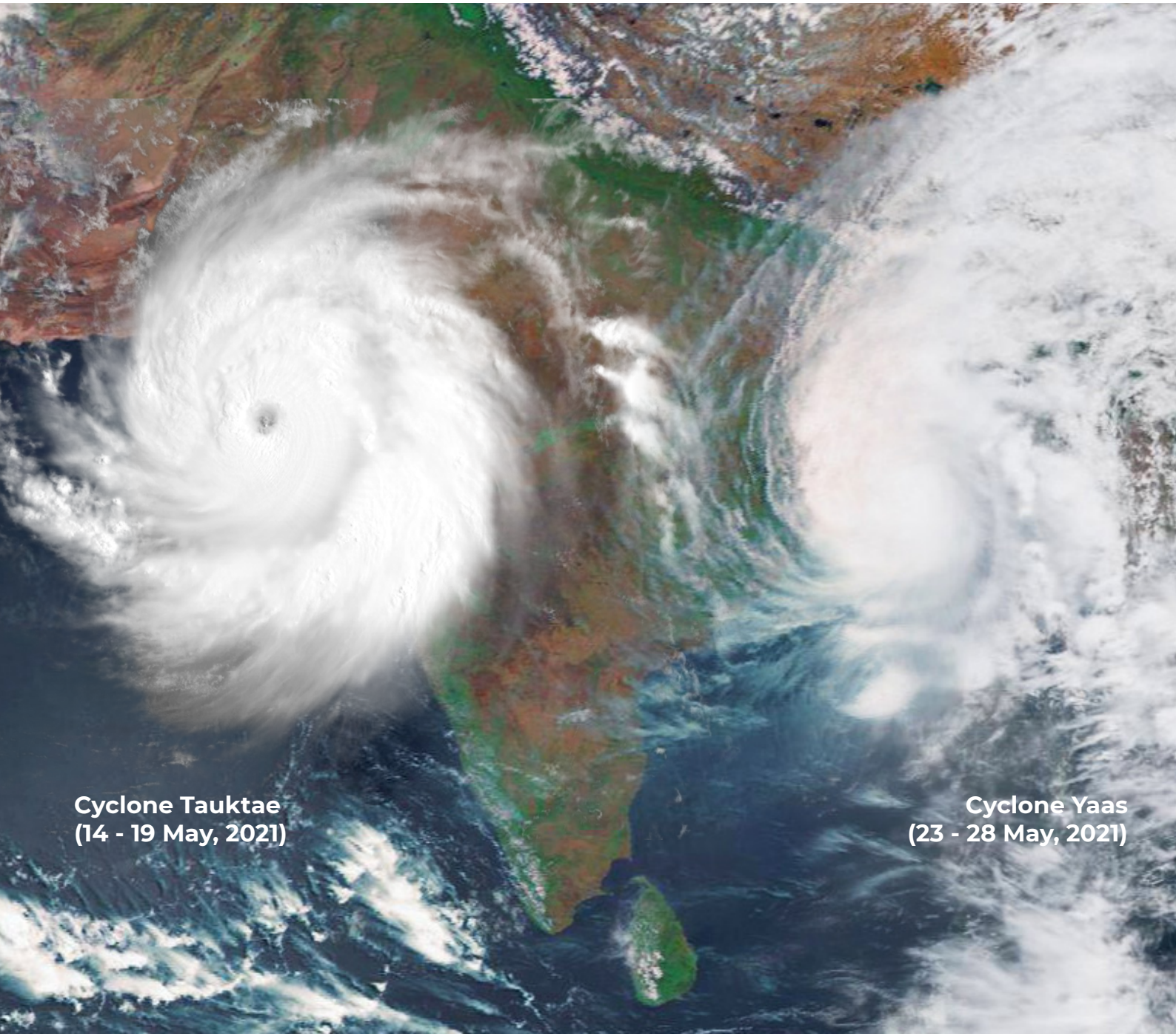


MAY 2021



AAPDA SAMVAAD

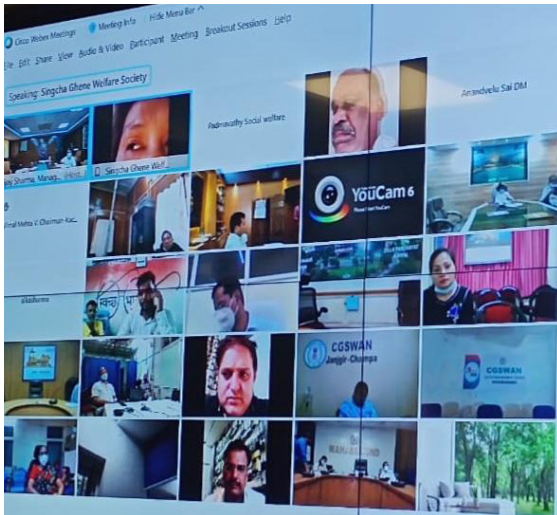
DOUBLE TROUBLE
CYCLONE TAUKTAE AND CYCLONE YAAS



Cyclone Tauktae
(14 - 19 May, 2021)

Cyclone Yaas
(23 - 28 May, 2021)

Meeting with NGOs, SDMAs, DDMA's to discuss COVID containment



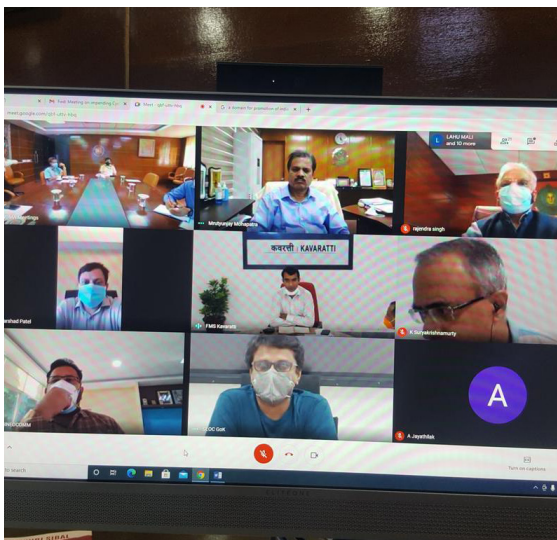
On 6 May, NDMA held a web meeting with nearly 1000 NGOs along with SDMAs and DDMA's engaged in COVID containment. The