and sanitation facilities. Cleaning up of waste should also be in priority. Some of the specific measures can be –

- Immediate water supply through tankers should be mobilized in affected villages. This is to meet the demand of drinking water which has been hampered due to the damages to power supply. This is especially important in the context of Jafrabad taluka in Amreli where power supply in many villages has not been restored. Point-of-use chlorine drops should be made available with proper education on its use, in order to increase availability of potable water for the time being.
- Alternatively, in the absence of electricity, diesel generator sets should be employed where water can be made available through open wells and borewells in affected area.
- Damages to the piped water supply, handpumps, tube wells, borewells, etc., should be started so as to restore the natural water supply of the region quickly.
- Safe water containers (2 Nos. 10 Lt capacity Minimum) with lid and tap should be provided to vulnerable families.
- If toilets of schools, panchayats and other community places are in working condition, it should be opened up for people who don't have access to toilets. Panchayat should take responsibility of

cleaning and maintaining these facilities, along with provision of adequate water and lighting at night.

- Debris, agriculture waste, animal carcass and other hazardous waste should be cleaned, considering Covid -19 guidelines. Many of the villages have been cut off due to debris and road blockages. As a result, services for debris cleaning have not been able to reach isolated location such as agricultural fields for cleaning up the waste. Therefore, this cleaning up of roads, fields, etc., is to be done not only for hygiene, but also for increasing connectivity.
- PPE kits should be provided to sanitation workers to ensure their health and safety.
- Hygiene kit including sanitizer, soap, tooth brush, tooth paste, anti-septic liquid, sanitary pads, detergent should be provided to vulnerable families, to address the needs of women, adolescent girls and children.

## 2. Medium and Long-Term Measures

Medium and Long-term measures should address the development of the water and sanitation system into a resilient and sustainable one. These include not only improving the infrastructure, but also the capacity building of the local community to address small emerging needs themselves. These include –

- Back-up power supply in the form of generator should be kept on standby in a maintained condition near all major and minor water supply structure. This will help in ensuring that a power outage does not bring the water supply system at a standstill, since water is one of the main items of necessity.
- Alternative power supply for water system can also be explored, for example- solar panels. Districts like Amreli, Bhavnagar and Gir Somnath receive ample solar energy and can be used to properly run the water supply systems. Appropriately safeguarded solar installations can withstand high wind speeds. These can be constructed for pumping stations to reduce dependence on electricity or diesel power.
- Training of youth from the community on doing basic repairs to the piped water system, handpumps and tube wells can be done. Meanwhile, efforts can also be directed towards training of community in well cleaning. Both these trainings involve relatively simple techniques that can easily be learnt by the community and implemented. This will help in increasing their capacity so that in case of such a situation next time, the community can begin restoring their water supply till the time accessibility is restored and external help can be procured.
- Longer term agreements with suppliers for storage and supply of basic non-perishable hygiene items including menstrual absorbents, following minimum standards in emergencies.
- Cleaning, disinfection and maintenance of village ponds should be taken up jointly to ensure that the ponds serve as emergency water sources and not turn into waste dumping areas
- Awareness building and discussions need to be done with women and adolescent girls regarding menstrual health especially in the coastal villages. This can be linked with the services provided by ASHA and Anganwadi workers as well as the Mamta Diwas.



## Shelter

### Situation Analysis:

- Out of 23 affected districts in the state, 5 districts namely Amreli, Gir-Somnath, Bhavnagar, Junagadh and Botad were the worst affected districts.
- In the housing sector, as many as 98,518 kutcha houses and 1593 pucca houses have either been completely destroyed or damaged due to their weak structures.
- A considerable population also lives in houses on farms which are made of stone and Mangalore tiles or tin roofs. These semi-permanent houses have also faced wall collapse and roof being blown off. In the short term, material support is required in terms of tarpaulin sheet or tiles for roof for temporary housing arrangements.
- In the medium term, support for repairing the partially damaged houses is required. While in the long term, technical support is required for facilitating the construction of cyclone resilient housing. The partially damaged houses should not be encouraged to be demolished, but to be repaired and restored to bring them back to the original state. But then they will need to be retrofitted to reduce the vulnerability which in first place had caused the damage. Especially the strengthening of roof so that it does not fly off in next cyclone. This also will become an important retrofitting measure for many other existing houses in the cyclone areas.

### Recommendations based on real time data and inputs from sectoral experts:

The government has announced ex gratia compensation under seven heads — cash doles, gharvakkhari (household goods), partially damaged homes, fully damaged homes, damaged to cattle sheds, loss of livestock and loss of human life. The government will pay Rs 25,000 for partially damaged authorized or unauthorized homes and Rs 95,100 for fully damaged authorised homes. Owners of damaged huts will be eligible for Rs 10,000 ex gratia compensation. Owners of cattle sheds will get Rs 5,000 compensation. However following recommendation were made by the IAG to complement the government efforts in recovery phase as part of Build Back Better.

### Immediate actions:

- Ensure safe living space for families whose houses are completely destroyed including COVID appropriate guidelines.
- Provide shelter kits based on the local construction practices along with the quick guide on repairs.
- Creation of teams of masons at Gram Panchayat level in coordination with local administration to support affected households.
- Preparation and dissemination of repair guidance note based on the damage assessment of housing. Houses that are partially damaged would have to be repaired in the correct way.
- Advocacy with government for Owner driven reconstruction process for reconstruction of houses.

### Early Recovery actions/Medium team actions:

- Repair and reconstruction houses ensuring cyclone resistant features. This could be done using materials salvaged from the collapsed houses with supplementary materials added.

- Training of construction workers on cyclone resistant features and safe construction practices
- Preparation of database of vulnerable housing stock which should be prioritize for retrofitting or new construction under government support using AI based model and ground verification.
- Linkages with PMAY or any other government schemes for reconstruction of houses
- Analysis of local construction practices and identify interventions which will ensure disaster resilience features.

**Long term and Resilience building:**

- Community led disaster risk management trainings and programs for various villages and linking it to local development plans.
- Cyclone preparedness as part of development interventions.



## Education

### Situation Analysis

Gujarat has a total of around 90,000 schools (including *Anganwadi* centres) that cater to over 75 lakh students. These school complexes are the safe spaces ensured for the students to engage in quality learning and their holistic development. Children of a considerably large part of the state are expected to be impacted because of their homes, communities being impacted due to the cyclone (community infrastructure- homes, water and electricity access, sanitation facilities, etc., and the psychosocial impact of the destruction) and because the school infrastructure (school buildings, teaching-learning materials, school campuses, etc.) being impacted. Schools buildings have also been used as shelter during cyclone evacuation in many villages.

