



DECEMBER 2024 EDITION

## CENTRE FOR DISASTER MANAGEMENT AND LAW

ANNUAL NEW SLETTER

## **PREFACE**

Odisha is no stranger to Natural Disasters. Whether it be floods, cyclones or draughts, the state has to bear the brunt of nature. This year in 2024, once again the state had to face a severe cyclone in form of cyclone DANA. Fortunately the cyclone did not cause widespread damage. Through the years since the super cyclone of 1999, the state of Odisha has developed effective strategies to strengthen disaster management, relief & rescue. Nevertheless every natural disaster is a challenge and it allows the state to rehearse and reinvigorate the administrative mechanism to deal with disasters.

The Centre for Disaster Management and Law (CDML) is a centre dedicated to research on Natural Disasters. The center undertakes research on disaster management, preparedness and mitigation. This time too the center kept a close watch on the developments of cyclone DANA. The center also recognizes that with the impeding global warming and climate change, the frequency of natural disasters will only increase in future. This time the center has decided to dedicate this issue of its annual newsletter to cyclones highlighting various aspects.

## CYCLONE DANA



Cyclone Dana started as a low pressure area in Bay of Bengal. It developed into a deep depression on 22nd October 2024, into Cyclonic storm Dana on 23rd October. It reached its peak on 24th October eventually crossing Odisha coast and making landfall on 25th October (01:30 IST)near Bhitarkanika National Park in Kendrapara district and Dhamara port in Bhadrak district. Windspeed of 100-120 kmph was observed during landfall which continued till morning of 25th October gradually weakening into a low pressure area by 26th October.

The cyclone led to heavy rainfall in coastal areas of Odisha and West Bengal leading to floods in low lying areas. In Odisha mobile towers, electric poles and roads were damaged. The cyclone also damaged over 180000 acers of standing crops in Odisha and there were reports of farmer being pushed in poverty due to meagre compensation. Mass evacuation and timely action on part of administration ensured that there were zero deaths in Odisha.

The response work was led by District Disaster Management Authorities and State Disaster Management Authority. They were assisted by bodies like UNICEF and other NGOs in need assessment and relief distribution. Anganwadis were closed for three days and the anganwadi workers were directed to report to the cyclone shelters instead. While experts have appreciated the work on the part of the administration they have also highlighted the role of natural resources such mangrove cover for reduced impact of the cyclone highlighting the importance of this natural barrier.

-Kanishka

#### CYCLONE DANA BATTERS WEST BENGAL WITH FURY



On October 25, 2024, Cyclone Dana struck the eastern Indian state of West Bengal with unrelenting ferocity. As a severe cyclonic storm, it unleashed powerful gusts of up to 110 kilometers per hour, accompanied by relentless downpours that left a trail of destruction. The cyclone's impact was far-reaching, affecting millions of people statewide. Authorities successfully evacuated lakhs of people from vulnerable coastal areas, while thousands of homes were either damaged or reduced to rubble. Widespread power outages and disrupted transportation links further exacerbated the crisis, isolating numerous communities.

The agricultural sector bore the brunt of the cyclone's fury, with over many hectares of crops laid waste. This devastating blow threatens the livelihoods of countless farmers, potentially triggering food shortages and price hikes in the months to come. Furthermore, Cyclone Dana inflicted significant damage on the state's infrastructure, including roads, bridges, and educational institutions. The daunting task of repairing and rebuilding this infrastructure now lies ahead for the state government.

Fortunately, the response to Cyclone Dana has been swift and effective, with the Indian government and international aid agencies collaborating to provide relief to those affected. Nevertheless, the long and arduous road to recovery will necessitate sustained support from the global community.

-Kumar Aghna

### USEFULNESS OF CYCLONE SHELTERS IN ODISHA



One of the biggest challenges to tackle during a cyclone is the timely and safe evacuation of the large number of people from the coastal habitats. They are highly vulnerable to cyclonic winds, floods, etc. Multi Purpose Cyclone Shelters have served as an answer to the issue. Through these shelters, Governments across the country have managed to mitigate risk and ensure the safety and well-being of those who are vulnerable to the risk. These shelters are usually schools or community centres which are converted to cyclonic shelters. Due to their robust structure and capacity, such community centres and schools are ideal for evacuating the vulnerable and providing them with a meaningful stay. During the recent cyclone, Dana, the Odisha Government had kept 800 cyclonic shelters for people who shall be evacuated from the plausible affected areas. In addition to that, the government also added 500 temporary shelters to ensure their vision of zero casualty is achieved. These shelters had food, water, electricity, medical aid, etc to ensure every need is taken care of. The government had also prepared a list of pregnant women who were expected to deliver within a fortnight to ensure that they can be shifted to nearby hospitals from the shelters. It is due to the cyclone shelters that Odisha achieved its target of zero casualty while tackling Cyclone Dana.