meeting was held to discuss developing a coordinating mechanism to engage with agencies at state and district levels.

Review meeting on preparedness for Cyclone Yaas



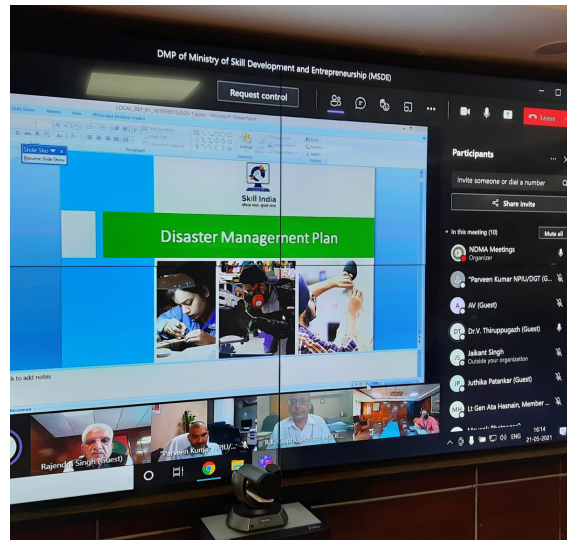
On 21 May, a High level meeting was conducted to discuss the impending cyclone forecasted to hit the Eastern coast (Cyclone Yaas). Important aspects of preparedness were discussed with NDRF, IMD, CWC, east coast States and other response services.