Though the schools have not yet been reopened since March 2020 (only secondary grades have been reopened for a month in the month Jan), the facilities that the schools provide, i.e. safe infrastructure for the teaching-learning process to take place, safe water and sanitation facilities, learning environment for holistic development, etc. need to be maintained to ensure that the students are safe once the schools reopen. As the infrastructure has been impacted by the cyclone, it is also important to oversee the damage that the cyclone might have created on the school infrastructure and on students' present learning (distance learning) platforms like Television, Mobile phones, etc. There are reportedly 30 Talukas in 6 districts that are affected due to Tauktae, having a 1027855 enrolled children (54% girls and 46% boys) in 4856 schools as given below.

The main issue in normal times the coastal villages is the quality of education. Migrant labourers and marginalized communities like the Koli community living in these areas have not given much emphasis to education of their children. After 7<sup>th</sup>-8<sup>th</sup> standard, the dropout rates in such communities are high owing to early marriages or use as manpower in labour to financially support the family. However, due to the cyclone there has been no major damage to the education system.

Affected Districts	Affected Blocks	Number of schools	Total Enrollment	Girls Enrollment	Boys Enrollment
<b>Amreli</b>		<b>1295</b>	<b>232166</b>	<b>125834</b>	<b>106332</b>
	Amreli	202	41405	23924	17481
	Babara	125	21279	11415	9864
	Bagasara	74	11874	6615	5259
	Dhari	138	19351	10259	9092
	Jafrabad	82	19986	10318	9668
	Khambha	84	13569	6984	6585
	Lathi	106	17395	9522	7873
	Rajula	154	34066	18040	16026
	Savarkundla	186	35049	19001	16048
<b>Anand</b>		<b>1664</b>	<b>380088</b>	<b>204331</b>	<b>175757</b>
	Khambhat	222	49369	26624	22745
	Tarapur	76	14235	7604	6631
<b>Bhavnagar</b>		<b>1666</b>	<b>444186</b>	<b>236575</b>	<b>207611</b>
	Bhavnagar	395	152231	79532	72699
	Ghogha	88	17195	8970	8225
	Mahuva	280	77846	41356	36490
	Talaja	252	63262	34776	28486
<b>Botad</b>		<b>458</b>	<b>130045</b>	<b>72027</b>	<b>58018</b>
	Botad	184	62310	34815	27495
	Gadhada	150	35625	19334	16291
<b>Gir Somnath</b>		<b>1072</b>	<b>217289</b>	<b>114719</b>	<b>102570</b>
	Girgadhada	118	18900	9669	9231
	Kodinar	169	37830	19104	18726
	Sutrapada	163	25688	13461	12227
	Talala	128	22524	12705	9819
	Una	218	52146	27402	24744

	Veraval	276	60201	32378	27823
<b>Junagarh</b>		<b>1580</b>	<b>244304</b>	<b>131558</b>	<b>112746</b>
	Bhesan	80	10695	6098	4597
	Keshod	205	28812	15092	13720
	Maliya Hatina	197	25654	13535	12119
	Manavadar	127	17179	9110	8069
	Mendarda	101	10295	5633	4662
	Vanthali	106	14526	8430	6096
	Visavadar	170	17358	9592	7766
<b>Total</b>		<b>4856</b>	<b>1027855</b>	<b>551298</b>	<b>476557</b>

In affected 6 districts, there are identified 217 special training program centres for out of 3474 children who are receiving residual training for transition to formal education system. Continuity of education of these children is at high risk. Essential services for these most vulnerable children is crucial.

### Assessment Findings:

Affected Districts	STP Centres	Boys	Girls	Total
Gir Somnath	16	89	92	181
Amreli	28	200	272	472
Bhavnagar	88	760	696	1456
Botad	4	22	22	44
Junagarh	73	627	542	1169
Anand	8	74	78	152
<b>Total</b>	<b>217</b>	<b>1772</b>	<b>1702</b>	<b>3474</b>

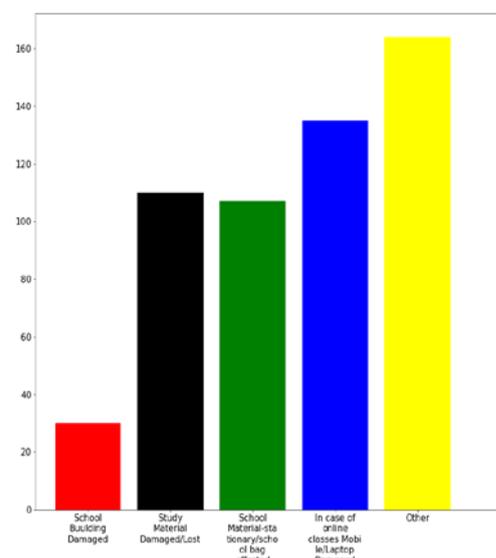
#### Continuity of learning and essential services

Disasters could have a major impact on children and education systems by destroying school infrastructure and material. Schools are child- friendly safe places, important for psycho- social well-being of children, especially in post disaster trauma recovery. Quality education in emergencies is viewed as secondary when compared to the provision of vital items and services, although it importantly impacts community resilience in the longer term.

This being the summer vacation for schools and the interim period for progression to the upper classes, the impact on primary education has not been given very serious attention in this assessment. Closure of schools due to pandemic induced lockdown has resulted in online teaching and learning of children through various mediums such as Television and mobile phones. However, the essential service provision like that of mid-day meal and MHM needs are hindered due to cyclone. Currently even the online learning and supply of nutritional and hygiene services is non-functional due to summer vacation. The digital learning cycle is scheduled to restart from June 7, 2021. Therefore, it is essential to restore the electricity connection for the continuity of online learning.

With restarting of new learning sessions post summer vacation, all students were to receive new learning material for upcoming session in the month of June. Therefore, loss of reading and learning material if at all would not impact the learning cycle of students enrolled in the schools.

#### Impact on school infrastructure



Majority of school buildings in Gujarat state are pucca structure, therefore no major damage to school buildings have been reported. However, non-RCC extension structures including WASH facilities, compound walls have faced minor damages. Water logging and damage of solar panels have been reported by care takers of residential schools. However, absence of students in these residential schools due to COVID has led to no injuries or casualties to children of these schools. Repair works shall be undertaken by local authorities.

