

OTHER ACTIONS

- Structural safety of lifeline infrastructure in coastal areas
- Establishing a robust system of locating multi-purpose cyclone shelters and cattle mounds
- Ensuring cyclone-resistant design standards are incorporated in the rural/ urban housing schemes in coastal areas
- Building all-weather road links to all coastal habitations, between habitations and cyclone shelters/cattle mounds
- Maintaining the full designed carrying capacity of main drains and canals along with feeder primary/secondary/ tertiary channels, creating additional flood flow canals in frequently inundated areas
- Construction of saline embankments to prevent ingress of saline water associated with cyclonic storm surge

Encouraging public-private partnership with corporate/trusts.

- Mapping and delineation of coastal wetlands, patches of mangroves and shelterbelts, identification of potential zones for expanding bio-shield spread based on remote sensing tools.
- Regulating infrastructure and development activities in coastal zones.
- Monitoring of water quality as well as the carrying and assimilative capacities of open waters with institutionalised remedial measures.
- Developing Integrated Coastal Zone Management (ICZM) frameworks for addressing the sustainability and optimal utilisation of coastal resources as also cyclone impact minimisation plans.

 Evolving eco-system restoration plans for degraded ecological zones

- Developing delta water management and freshwater recharge/management options.
- Coastal bio-shields spread, preservation and restoration/ regeneration plans.
- Implementing coastal flood zoning, flood plain development and flood inundation management and regulatory plans.
- Groundwater development and augmentation of freshwater requirement in coastal urban centres.
- Development of Aquaculture Parks in the identified potential zones.
- Setting up of an exclusive eco-system monitoring network to study the impact of changing climate.

oDeveloping integrated hazard mitigation framework taking into account cyclone and associated storm surge, wind hazard, rainfall-runoff, river flood and Geographical **Information System (GIS) models for** estimating possible areas of inundation along with the depth of inundation (levels), possible damage to infrastructure, crops, houses, etc.,

• Evaluating not only the vulnerability but also the changing profile of vulnerability from time to time.

- Integrate ongoing efforts of the SoI, DoS under National Spatial Data Infrastructure, National Database for Emergency Management and MoEFCC initiatives for speedy completion of digital spatial data generation to cover 84 coastal districts that are vulnerable to cyclones, for evolving holistic cyclone risk reduction strategies on priority.
- High resolution coastal Digital Elevation Models (DEMs) are to be developed for micro-scale delineation of cyclone risk, hazard and vulnerability

NATIONAL CYCLONE RISK MITIGATION PROJECT

•India initiated this project to undertake structural and nonstructural measures to mitigate the cyclone's effects.

•It is designed for coastal states and UTs of India.

•The aim of the project is to protect the vulnerable local communities from the impact of cyclones and other hydro-meteorological calamities.

Integrated Coastal Zone Management (ICZM) Project

•In August 2019, a draft **Environmental and Social Management** Framework (ESMF) for integrated coastal management was released by the Ministry of Environment, Forest and Climate Change (MoEF&CC.) •It aims to bring a comprehensive plan to manage coastal areas.

IMD'S COLOUR CODING OF CYCLONES

It is a weather warning that is issued by the IMD to aware people ahead of natural hazards. The four colours used by IMD are 1. Green 2. Yellow

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- 3. Orange
- **4. Red**

CYCLONE: DO'S & DONT'S

• Before the Cyclone season:

- Check the house; secure loose tiles and carry out repairs of doors and windows
- Remove dead branches or dying trees close to the house; anchor removable objects such as lumber piles, loose tin sheets, loose bricks, garbage cans, sign-boards etc. which can fly in strong winds
- Keep some wooden boards ready so that glass windows can be boarded if needed
- Keep a hurricane lantern filled with kerosene, battery operated torches and enough dry cells
- Demolish condemned buildings
- Keep some extra batteries for transistors
- Keep some dry non-perishable food always ready for use in emergency

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NECESSARY ACTIONS

•The actions that need to be taken in the event of a cyclone threat can broadly be divided into :

- •Immediately before the cyclone season
- oWhen cyclone alerts and warnings are communicated

•When evacuations are advised
 •When the cyclone has crossed the coast

WHEN THE CYCLONE STARTS

- Listen to the radio (All India Radio stations give weather warnings).
- Keep monitoring the warnings. This will help you prepare for a cyclone emergency.
- Pass the information to others.
- Ignore rumours and do not spread them; this will help to avoid panic situations.
- Believe in the official information
- When a cyclone alert is on for your area continue normal working but stay alert to the radio warnings.
- Stay alert for the next 24 hours as a cyclone alert means that the danger is within 24 hours.

WARNING GET AWAY FROM LOW-LYING BEACHES OR OTHER LOW-LYING AREAS CLOSE TO THE COAST

- Leave early before your way to high ground or shelter gets flooded
- Do not delay and run the risk of being marooned
- If your house is securely built on high ground take shelter in the safe part of the house. However, if asked to evacuate do not hesitate to leave the place.
- Board up glass windows or put storm shutters in place.
- Provide strong suitable support for outside doors.
- If you do not have wooden boards handy, paste paper strips on glasses to prevent splinters. However, this may not avoid breaking windows.
- Get extra food, which can be eaten without cooking. Store extra drinking water in suitably covered vessels.
- If you have to evacuate the house move your valuable articles to upper floors to minimize flood damage.

- Ensure that your hurricane lantern, torches or other emergency lights are in working condition and keep them handy.
- Small and loose things, which can fly in strong winds, should be stored safely in a room.
- Be sure that a window and door can be opened only on the side opposite to the one facing the wind.
- Make provision for children and adults requiring special diet.
- If the centre of the cyclone is passing directly over your house there will be a lull in the wind and rain lasting for half an hour or so. During this time do not go out; because immediately after that, very strong winds will blow from the opposite direction.

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Switch off the electrical mains in your house.
Remain calm.

DURING A CYCLONE

- DO NOT venture out even when the winds appear to calm down. The 'eye' of the cyclone might be passing.
- Winds might intensify and gush again and cause damage. Be safe inside till it is officially announced that the cyclone has passed.
 WHEN EVACUATION IS INSTRUCTED
- Pack essentials for yourself and your family to last a few days. These should include medicines, special food for babies and children or elders.
- Head for the proper shelter or evacuation points indicated for your area. Do not worry about your property
- At the shelter follow instructions of the person

POST-CYCLONE MEASURES

- You should remain in the shelter until informed that you can return to your home.
- o You must get inoculated against diseases immediately.
- Strictly avoid any loose and dangling wires from lamp posts.
- If you have to drive, do drive carefully.
- Clear debris from your premises immediately.
- Report the correct losses to appropriate authorities.