Review meeting on preparedness for Cyclone Tauktae



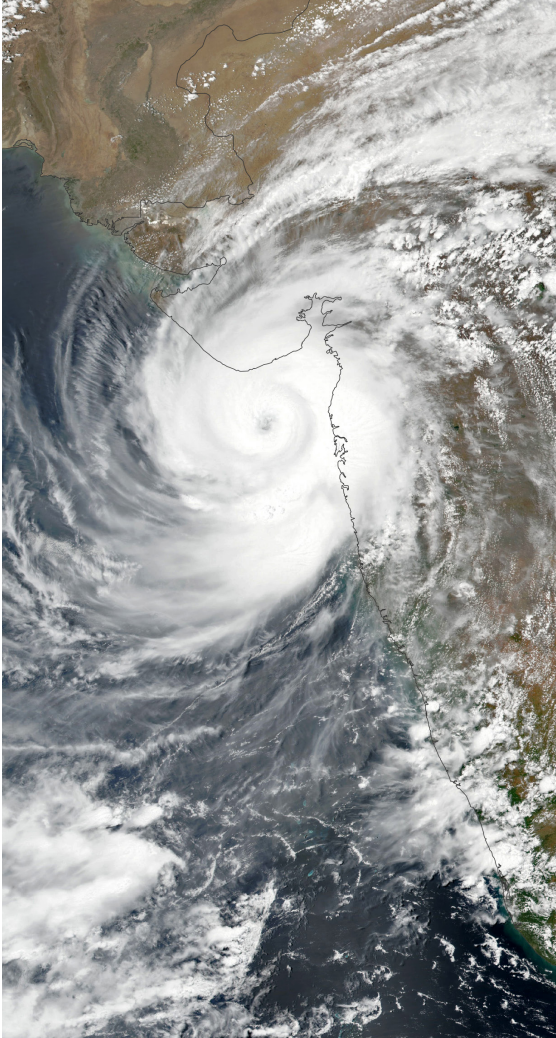
On 13 May, NDMA conducted a meeting with SDMA's on the west coast to take stock of the preparedness in view of the impending cyclone (Cyclone Tauktae) and to discuss measures to reduce the effect of landfall.

Review of Disaster Management Plan



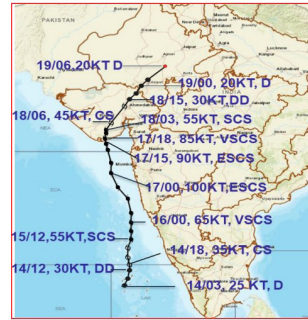
On 21 May, NDMA reviewed the Disaster Management Plan (DMP) of the Ministry of Skill Development and Entrepreneurship. India's National DMP was launched in 2016, and subsequently each ministry has to prepare their DMP which is further reviewed by NDMA.

DOUBLE TROUBLE CYCLONE TAUKTAE AND CYCLONE YAAS



television and radio. Hon'ble PM Narendra Modi also held a meeting on the 15th to review preparedness of the States, Central Ministries/Agencies for Cyclone Tauktae.

Trajectory of Cyclone Tauktae (14-19 May, 2021)



Observed track of ESCS TAUKTAE during 14th-19th May, 2021
Source: IMD

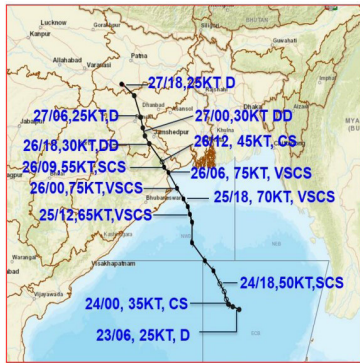
On the morning of 13th May, IMD released information on the formation of a low-pressure area over southeast Arabian Sea and adjoining Lakshadweep area. This was to intensify further in the subsequent 24 hours into a cyclonic storm, named 'Tauktae' and move north northwestwards covering the entire west coast of India and make landfall in Gujarat by 17th-18th May.

In view of this, NDMA proactively took a meeting on the very same day with the concerned SDMA's to take stock of the preparations to reduce the effect of the impending cyclone. Do's and don'ts related to preparation, precautions to take during cyclone were immediately disseminated on social media platforms,

- A low pressure area formed over southeast Arabian Sea & adjoining Lakshadweep area in the morning of 13th May 2021.
- It concentrated into a depression over Lakshadweep area in the morning of 14th May, 2021 and further intensified into a deep depression in the same afternoon and into cyclonic storm 'Tauktae' by midnight.
- It moved nearly northwards and intensified into a severe cyclonic storm by the evening of 15th May over eastcentral Arabian Sea. Continuing to move nearly northwards, it intensified into a very severe cyclonic storm in the early hours of 16th May over eastcentral Arabian Sea.
- It gradually started moving north-northwestwards from noon of 16th May and intensified rapidly into an extremely severe cyclonic storm in the early hours of 17th May. Thereafter, it entered marginally unfavourable environment, weakened gradually and crossed Saurashtra coast close to northeast of Diu on 17th May.