### **Recommendations based on real time data and inputs from sectoral experts:**

#### **Immediate Relief:**

- It is crucial to provide psychosocial to children experiencing multiple challenge of COVID and cyclone. SMC should be made active member to catalyze such support at education institution level. Capacity building of SMC members and provision of IEC for same to be undertaken.
- Setup child friendly spaces for children and promote psychosocial well-being of children. Conduct sessions for children and caregivers on Psychological First Aid and counselling and seek counselling from Govt. setup mental health helplines. Engage children with recreational activities few hours every day.
- Engage children through group activities for their well-being, educations sector expertise to introduce inclusive non formal and skill education, arts and crafts to build the resilience of children aftermath of emergency.
- Ration distribution under the provision of mid-day meal through schools and fortified food through Anganwadi centres need to be restored and strengthened to ensure the fulfillment of nutritional needs of children to avoid possibility of malnutrition which might hinder their physical and mental development.
- Meeting the hygiene needs of adolescent girls in emergency settings enable human rights, dignity, and public health. Schools are a safe space for girls to access sanitary absorbents, however closure of schools have limited this accessibility. Therefore, it is essential to include provision of sanitary absorbent in relief kit as an essential commodity.
- Green schools have existing water conservation structure which might have stored water quantity and can be explored to fulfill the needs of water supply for emergency use for the affected community.
- IEC relating to cyclone response, personal hygiene, abuse of children, COVID management in emergency situation and psychosocial support for children to be provided either through audio-visuals which can either be incorporated with the learning material of new session or provided as separate interactive booklet.

#### **Early Recovery actions/Medium term actions:**

- Minor repairs required in the schools in coastal villages need to be undertaken to ensure safe learning environment to students once the schools reopen.
- Restoration of electricity is essential to ensure continuity of digital learning post summer vacation.



## Protection

### Situation Analysis:

In the devastating cyclone Tuakthae almost 0.39 million children were affected in 22 districts of Gujarat. The worst hit sectors WaSH, shelter, Education and health in the pandemic situations added more vulnerabilities among children. The major damage in existing WASH, shelter and loss of livelihood both farm and non-farm has increased food security and livelihood crises. The cyclone has hit severely and weaken the capacity of communities and the existing adaptative model of community and children were devastated. In certain crises situation where children don't have access to safe drinking water, lack of protective space for adolescent girls and women, loss of livelihood and shelter, discontinuity from education have made children more vulnerable and are at high risk of abuse and violence. The dysfunctional WASH system, lack of child friendly wash facilities and gender segregated wash facilities makes 6-14 and 14-18 adolescent girls expose to sexual abuse and gender based violence. Loss of livelihood among poor vulnerable section of affected communities can make girl child at high risk of gender based violation like child marriage and children could be engaged to labour work where they could be at high serious risk of physical, emotional abuse. The food security issues among vulnerable section of affected communities could lead children to starvation, malnutrition and anemic. Loss of education during pandemic situation for more than two years and now this devastating cyclone disconnected children from education. Children are in deep state of shock and stress after facing displacement, separation from parents/caregivers in cyclone devastation. In this stressing situation, mental well-being of children is seriously affected.

In humanitarian crises children are most vulnerable and its imperative in emergency settings to understand the needs for children especially with age appropriate. Usually the existing child protection system are in less capacity to address the needs of children, therefore integrated and cross sector programming approach is need of an hour in emergency settings to address the needs of children. Intervention in child protection. Based on integrated and protection mainstreaming approach following are the key recommendation to ensure comprehensive and holistic child protection intervention. Men, women and children have stayed at designated safe shelters for 2-3 days and at present staying together in damaged houses without enough privacy and adapted infrastructures.

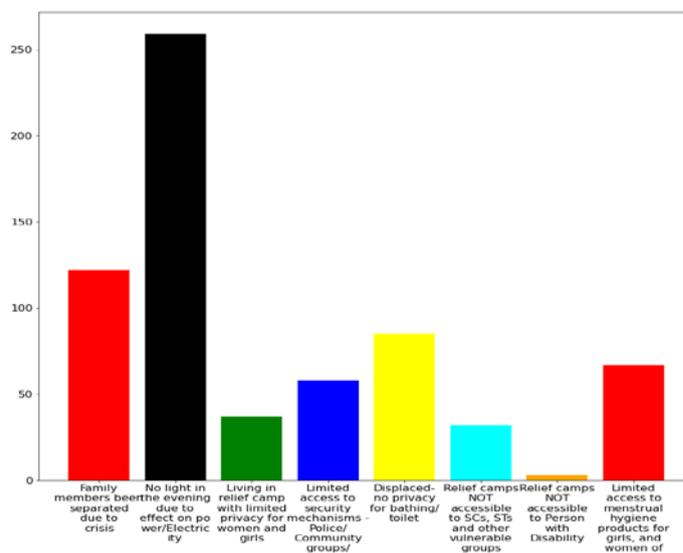
The cyclone added fear and anxiety among children and adolescents as some have never seen a cyclone in their lives. Noises of heavy winds and roofs flying away added more to their fear and insecurity. Most of the Multi-Purpose Cyclone Shelters (MPCS) were not used during cyclone. One MPCS at Chitrasan of Jafrabad block, did not have proper road to reach. Some MPCS in Una blocks were used but the next morning all were vacated since the people were in a hurry to reach their houses. Moreover, the MPCS are not accessible to the people with disability. The ramp is there with proper gradient but the roads to access MPCS are not feasible. For instance, in Saiyad Rampara, the MPCS has been built on hill, the MPCS in Chitrasan is built on the out skirts and hilly areas without proper roads to access it.

In addition, the sanitation blocks in MPCS are not constructed keeping in mind the needs of people on wheelchair. As mentioned earlier, children are not going to school due to the pandemic and are spending more time at home. This change has had an effect on the mental health and behavior of children and adolescents. There is high chance of school dropout in the coming years. This cyclone has only added shock in their lives by destroying their houses and their parent’s livelihood.

Not much information on gender could be obtained on offenses against women and children. Globally evidence points towards the fact and disasters and conflicts increase vulnerabilities and the gendered impacts are visible on those affected. Drawing from this, the assessments teams are concerned regarding a possible rise in offences against women and children; domestic and intimate partner violence and increased human trafficking/child labour and child marriage. This needs further enquiry through sustained engagements and interactions with the community since these issues are taboo and therefore might not be spoken of/admitted to.

As per recirs with the Gujarat State Child Protection Society there has been no damage to Child Care Institutes in the affected districts.

Based on responses, it emerged that there is a perception among women that they have become more vulnerable due to lack of light and loss of secured dwellings. During interactions, 70% of the cohort of women respondents expressed apprehension that the lack of electricity made them feel unsafe and that they were not aware when it would be restored.



