Centurion University
Shaping Lives...
Empowering Communities...

Collaborative Framework for Climate Disaster Preparedness, Risk Reduction and Community Resilience

Centurion University actively participates in co-operative planning efforts to address climate change-induced disasters including floods, cyclones, droughts, heatwaves, coastal vulnerabilities, and displacement of vulnerable communities. Through collaborations with local and regional government bodies, technical institutions, NGOs, and community groups, the University contributes toward disaster preparedness, mitigation planning, climate resilience, and sustainable recovery strategies aligned with SDG 13.

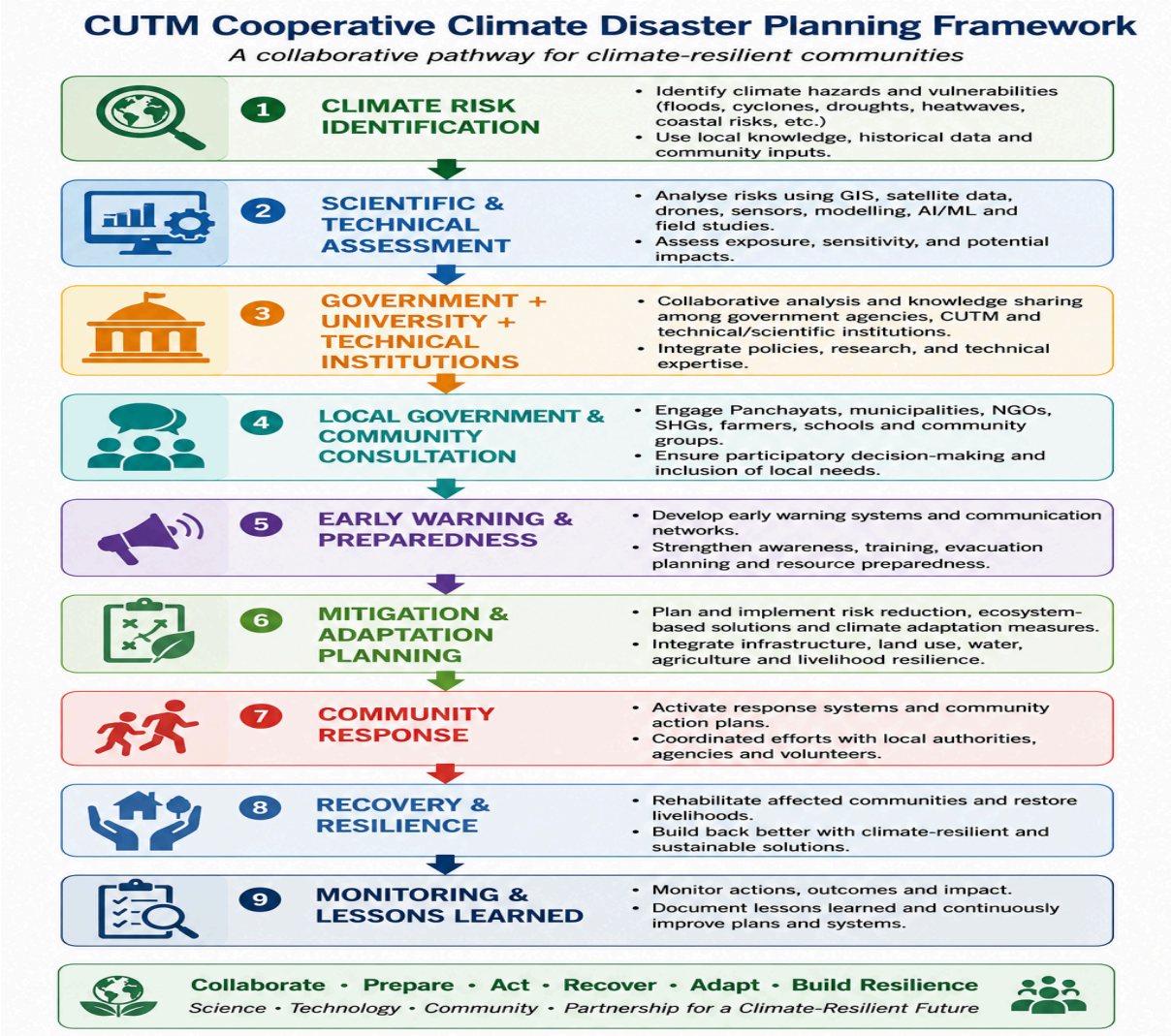
1. Collaborative Disaster Resilience Framework