- After landfall, it weakened into a very severe cyclonic storm over Saurashtra in the midnight of 17th May. Thereafter, it started moving north-northeastwards and weakened into a severe cyclonic storm in the forenoon and further into a cyclonic storm during noon of 18th May over Saurashtra and adjoining Gujarat region.
- Continuing to move north-northeastwards, it weakened into a deep depression in the evening and into a depression over Gujarat region and adjoining South Rajasthan by the midnight of 18th May.

Cyclone Yaas

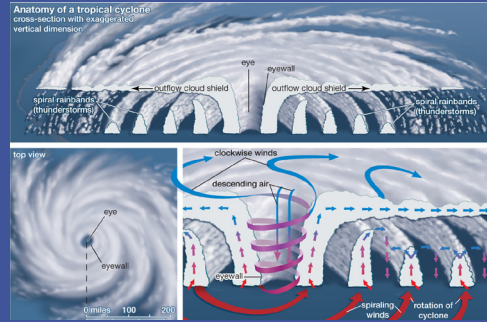


Observed track of VSCS YAAS during 23rd-28th May, 2021
Source: IMD

As the remnants of Tauktae were spreading in north India, another low pressure area was identified and informed by IMD on 19th May, this time on the east coast of India. The low pressure area identified by IMD was likely to be formed over Andaman Sea and adjoining east central Bay of Bengal around 22nd May. It was to intensify gradually into a Cyclonic Storm during the subsequent 72 hours and move northwestwards reaching West Bengal-Odisha coast around 26th May.

Do you know?

Tauktae was named by Myanmar. It means 'gecko,' a very high-pitched lizard in Burmese language. Yaas was named by Oman and it means 'Jasmine' in Persian language.



What are cyclones?

A cyclone is an extreme weather phenomenon caused by disturbances around a low pressure area over water bodies. Winds spiral around the centre of this low pressure area in a snake-like coil and gather speed. These winds rotate anti-clockwise in the northern hemisphere and clockwise in the southern hemisphere. When it develops over tropical waters, it is known as a tropical cyclone. Tropical cyclones that are formed over the Atlantic Ocean are called hurricanes; those formed over the Indian Ocean are called cyclones, and those which are formed over the Pacific Ocean are called typhoons. The average life period of a tropical cyclone is about seven days. However, they are relatively short lived over the north Indian Ocean with a life period of about 5-6 days.

There are two cyclone seasons in the north Indian Ocean - pre-monsoon season (April-June) and post-monsoon season (October-December). The months of May-June and October-November are known to produce cyclones of severe intensity. The eastern coast of India is more vulnerable than the western coast. Odisha and Andhra Pradesh are the most vulnerable followed by West Bengal and Tamil Nadu and Puducherry. On the western coast, Gujarat is most vulnerable.

Do you know?

The cyclones that are formed in any ocean basin around the world are named by the Regional Specialised Meteorological Centres (RSMCs) and Tropical Cyclone Warning Centres (TCWCs). There are a total of six RSMCs in the world, including the India Meteorological Department (IMD).

The India Meteorological Department (IMD) names the cyclones developing over the north Indian Ocean, including the Bay of Bengal and the Arabian Sea. It also issues advisories to 12 other nations in the region on the development of cyclones and storms.

The World Meteorological Organization (WMO) and the United Nations Economic and Social Commission for the Asia Pacific (ESCAP) have been naming cyclonic storms since 2000. In April 2020, IMD released a list of 169 cyclone names. 13 suggestions were sent in by the aforementioned WMO/ESCAP member nations.

NDMA immediately reviewed preparations by conducting a high level meeting with NDRF, IMD, CWC, east coast States and other response services

on 21st May. Hon'ble PM Narendra Modi also held a meeting on the 23rd to review preparedness of the States, Central Ministries/Agencies for Cyclone Yaas.