**Recommendations based on real time data and inputs from sectoral experts:**

- State must provide psycho-social care by sending professionals or trained counselors to the affected villages under the monitoring of skilled and experienced senior counselors.
- Capacity building of community volunteers, mainly the youth on psycho-social counseling by institutions like NIMHANS or State Mental Health Council on mental health workers.
- State authorities have to reflect on accessibility of basic amenities for differently abled persons at MPCS.
- Affected population needs to be made aware of the prevention and response/redressal mechanisms at the district and sub district level, especially the MSK and 1098 helplines as prevention and response systems to GbV and other kinds of violations children and women might have risk to.
- Regular inspections and monitoring needs to be established with the Social and Outreach Worker from the District Child Protection Units and the Childline service for sustained outreach and engagements.
- In case there are NGOs working in the areas, CPCs should be strengthened towards better gatekeeping mechanisms.
- Community PSS and Peer support networks should be facilitated by NYKS and NSS volunteers active in the area.
- Information regarding social protection/Family based alternative care schemes including foster care,

sponsorship and palak mata pita to be provided by the volunteers to affected families to ensure that they are protected from increased vulnerabilities to children.

- Form Children's Groups in every village or in every hamlet of village. They can be trained on child rights and protection mechanism.
- Collaborate with community level stakeholders, children and other humanitarian actors to identify and analyze existing and protection risk for children like dangers, injuries, child labour issues, physical and mental treatment, abuse and mental health distress.
- Coordinate with sector expertise/leads and identify needs of children in each sector and plan emergency response with protection mainstreaming in each sector. For example food security and child protection staff need to coordinate based on their data/Need assessment and intervene as per the needs of children.
- WASH and Child protection sector experts need to work together and ensure protection mainstreaming in WASH. For example: WaSH and shelter expert should design wash station and shelter to ensure adolescent girls have safe and protective space and access to WASH facilities as per the age appropriate.
- Food security and livelihood expert to ensure protection mainstreaming in livelihood and to analyze the needs of children who are at high risk of child marriage and child Labour. With integrated approach, livelihood and protection sector expert should have joint strategy to target families with least economic strengthen/more children in families. The joint sector protection strategy to mitigate risk of children getting engaged in labour work and protect from children especially adolescent's girls from gender based violence (child marriage).
- Strengthen and rebuild community based child protection mechanism, support village level child protection committees, district child protection units in addressing needs of children in child care institutions, observation homes.
- Setup child friendly spaces for children and promote psychosocial well-being of children. Conduct sessions for children and caregivers on Psychological First Aid and counselling and seek counselling from Govt. setup mental health helplines.
- Develop a comprehensive child protection information management system.



## Health

### Situation Analysis :

With the impact of COVID pandemic in place, cyclone has results in increase in vulnerability of the community. The impact from cyclones extends over a wide area, with strong winds and heavy rains. However, immediate health effects can be seen in terms of injuries, infections, mental health problems, damage to health infrastructure etc.

The longer-term health effects result from displacement, shortages of safe water, injuries, disruption of access to health services and delayed recovery.

There were 1489 power backups deployed in all hospitals in affected districts as part of the preparedness measure before the onset of the Cyclone.

174 ICU on wheels ambulance and 607 numbers of 108 ambulances have been deployed in affected districts for COVID patients.

The state government had created 35 green corridors to ensure uninterrupted oxygen supply to hospitals. About 80 metric tonnes (MT) of oxygen buffer stock was arranged for Jamnagar and Bhavnagar districts that were likely to be affected by the cyclone.

### Effects:

1. **COVID** immunization came to halt after instructions by the state government to keep health staff on stand-by during the cyclone at the health facilities as the focus shifts towards managing the patients admitted in the hospital.
2. Short circuit at health facility in Gir Somnath resulting in non-functionality of computers- for restoration grant demand has been put up to the department.
3. Due to fear of cyclone and its damage, the COVID preventive measures was not a priority like wearing of masks etc. People were more concerned about the damage done due to cyclone which might increase in the cases.
4. In the district of Amreli, Out of 130 Covid hospitals affected, 98 have been restored, Out of 18 Oxygen plant affected, 10 have been restored.

### Recommendations based on the real time data and inputs from the sectoral experts

#### Immediate needs:

- Access to services like routine immunisation and outpatient consultations must be ensured.
- Removal of sludge and other waste to be done properly to reduce risk of long-term diseases. The contamination of water with faeces, silt and debris are likely to affect the areas, leading to raise the cases of diarrhoea, dysentery and other water-borne diseases. Vaccines are recommended for people, where poor sanitation and unsafe water are common.
- The functionality of health centres must be maintained as there are chances of outbreak of diseases immediately and the prevailing pandemic.
- Awareness to resume the COVID preventive measures like wearing of masks, hand washing/ cleaning. Provision of masks as essential items
- Awareness about basic hygiene promotion hand washing is critical to help prevent the spread of illness and disease.

- Monitoring of COVID 19 patients and health facilities must be strengthened in affected areas.
- Pregnant women must be treated with priority, ones which are being relocated to shelter homes should be tracked and provided with ANC and PNC services. Special care should be given to people with disability, elderly and children in terms of accessibility to health services.
- Mobile Van Health Facilities should be provided in hard-to-reach areas.
- Doctors can be deployed for arranging medical camps in the affected areas or where the health facilities are far from the villages.
- To resume COVID vaccination as soon as possible
- IEC materials on safe health & hygiene practices need to be distributed among the affected population through relief & medical camps.
- Grief and shock are normal in the immediate aftermath of a natural disaster; psychological counselling support is required
- Women/adolescent girls on their period are at greater risk especially those who are relocated. No access to clean cloth or sanitary napkins as absorbents of menstrual blood can be there in shelter homes. Awareness of safe and easy access to sanitation, supply of water, free distribution of sanitary napkins/ culturally appropriate sanitary towels to be ensured. Provision of sanitary napkins as essential items.
- Chlorination/disinfection of the water sources at the health facility can be recommended.
- Bed nets can be made available for the indoor patients in mosquito breeding zones
- ASHA/ANM/MPHW can be trained for basic health check-up like temperature checking, symptoms of COVID, checking oxygen saturation in the community randomly as chances of infection increase as relief operations are going on in the affected areas and many people form out of district and other people are visiting the affected area. Community level awareness can be initiated through panchayats.