Centurion University works closely with local Panchayats, municipalities, NGOs, research organizations, and government agencies to co-develop climate adaptation and disaster management strategies. The University integrates scientific research, technology-driven monitoring, community awareness, and sustainability education to strengthen regional climate resilience. The University's cooperative planning approach brings together scientific knowledge, government disaster-management mechanisms, technology-enabled monitoring, community knowledge and institutional capacity. This enables climate risks to be identified, assessed and addressed through coordinated preparedness, early warning, mitigation, response and recovery planning.

Partnerships & Stakeholder Engagement

CUTM's cooperative disaster-resilience planning involves multiple levels of stakeholders. Scientific and technical institutions contribute hazard information, modelling and monitoring capabilities; government agencies and local authorities contribute disaster-management coordination; NGOs, SHGs and community groups contribute local knowledge and community mobilisation; and schools and educational institutions support climate literacy and preparedness.

Partner / Stakeholder	Area of Collaboration	2025 Focus
IIRS-ISRO	Disaster management training	Advanced mitigation tools and GIS applications
MoES-INCOIS	Marine and coastal resilience	Early warning systems and coastal monitoring
Local Panchayats & Municipalities	Community resilience planning	Climate adaptation and awareness
NGOs & SHGs	Grassroots climate engagement	Disaster preparedness and livelihood resilience
Schools & Educational Institutions	Climate education and awareness	Youth participation and preparedness



Summary of 2025 Cooperative Climate-Disaster Planning Activities

Initiative	Partner / stakeholder	Documented activity	Participants
Disaster Management and Mitigation Workshop	IIRS–ISRO and relevant technical stakeholders	Training on disaster-management tools and techniques	56
Coastal and marine field activities	MoES–INCOIS and scientific partners	Marine monitoring and coastal-resilience activities, including the reported *RV Sagar Utkal* campaign	120
Local disaster-resilience engagement	Panchayats and municipalities	Climate-risk awareness and community-preparedness engagement	5
Community preparedness	NGOs, SHGs, schools and community groups	Awareness and capacity-building activities	350

Environmental monitoring	monitoring and technical teams	Environmental data and monitoring initiatives programme	54

Disaster Management & Mitigation Workshop

In 2025, the University organized advanced workshops on Disaster Management and Climate Mitigation using modern tools and technologies in collaboration with IIRS-ISRO, MoES institutions, and regional disaster management stakeholders. The programmes focused on disaster preparedness, response systems, climate adaptation, and community-based resilience planning.

- Training on disaster risk reduction and climate adaptation strategies
- Use of GIS, satellite imagery, and drone-based monitoring systems
- Flood forecasting, cyclone tracking, and drought monitoring techniques
- AI and machine learning applications for predictive disaster analytics
- Community-centered disaster preparedness and recovery planning
- Alignment with national and international disaster resilience frameworks

The programme strengthened institutional and stakeholder capacity to use scientific and digital tools for disaster-risk assessment, early warning, preparedness and climate-adaptation planning. It also promoted the integration of technology-based evidence with community-centred disaster management.

Coastal Resilience & Marine Monitoring Initiatives

Centurion University continued collaborative coastal monitoring and marine research initiatives with MoES-INCOIS and other scientific organizations in 2025. Joint field studies and coastal vulnerability assessments contributed toward early warning systems, sea-level rise monitoring, and climate-resilient coastal planning.

- Marine and coastal ecosystem monitoring near vulnerable coastal regions
- Support for disaster preparedness and early warning systems
- Research on sea-level rise and coastal climate vulnerabilities
- Promotion of sustainable Blue Economy and coastal resilience

CUTM's collaboration with MoES-INCOIS strengthens the connection between scientific coastal observations and climate-resilience planning. Marine and coastal monitoring contributes to understanding coastal vulnerabilities, supporting early-warning systems and strengthening preparedness for climate-related coastal hazards.



Climate Awareness & Community Preparedness Programmes

The University conducted awareness programmes, Earth Day celebrations, plantation drives, and sustainability outreach initiatives emphasizing disaster preparedness and climate resilience. Students, school children, faculty members, NGOs, SHGs, and community participants were actively engaged in these programmes.