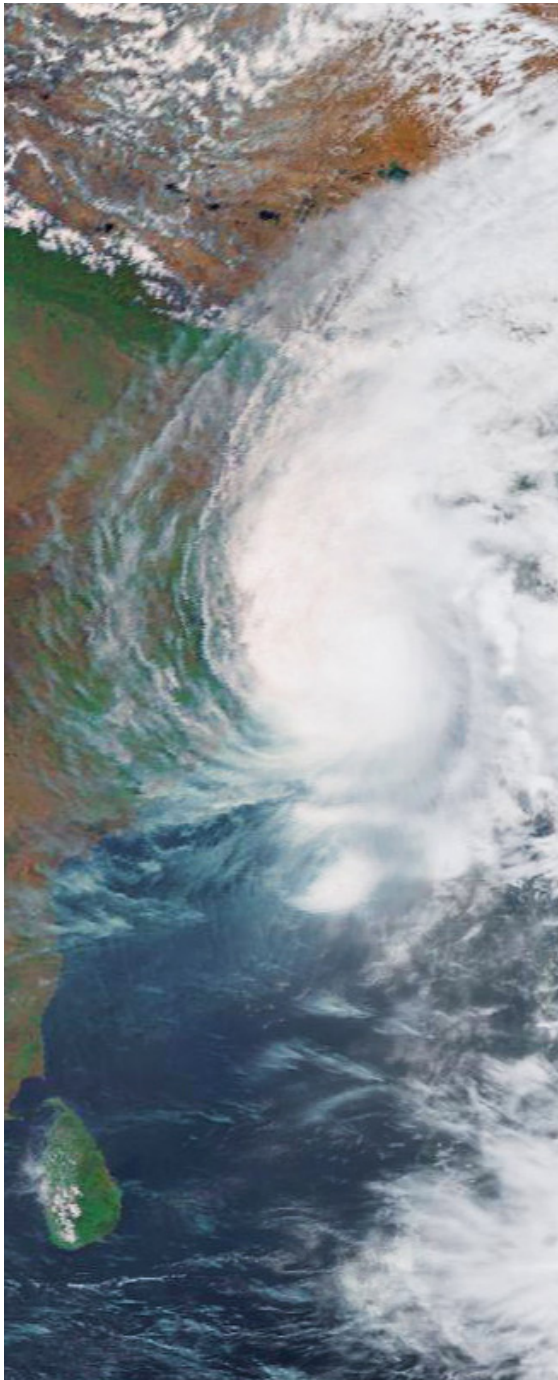
Trajectory of Cyclone Yaas (23-28 May, 2021)

- A low pressure area formed over eastcentral Bay of Bengal (BoB) in the morning of 22nd May. It lay as a well marked low pressure area in the same afternoon and concentrated into a depression over eastcentral BoB by noon of 23rd May.
- It moved northwestwards and intensified into a deep depression in the midnight of 23rd May and into the cyclonic storm 'Yaas' in the early morning of 24th over the same region.
- It moved nearly north-northwestwards and intensified into a severe cyclonic storm in the midnight of 24th May over eastcentral BoB. It started moving northwards from the morning of 25th and intensified into a very severe cyclonic storm in the evening over northwest BoB.
- Thereafter, it moved north-northwestwards crossing north Odisha coast about 20 km to the south of Balasore on 26th May.
- Further moving north-northwestwards, it weakened rapidly into a severe cyclonic storm over



Do you know?

During the satellite era (1961-2021), Tauktae was the most intense cyclone after the Kandla cyclone in 1998. It was a very rare cyclone causing adverse weather over west coast States and Union Territories as it moved parallel to the west coast and crossed Gujarat. The life period (D to D) of the system was 129 hours (5 days & 9 hours).



north coastal Odisha in the afternoon, into a cyclonic storm over north Odisha in the evening and into a deep depression in the midnight of 26th over north interior Odisha and adjoining Jharkhand.

- It weakened into a depression over central parts of Jharkhand in the noon of 27th and into a well-marked low pressure area over Bihar and adjoining southeast Uttar Pradesh in the early morning of 28th May.

Preparation was the key!

The cyclone season of 2021 entailed with it the additional challenge of COVID-19. Safe evacuation of thousands of people while ensuring maintenance of COVID appropriate behaviour, along with special preparedness for COVID management in hospitals, power backup and storage of essential medicines in vulnerable locations were some additional and necessary preparations authorities had to undertake this season.