#### Mid-term needs:

- Communication strategy need to be developed for creating massive awareness among the community on safe health & hygiene practices during disaster.
- IEC materials need to be adequately distributed among the affected population for awareness purpose.
- Inter-sectoral coordination and preparedness need to be strengthened for handling mass casualty and necessary arrangements for transportation of patients to health facilities.
- ASHA/ANM/MPHW can be trained for basic health check-up like temperature checking, symptoms of COVID, checking oxygen saturation in the community randomly as chances of infection increase as relief operations are going on in the affected areas and many people form out of district and other people are visiting the affected area. Community level awareness can be initiated through panchayats. These frontline workers can also support the restoration of Covid-Care Centres which were started under the “Maro Gram Corona Mukta Gram” initiative.
- Doctors can be deployed for medical check ups after few months of the disaster which will give us any post cyclone diseases prevailing in the community and also for monitoring the NCDs.
- *Long-term needs*
- Health facilities/Institutions in disaster prone areas need to be mapped and preparedness measures (constitution of medical teams etc.) further to be strengthened
- Alternative arrangement for power supply (generator, fuel etc.) in Health facilities/ Institutions should be made as a sustainable option.
- Shock/ grief are normal in the immediate aftermath of disaster, which directly impact the health of the people resulting in physical trauma and emotional trauma. Loss of life, shelter and livelihoods has both short/long term mental health effect, which delay rehabilitation of affected areas and delay the return

to normalcy, especially that the COVID 19 is still a matter of grave concern. Services related to mental health like counselling support etc should be in health facilities.

- Lack of or disrupted food supplies can lead to long term food shortages and malnutrition, among the newborns, infants and elderly populations. So, nutritional needs to be look after for a longer period of time in severely affected areas.
- Need for integration of emergency medical services with the primary health care system.
- The health professionals to be trained on disaster management. Capacity building of the health professionals is needed.



# Food security and nutrition

## Situation Analysis:

Food availability in cyclone affected areas was hugely hampered due to losses to cooking infrastructures and stored items as well closure of market or disruptions to supply. Prices have soared and with that access to food materials and vegetables decreased.

In all places, including small towns, food availability has decreased due to (i) loss of stored food materials, and/or (ii) unavailability water and power, and/or (iii) rise in price of vegetables and other food materials, or and/or (iv) serious disruptions to markets or supply chain.

Assess for disruption in food supplies, especially in families with pregnant women, breastfeeding women, adolescent girls, infants and young children.

Awareness about basic hygiene promotion hand washing is critical to help prevent the spread of illness and disease.

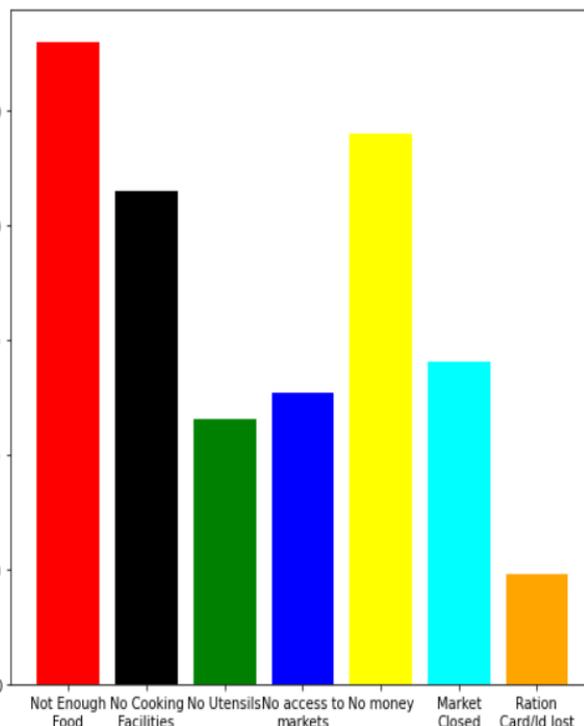
Need of local volunteers for beneficiary selection, distribution, procurement etc.

State/district performance on reducing hunger, providing access to adequate food and nutrition before Tautkae (E.g. Children underweight, stunted, prevalence of anemia among women).

Based on the data gathered during survey, number of days the food/supplies available to the families; Families with scarcity of food to meet the basic requirements; Impact on the community.

Status of non-food essentials for cooking (like Kitchen utensils, stove, light, fuel and others).

Access to government and non-government assistance to the area (including government programs on food and nutrition; market accessibility)



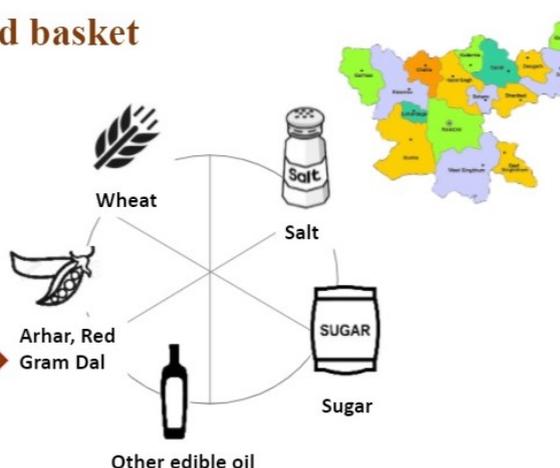
## Designing a state specific food basket



Average Family / Household size in the state (Census, 2011) :

5

What should constitute a "Food Basket" in Gujarat?



\*Items in the food basket reflect the most preferred Cereal / Pulses / Oils in the state (NSSO, 68<sup>th</sup> round, 2011-12).  
 \*other edible oils include all other vegetable oils such as rice bran oil, linseed oil, etc apart from mustard oil, groundnut oil or coconut oil, refined oil includes soyabean oil, sunflower oil.

## Recommendations based on real time data and inputs from sectoral experts:

- All those having ration cards are covered through "one nation, one card" approach. A quick and easy form of temporary cards need to be made available for others.
- Provision of Grocery kits (Wheat flour, Rice, Salt, Masala powders, Potatoes, Tuverdal, Oil) for most vulnerables.
- Need of local volunteers for beneficiary selection, distribution, procurement etc.
- Free supply of cooked food to families whose houses have been totally damaged for at least 15 more days.
- To avoid the risk of nutrition deficiency, it is important to resume services of all Anganwadi centers and supply of nutrients to children, adolescent girls and pregnant/lactating mothers.
- Despite schools not functioning, support should be provided to children through Mid-Day meals. Ration distribution under the provision of mid-day meal through schools and fortified food through Anganwadi centres need to be restored and strengthened to ensure the fulfillment of nutritional needs of children to avoid possibility of malnutrition which might hinder their physical and mental development.
- Restoring Fair Price Shops (FPS), and ensuring timely functioning and sufficient food grain storage by increasing the supply.



