



Government of Tamil Nadu
Department of Employment and Training

Course : TNPSC Combined Civil Services Examination - IV(Group IV / VAO)

Subject : Geography

Topic : NATURAL CALAMITIES AND DISASTER MANAGEMENT

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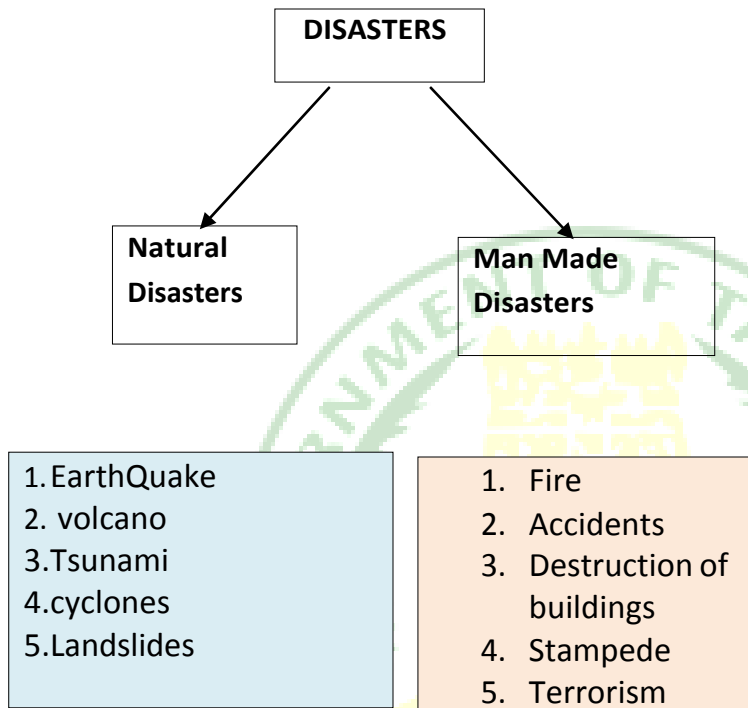
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NATURAL CALAMITIES AND DISASTER MANAGEMENT

Disaster

A disaster is a serious disruption of the functioning of a society involving human and material loss.



Earthquake

The sudden shaking of the earth at a place for a short spell of time is called an earthquake

- The point where an earthquake originates is called its 'focus'.
- The vertical point at the surface from the focus is called 'epicentre'.
- Magnitude of earthquake is measured using Richter Scale
- Damage caused is measured by Mercaulli Intensity scale.

Volcanoes

- Volcanoes are openings or vents where lava, small rocks and steam erupt onto the earth's surface.

Tsunami

Tsunami are waves generated by earthquake, volcanic eruptions and underwater landslides

Geography GK

- ★ Tsunami hit the south east Asian countries on the 26th of December, 2004. It triggered one of the biggest Tsunamis the world had ever witnessed. Nagapattinam was the worst hit in the state of Tamil Nadu.
- ★ Tsunami Early Warning System at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad in 2007

Droughts

Failure of rains cause prolonged periods of dryness which results into crop-failures. This condition is called as drought

Cyclones

A low pressure area which is encircled by high-pressure wind is called a cyclone.

Landslide

The movement of a mass of rocks, debris, soil etc., downslope is called a landslide

Avalanche

A large amount of ice, snow and rock falling quickly down the side of a mountain is called an Avalanche.

Floods

An overflow of a large amount of water, beyond its normal limits, especially on the rainfed areas is called a flood

Types of Floods

Flash floods

Floods that occur within six hours during heavy rainfall.

River floods

Floods are caused by Precipitation over large catchment areas or by melting of snow or sometimes both.

Coastal floods

These Floods are associated with cyclone high tides and Tsunamis.

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Operation Madad – Undertaken by Indian navy, army and airforce during the relief operation of December 2015 Chennai flood caused by north-east monsoon.



December 2015- Chennai Flood

Weapons of Mass Destruction

The weapons of mass destruction (WMD) include those articles which can cause nuclear, chemical or biological warfare. They can cause large-scale human sufferings, loss of life and property and several other damages.

Nuclear Weapons

Several countries in the world have developed nuclear weapons, which can be harmful and destructive.

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The atom bomb dropped by USA on Japan during the Second World War.

- ★ On 6th August 1945 - (Little Boy) over the city of Hiroshima in Japan.
- ★ On 9th August 1945 - (Fat - Man) over the city of Nagasaki in Japan

Accidental Disasters

Of all the disasters, caused by human error, the most costly in terms of loss of life and property have been accidents of transportation vehicles. Every year a large number of people die in our country due to road and rail accidents due to human error.

Disaster Management



Disaster Management Act 2005

The Act provides for setting up of a

- National Disaster Management Authority (NDMA) – Chairman- the Prime Minister
- State Disaster Management Authorities (SDMAs) - Chairman- the Chief Ministers
- District Disaster Management Authorities (DDMAs) - Chairman- Collectors / District Magistrates / Deputy Commissioners

National policy on disaster management was laid in 2009

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- ★ TN SMART –Tamil Nadu System for Multi-Hazard Potential Impact Assessment and Emergency Response Tracking ,TamilNadu govt launched this Mobile App to help during natural disasters.
- ★ TamilNadu govt on August 2018 laid State Disaster Management Perspective Plan (2018-2030)

Disasters	Agencies
Cyclone	Indian Meteorological Department
Tsunami	Indian National Centre for Oceanic information Service
Floods	Central Water Commission


PLAN FOR 2018-2030

The govt sets priorities, strategic action plan and the way forward in disaster risk reduction

UNDERSTANDING DISASTER RISK


<ul style="list-style-type: none"> > Hazard risk and vulnerability assessment and mapping for all major disasters > Big data analytics-based risk assessment 		<ul style="list-style-type: none"> > Flood mitigation through interventions aided by mapping of flood-prone river basins with UAVs > Integrated CZM plan for village level planning
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STRENGTHENING DISASTER RISK GOVERNANCE


<ul style="list-style-type: none"> > Strengthening disaster response force > Modernization of fire services > Inter-departmental zonal teams 		<ul style="list-style-type: none"> > Multi-stakeholder participation > Disaster response guards to provide service in all vulnerable areas > Training of first responders
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INVESTING IN DISASTER RISK REDUCTION

Measures to be initiated:

<p>To be made flood resistant Tiruvallur, Kancheepuram, Cuddalore, Nagapattinam, Tuticorin, Ramanathapuram and</p>		<p>Kanyakumari</p> <ul style="list-style-type: none"> > Restoration and protection of fragile ecosystems > Prevention of sea water intrusion > Enhanced storage of water bodies
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ENHANCING DISASTER PREPAREDNESS

<ul style="list-style-type: none"> > Real-time forecasting with TN system for Multi-Hazard Potential Impact Assessment and Emergency Response Tracking (TN-SMART) > Ward level Chennai flood warning system > Real-time flood forecasting and spatial decision support 		<ul style="list-style-type: none"> system for Adyar, Cooum, Kosasthalaiyar rivers, Kovalam basins, other river basins > Storm surge model based on geo spatial technology for real-time warning > Use of social media, mobile technologies, satellite telephony, HF sets, and distress alert transmitters in risk communication
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