Early warning by IMD and the coordination between different disaster response agencies made cyclones Tauktae and Yaas success stories of accurate forecast, solid preparedness, quick pre-emptive action, and adaptiveness during the pandemic.

The number of days between the end of Tauktae and the beginning of Yaas were not more, only 4 days. However, India's readiness and response to the double trouble of cyclones during the second wave of COVID-19 highlighted the shift in India's disaster management approach, from being response-centric, to now being preparation centric.

Do you know?

Cyclone Yaas had developed just after 4 days of the dissipation of extremely severe cyclonic storm (ESCS) Tauktae (14- 19 May) over the Arabian Sea. The life period (D to D) of the system was 114 hours (4 days & 18 hours).

SUCCESS STORY



COMMON ALERT PROTOCOL

DISASTER RISK REDUCTION THROUGH AN INTEGRATED ALERT SYSTEM

A huge role in preparing the vulnerable communities for disasters is the Common Alert Protocol (CAP).

What is CAP?

NDMA initiated a CAP-compliant integrated alert system—'सचेत' by partnering with the Department of Telecommunications (DoT)

to disseminate alert messages to end users. CAP allows a warning message to be disseminated simultaneously over many dissemination mediums, thereby increasing effectiveness of the warning. It further ensures that the targeted populations, as well as disaster managers, have more reaction time to mitigate losses from an impending disaster.

SUCCESS STORY

CAP includes integration of all the major national alert generating agencies (IMD, CWC, INCOIS, SASE, etc.), the alert generating agencies in the 36 states and UTs, (SDMAs), and alert dissemination agencies. This platform has been demonstrated for geo-targeted SMS dissemination integrated with the telecom service providers of India in many states and UTs of India.

Testing of the platform

The efficacy of the platform was tested by the Jammu and Kashmir SDMA for dissemination of weather forecasts to the Amarnath Yatra pilgrims in 2018, by the Kerala SDMA for issuing advisories (40 lakh precautionary messages were sent) to flood-affected people in 2018. Loss of human life during Cyclone Fani in 2019 was considerably averted by disseminating warning messages along with the efforts of administrative machinery.

The state of Tamil Nadu was chosen for a pilot project, in which the CAP-compliant integrated alert system was tested for disseminating geo-targeted alerts. Using this platform, TNSDMA sent 6.5 crore disaster alerts over SMS, and around 14 lakh flood-warning messages to the people relating to release of water from Chembarambakkam

lake and potential flood threat in the Adyar and Araniyar river basins during Cyclone Nivar in November 2020. Again, during Cyclone Burevi in November-December 2020, 76.3 lakh SMSes were sent out in Tamil.

The platform developed by C-DOT for the CAP (pilot) project was also extensively used for the '**COVID-19 Sāvdhān**' initiative of Government of India. State government authorities disseminated important information and advisories related to the COVID-19 pandemic to populations in target areas (addressing both the local population and transients).

The Common Alert Protocol is a prime example in the steps taken by the Government of India to shift the paradigm from one of reactive emergency response to one of proactive implementation of measures for disaster preparedness and risk reduction.

Do you know?

The term '**सचेत**' is an acronym for '**समर्पितचतोवनीत**' in Hindi, or 'Integrated Alert System' in English. Also, the word '**सचेत**' in itself means 'alert'.



THE FIVE FAQs - FLOOD

1 What are floods and the factors which cause floods?

An overflow of a large amount of water beyond its normal limits, especially over what is normally dry land.

Causes : -

- Meteorological factors such as heavy rainfall, cyclonic storms, etc.
- Hydrological factors such as occurrence of high tides.
- Anthropogenic factors such as unplanned urbanization, poor waste management system, ill maintenance of drainage systems, etc.



2 What preparations can people residing in flood-prone areas take?

Be updated about the weather. Prepare an emergency kit with essential items, keep a first aid kit, and keep important documents in water proof bags. One should keep their mobile phones charged and use SMS if necessary. Keep animals untied for their safety.