# Livelihood

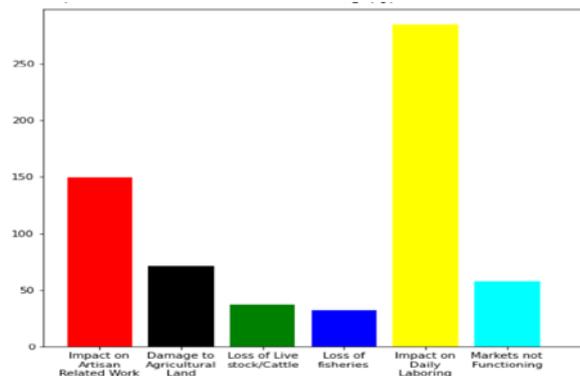
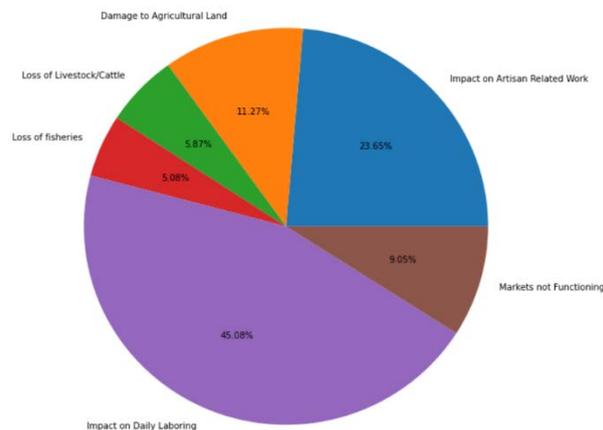
## Situation Analysis

Most of the Households visited in five worst tauktae cyclone affected villages namely Gir Somnath, Amreli, Botad, Junagarh and Bhavnagar show major source of income is from daily wages. As the cyclone has affected a many, the people depending on Agriculture and it its subsidiary activities have suffered due to disruption of services and farmlands. The average monthly income was INR 7461 in the pre-cyclone period which was manageable in normal times. But due to this cyclone impact, most families have prioritised to rebuild their damaged assets which may not be possible if this prolonged suffering continued for longer days.

As majority of standing crops along with horticultural crops were reported damages, it will be difficult for the families to recover unless until some substantial support given by government /civil society in engaging the communities in income generating opportunities. For households traditionally depending on agriculture labours, an immediate Cash for work programme may be planned for the affected areas.

100% of Daily Wage Earners have lost total or significant income opportunities for two primary reasons, (i) they are totally engaged in repairing the houses or protecting their families as their houses have been destroyed, and (ii) employment opportunities in the sectors in which they were engaged - such as agriculture, shops, construction etc. - have been badly damaged, and thus, are close. In the livelihood sector, the summer crops have been damaged, especially those that are standing. Apart from bajra, sesamum, green gram, groundnut, pearl millet, black gram were some of the summer crops sown this year. Kesar mango plantations in Gir Somnath and Junagadh bore the brunt of the storm along with coconut and banana plantations from other affected districts. Immediate support is required for provision of food grains for the affected families for at least the next one or two months. In the medium term, especially in the sowing season starting in June, famers engaged in agriculture and horticulture need to be supported with the provision of seeds and other agricultural inputs. While in the long term it is necessary to develop agricultural and horticultural practices that are resilient to such hazards.

Similarly, in the animal husbandry sector, 7974 livestock have been lost owing to the cyclone. There is an immediate need to provide veterinary support to those that are injured. Although compensation is being provided by the government to such cases, it will be ideal to provide fodder and other support where possible. While in the long term there is a need to develop a mechanism for the evacuating and sheltering livestock in emergency situations. Similar support needs to be provided for fishermen working in the coastal areas.



## Recommendations based on real time data and inputs from experts:

There are four types of livelihood source which are affected which comprise 70% of total affected population 1. Agriculture 2. Animal husbandry 3. Fishing and 4. Daily wager in agri and other sources. These families could be identified and supported to restore their livelihood.

### Agriculture, Horticulture & Animal husbandry:

- For agriculture, subsidized inputs and technical support by agriculture and forestry dept in upcoming cultivation season which will be started in 3 weeks time, as the small and marginal farmers may not have enough resource to invest in the farm. Subsidize loan also provided. Loan weaver can be option to reduce their due from bank.
- For Mango farm and other orchards, sapling for re-plantation should provided by forestry and horticulture mission to support the farmers. Grafting of broken trees wherever possible, use of broken trees in composting and using the bio-fertilizer in upcoming crop.
- Substitute support to be provided to small and marginal farmers, ie cows of Gir which provide more milk.
- For animal husbandry, those who lost milch animals (Cow, buffalo, goat etc) concern department can support in providing them the local Gir bread and forest department can support in fodder at least up to harvesting of kharif crop.
- Adequate compensation should be provided to them to meet their damage and further supported to restore it.
- Form livelihood committee at village and plan revolving fund to provide support to affected communities to restart their livelihoods.
- Those who are involved in daily wage earning should be provided support under MGNREGA.
- For short term MGNRGA can be started in recovery phase of cyclone and later it can be supported in private land works in Kharif season.
- Veterinary department could ensure seasonal vaccine and veterinary care the injured and remaining livestock.

### Fisheries:

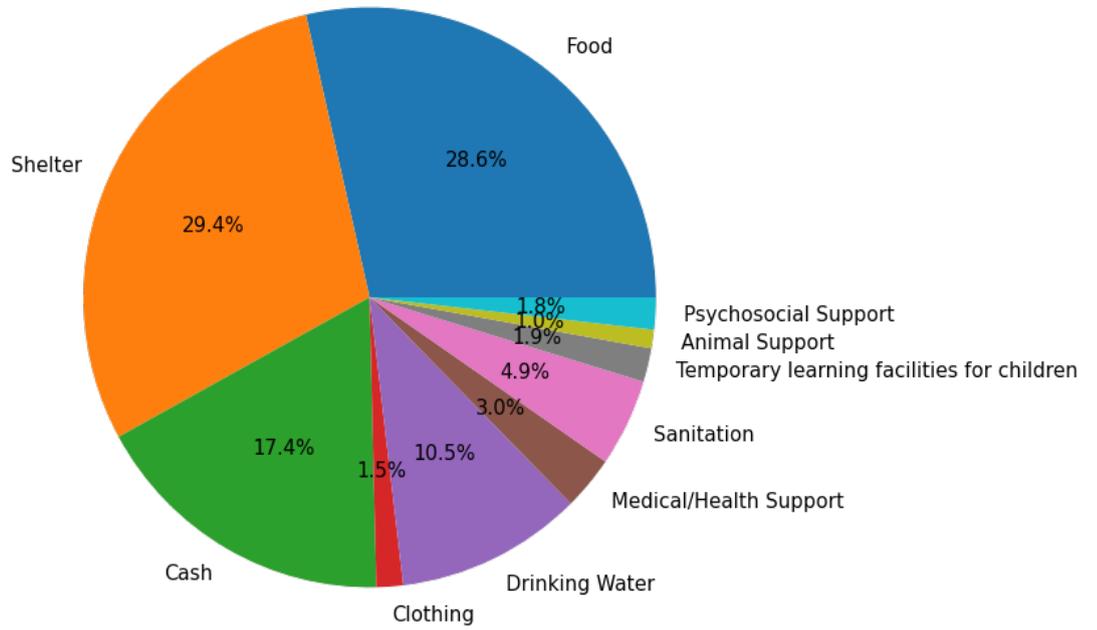
- fishing is one of the major source of livelihood in coastal area and many of then lost the small boats, nets and other accessories. Concern department can extend their support to revive the livelihood along with compensation of damage. Places for storage and supply chain could be resume to build their confidence in the fishing.
- Fisheries and allied sectors on fisheries are among the most important components of the state economy which supports livelihoods and socioeconomic development. Through advance warning, most fishermen communities in coastal villages of the state were safely evacuated resulting in zero casualties. After the landfall of the cyclone, massive damage and loss was suffered by fishing boats, nets, houses, and other household assets of fishermen in district like Amreli to a greater extent.
- Damage and Loss to the coastal/marine fishery were high in places like Amreli and other coastal districts due to this cyclone. Revival and restoration of assets lost both in fisheries and aquaculture, along with stocking of fresh stock, should be the priority. In the medium-term, registration of all aquaculture entities and inland fishers, strengthening of value chain initiative on inland fishery and marine fishery including strengthening producer companies, skill building, and insurance are the proposed strategy for