-Punyashloka

## ODISHA SUPER CYCLONE 1999



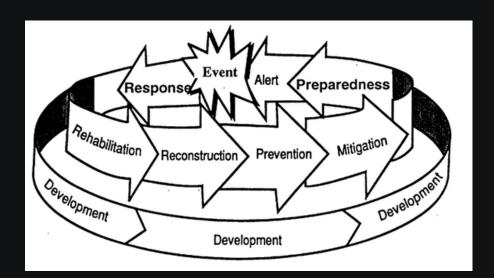
The Odisha Super Cyclone, or Cyclone 05B, wreaked havoc on the Indian state of Odisha in the month of October, 1999. Wind speeds touched 260 km/h with a storm surge of nearly 8 m, classifying it as a Category 5 tropical cyclone. The cyclone caused unprecedented and devastating damage, killing more than 10,000 people and displacing millions. Coastal districts were the worst affected, entire villages being erased from existence. The storm devastated infrastructure, crops, and houses, leaving behind a trail of mass starvation and disease. Relief and rehabilitation programs were launched on a large scale by the Odisha government, national authorities, and international agencies, but this experience emphasized the need for better disaster preparedness. This tragedy changed the course of disaster management for India and paved the way for creating bodies like the Odisha State Disaster Management Authority (OSDMA). In fact, it was set up well before the National Disaster Management Authority (NDMA).

Gradually, the focus shifted from relief, reconstruction, and rehabilitation towards planning, prevention, and preparedness. Odisha took the lead in establishing a specialized response force, the Odisha Disaster Rapid Action Force (ODRAF), which, besides its primary job of Search and Rescue operations, also functions as a relief force. The Jawans trained in the State Armed Police have since received modern techniques and tools. Like the Red Cross, OSDMA also built up a network of cyclone shelters along the Odisha coast scientifically surveyed by IIT Kharagpur.

As a preparedness exercise, the annual drill is conducted jointly with the NDMA in all cyclone shelters. The construction of multi-hazard resistant Emergency Operations Centre buildings is now complete at all district headquarters. The first 72 hours of any disaster have proven to be the most critical ones; therefore, Odisha has sought to develop the capacity of vulnerable communities to act as first responders. Such development includes a series of pilot task forces, a stakeholder-connected network, and up-to-date training and mock drills. OSDMA has made these contributions for over a decade now.

-Sushree

#### ROLE OF FOOD AND AGRICULTURE ORGANIZATION IN CYCLONE RELIEF AND RESCUE



The Food and Agriculture Organisation (FAO) in India aims to recover and relieve the cyclone disaster by implementing strategies to restore agriculture-based communities' livelihoods. For example, it has collaborated with state governments to assess damage caused to farmland, fisheries, and livestock following cyclones like Amphan (2020) and Fani (2019). FAO provided emergency agricultural inputs such as salt-tolerant seeds and tools to smallholder farmers to resume cultivation quickly. FAO also encouraged the rehabilitation of fisheries that cyclonic storms usually devastate by supplying boats, nets, and training on sustainable fishing practices. Besides this, disaster risk reduction advocacy by FAO through climate-resilient crops and community-based early warning systems strengthens the preparedness and resilience of vulnerable communities over the long term against cyclone hazards.

# ROLE OF UNICEF IN CYCLONE RELIEF AND RESCUE



UNICEF plays a crucial role in cyclone relief and rescue operations, addressing the needs of everyone, including vulnerable populations like indigenous people, particularly children. Through its holistic approach, it ensures timely assistance to affected communities during crises, ranging from collaborating with governments for large-scale rescues to safeguarding the well-being of every individual impacted. UNICEF promptly deploys emergency response teams to assess the cyclone's impact and coordinate relief efforts. It also provides nutrition assistance by distributing ready-to-eat food to those displaced from their homes. UNICEF prioritizes the protection and well-being of children, setting up child-friendly spaces to shield them from exploitation while offering psychological support. It establishes temporary learning centers and provides school supplies to ensure education continues uninterrupted. Furthermore, UNICEF monitors the impact of cyclones to enhance disaster management strategies. Overall, UNICEF plays a pivotal role in mitigating the damage caused by cyclones, ensuring that affected communities, especially children, are protected from their devastating effects.

-Kumar Yashasvi

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