3 How should one stay safe during a flood?

During a flood, one should not enter flood waters. If necessary, wear suitable footwear. Stay away from sewerage lines, drains, gutters, electric poles, fallen power lines. Eat freshly cooked food or dry food and drink boiled/chlorinated water. Use disinfectants to clean your surroundings.



4 Are there any precautions to take after a flood?

Don't allow children to play in flood waters. Don't immediately use electronic goods, get them checked first. Watch out for broken electric poles, wires, sharp objects. Don't eat food that has been in flood waters. Use a mosquito net to prevent malaria. Don't use the toilet and tap water if sewage pipes are damaged.



5 What to do if one needs to evacuate?

While evacuating, raise furniture, appliances. Put sandbags in the toilet bowl and cover all drain holes to prevent sewage backflow. Turn off power & gas mains and take an emergency kit. Come back home only when officials declare it safe to do so.





COVID-19 Vaccine Mythbusters

Myth: People with one or more comorbidities should not get vaccinated.

Fact: COVID-19 vaccines are safe and effective in adults with comorbidity.

Myth: Wearing a mask is no longer necessary after getting vaccinated.

Fact: Ever after getting vaccinated, one must follow covid appropriate behaviour i.e. wearing a mask, maintaining social distance and regularly washing/sanitising hands.

Myth: If you have had Coronavirus, then you don't need the vaccine.

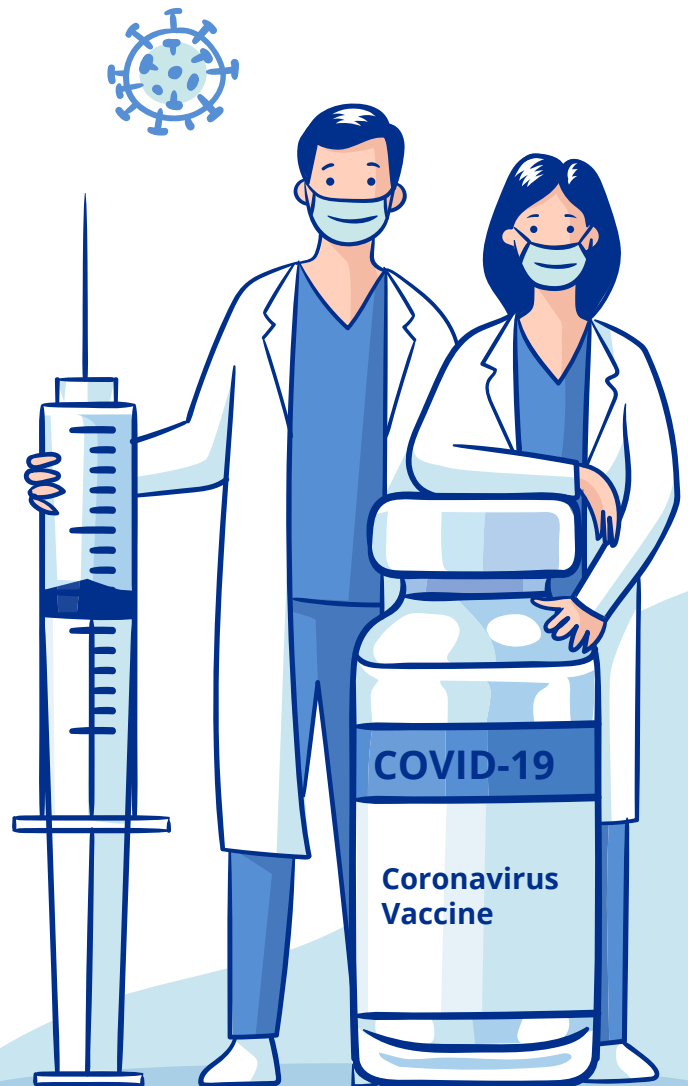
Fact: It is advisable to receive the complete schedule of COVID-19 vaccine irrespective of past history of infection. One must get vaccinated three months after recovery.

Myth: Vaccine can cause infertility in men and women.

Fact: COVID-19 vaccine is completely safe and there is no scientific evidence to prove that it can cause infertility in men and women.

Myth: Women should not take the vaccine 5 days before and after their menstrual cycle.

Fact: Experts have rubbished the claim and said periods have no effect on the vaccine.



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