revival. In the long-term there is a need to strengthen the mechanism to adhere to Coastal Regulatory Zone (CRZ) regulations, promote shelter belt plantations to protect against cyclones and storm surges, regulate habitations very close to coast, promote alternative livelihoods, and maintain ecosystem services.

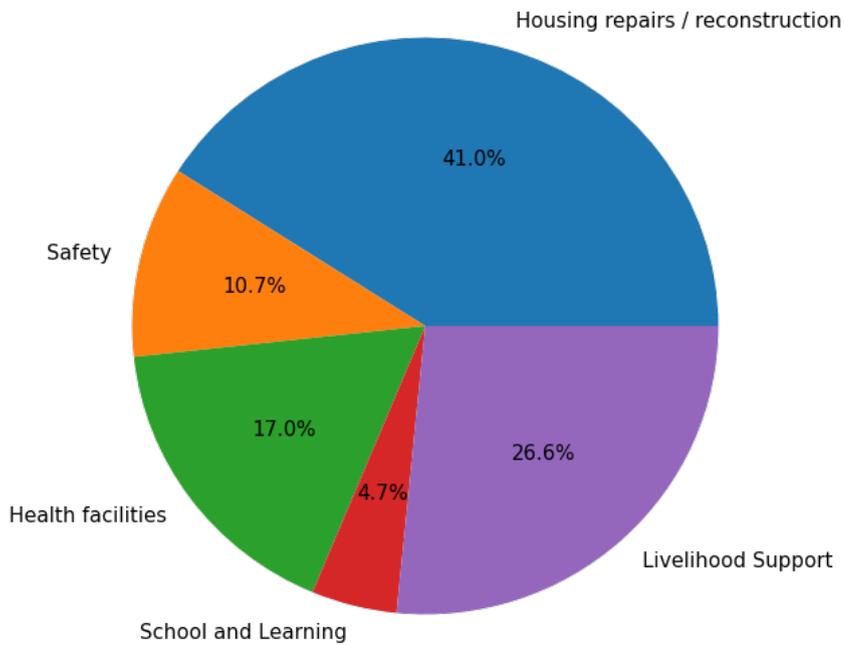
#### Daily wager in agri and other sources

- Daily business should be resumed or supported through the local milk cooperatives.
- Daily wage workers are in big numbers in the areas and they can be engage in the different works related to cyclone recovery. This is an opportunity for skill development units to run short team course to convert them into skilled human resource to diverse their sources.
- This cyclone could be an opportunity for the area to upgrade skills for girls and women in various income generating activities to get more opportunities ensuring no dropout from ongoing education.
- Cashdol and damage compensation is one level of support to restoring livelihood source will make affected communities in earning and that will resume normalcy so livelihood support for short and long term should be planned.
- Engaging of local Artisans with productions through providing raw materials, repairing of tools, market linkages through Mission Manglam and Gram Haat. Engaging Sakhi Mandals in small scale income generation activities (For ex. Mask stitching).
- Families who lost key earning person, should be provided special provision to initiate new livelihood.

### Priority Relief Needs as per JRNA



### Priority Recovery Needs as per JRNA





**Annexure 1. Immediate Response in affected area by Civil Society Organizations:**

No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
<b>Gir Somnath and Junagadh</b>					
1.	Human Development Resource Centre (HDRC)	Alice Morris 9825311422	Gir Somnath and Junagadh	Public awareness for precautionary measures on large scale in rural areas.	<ul style="list-style-type: none"> <li>Rapid Need Assessment in 23 villages covering 115 households to identify immediate needs</li> <li>Facilitating identification for information dissemination about cash dol distribution</li> <li>Provide 250 Tarpoline and 700 Food kits most vulnerable in Gir Somnath</li> </ul> Information dissemination- provision of damage assessment and compensation according to NDRF and SDRF covering 5 talukas of that area in 150 villages
2.	Ambuja Cement Foundation	Dalsukh Vaghsiya 9724328667	Coverage of 250 villages in Gir Somnath and Amreli	Relief distribution, shelter repairing, agricultural input, animal husbandry revival, water, Medical support.	<ul style="list-style-type: none"> <li>Ambuja foundation campus provided to the horticulture and agriculture department for survey and assessment- logistic support including accommodation, food, transportation</li> <li>4 water tankers provided to Gir somanath for drinking water</li> <li>100 Ration kit distributed in Gir Somnath - partner with Reliance Foundation and Khodaldham</li> <li>In Rajula and Jafrabad, Amreli- tie up with Gujarat Pipavava port to provide 500 ration kit to affected 500 households</li> <li>Solar lights/panels- technical team sent for repair</li> <li>Conducting damage assessment in their field area-50 villages in Kodinar and Una- ocus on agriculture and horticulture damage.</li> </ul>

No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
3.	Action Aid Gujarat	Sushila Prajapati 9925610621	Gir Somnath and Amreli ( Coastal talukas)	Humanitarian response and Human Rights	<ul style="list-style-type: none"> <li>Relief to 1000 households in Jafrabad and Rajula- support in ration kits, hygiene kits, temporary shelter kit</li> <li>Also planning a second relief to 2000 households.</li> </ul>
4.	AKRSP Gadu		Coverage- 150 villages in Junagad and Porbandar and some parts of Gi Somnath	Shelter repairing, accessing government entitlements.	<ul style="list-style-type: none"> <li>Talala- in 36 villages of their field area- intensive need assessment conducted for short and long term recovery- focus on agriculture based recovery</li> <li>150 villages- damage assessment for NDRF SDRF compensation- on housing, agriculture, animal husbandry, household utensils- conducted through their village committees. Listing completed to facilitated compensation.</li> <li>Long term- destroyed horticulture plots to be revived for the coming agriculture season. 150 such plantations</li> </ul>
5.	Goonj Gujarat Unit	Jigisha Maheta 8826386660	Gir Somnath and Amreli ( Coastal talukas)	Humanitarian response and development	<ul style="list-style-type: none"> <li>Relief support – Food kit of 18 Kg. to most affected coastal area of 6000 families.</li> </ul>
6.	Agha Khan Agency for Habitat	Ali Nawaz Nanjee 9898409899	Gir Somnath	School and child care Food and non-food relief and relief camp. Awareness and technical services	<ul style="list-style-type: none"> <li>Deployed trained rescue teams at 3 strategic locations at Una Kodinar and Verval and Rajula</li> <li>Rescue and first aid</li> <li>Distribution of 600 kits to the affected households in Una, Kodinar, Jafrabad, Rajula</li> <li>First hand damage assessment by their team in 50 villages</li> </ul>

No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
7	BAIF	Bachubahi Gohil 6353694848	Gir Somnath		Post cyclone animal health and care support provided in 100 villages through 17 cattle breeding center in Gir somnath, Junagadh and Porbandar
<b>Amreli</b>					
1.	Sikshan Samaaj Kalyan Kendra	Dhirubhai Vagadiya 9427280028	In Amreli- 7 talukas- presence in around 150 villages	Relief Coordination, shelter repairing management, availing public entitlements, agriculture.	<ul style="list-style-type: none"> <li>• Damage and need assessment in 25 villages intensively</li> <li>• Damage compensation by NDRF SDRF to be facilitated in in their villages</li> <li>• Through Local Farmer Community groups- providing initial relief and ration support to most affected families in the villages- provided more than 200 kits</li> </ul>
2.	Reliance Foundation	Bharat patel 9724849464  Gajera	Amreli	Relief distribution, shelter repairing, agricultural input, animal husbandry revival, water	<ul style="list-style-type: none"> <li>• Information vertical of RF- providing ration kits to Gir Somnath with help of local partner kodhaldham- 1000 kits.</li> <li>• Planning 2<sup>nd</sup> level relief- tarpoline sheets for housing damage to coastal houses in Amreli and Gir- 500 sheets.</li> </ul>
3.	Jamiyat Ulema E Hind, Kutch	Jabbirbhai 9574895541	Rajula Amreli	Shelter support	<ul style="list-style-type: none"> <li>• Shelter support ( Tiles, sheets, and repairing ) 1500 Hhs in Rajual town and villages, including contrition of 50 new houses</li> </ul>

No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
4	Red Cross Gujarat	Suresh Gami 9426182556	Have centres in Gir Somnath, Amreli, Bhavnagar and Botad	Humanitarian aid response, Rescue and First aid	<ul style="list-style-type: none"> <li>• Team provided rescue support in all locations of their presence</li> <li>• Removal of fallen tree, debris</li> <li>• In all 4 locations- 1300 cooked food packets distributed to most affected persons</li> <li>• First round relief—2080 initial relief kit (tarpoline sheet, toiletries including bucket, saree, kitchen utensils)</li> <li>• Planning 2nd level relief in all 4 locations for 5000 households</li> </ul>
5	Swadeep	Kalyan Dangar	Rajula Jafrabad and Mahuva in Bhavnagar	Education, Children and women	250 Food kit and 150 tarpaulins shred with most affected persons partners
6	BAIF	Tejalal Solanki 8780538318  Jigna Joshi 9904145989	Rajula	Animal health Care	300 HHs Food grain kit, 200 water cleaning support from CSPC 40 Injured animal supported 242 Animal insurance claim settlement
7	Anarde Foundation	Chandu Raiyani 9099048102	Rajula and Jafrabad	Food and non food relief	Ration kit support to 400 HHs in Rajula and water supply support
8	Gujarat Heavy Chemical Limited	Ramesh Makwana  9978955605	Rajula and Jafrabad	Food and water and agriculture	<p>Working on WASH, Agriculture, Health and Education and Skill training sector.</p> <p>Ration kit, water supply by generator and tanker in 12 villages. Total roof tiles support for housing of vulnerable HHs in 30 villages has been planned.</p> <p>Subsidies fertilizers will support small and marginal farmers. Horticulture especially Kesar mango sapling will be provided in Khambha taluka area.</p>

No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
9	Vivekanand Research Training Institute (VRTI)	Rohitbhai 9099971823	Amreli and Bhavnagar	Water, Agriculture	Ration kit to 800 HHs, 200 tarpaulin sheet and Damage assessment of Agriculture and Horticulture and small water harvesting structures in 34 villages
<b>Bhavnagar</b>					
1	Utthan	Praveen Bhikadia (CEO) 9426261832  Jayaben 9428181725	Presence in 100 villages across 3 talukas Bhavnagar, Mahua and Gogha	Relief distribution, shelter repairing, agricultural input, animal husbandry Revival, water	<ul style="list-style-type: none"> <li>• Bhavnagar taluka coastal 200 households- food kits supplied</li> <li>• Planned for providing semi-permanent or temporary shelter support to 400 families in Rajula Jafrabad, Mahua and Bhavnagar talukas</li> <li>• Monsoon crop- seed support 150 families</li> <li>• Kitchen garden support- 200 affected families</li> <li>• those Pashupalaks who are dependent on community land- fodder support to 100 such families</li> </ul>
2	Gram Nirman Samaaj	Ismali bhai Kalanya 9879023350	Mahuva, Bhavnagar	Relief distribution, shelter repairing, agricultural input, animal Husbandry revival, water	<ul style="list-style-type: none"> <li>• Provided drinking water to 25villages</li> <li>• Provided generator to 5 villages to run the water power pump</li> <li>• Fallen or bent Trees- rescue and treatment</li> </ul>



No.	Name of Organisation	Key Person Contact Number	Taluka & District	Thematic strength	Post-cyclone
3	Triveni Kalyaan Foundation	Ajit Jadav 9537994454	Mahuva	Agriculture and livelihood support to farmer and women groups	<p>TKF initiated cleaning of road and repairing of electricity supply in 20 villages of the farmers club in 20 villages and Sakhi mandal ( SHG) 572 groups</p> <p>Sakhi madal provided easy loan to their members to survive in the cyclone</p> <p>They also provided machinery support of JCB, tractors to supply and repair of infrastructure.</p> <p>They have plan to revive next agri season through seeds and agri technical support</p> <p>Sakhi mandal is instrumental for taking care of domestics need of the families in their cluster</p>