- Climate resilience awareness among school students and rural communities
- Training on sustainable land management and ecosystem conservation
- Promotion of early warning systems and adaptive community practices
- Biodiversity conservation and plantation initiatives for ecological resilience

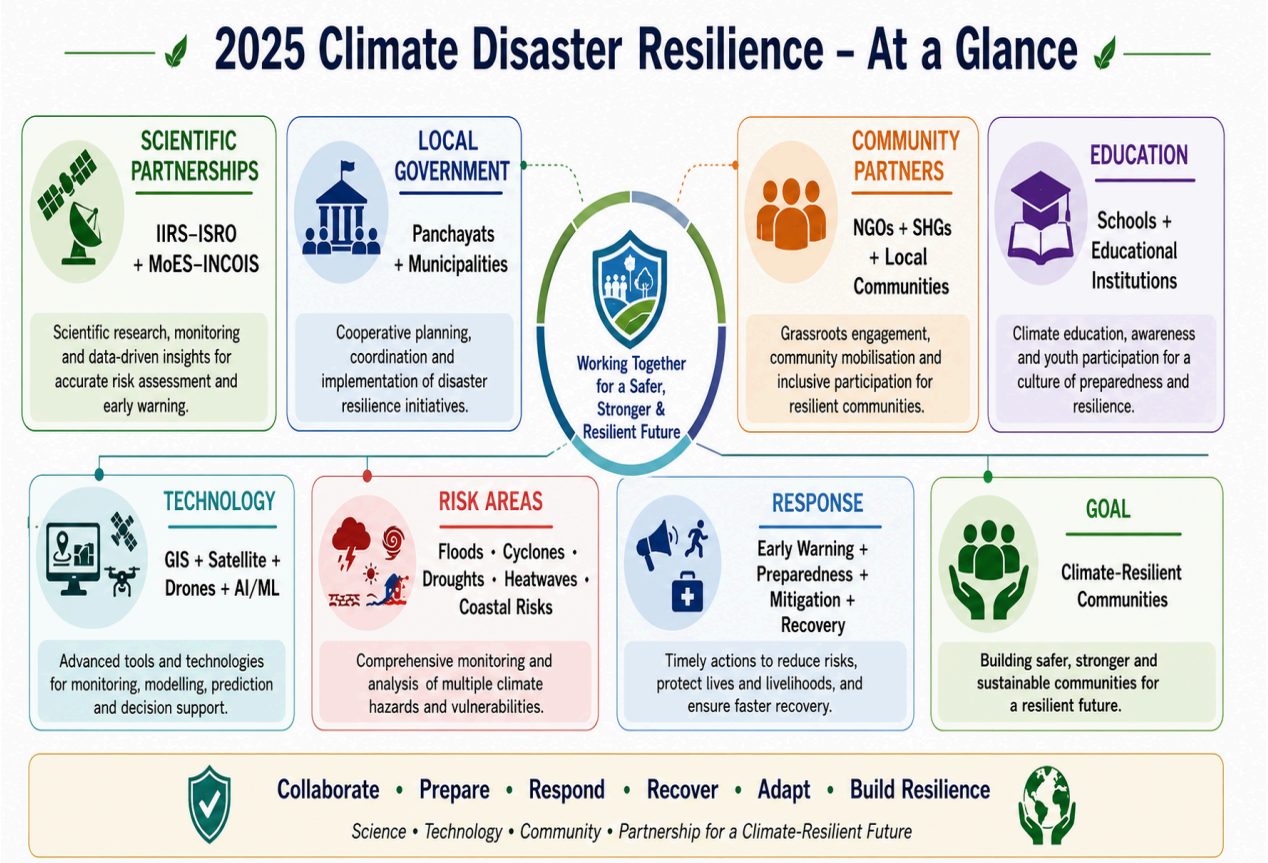
These programmes extend disaster-risk education beyond technical institutions to students, schools, rural communities, NGOs, SHGs and other local stakeholders, strengthening community-level preparedness and adaptive capacity.





One Day Awareness Workshop on Disaster Management and Mitigation Using Modern Tools and Techniques


Climate Disaster Preparedness, Early-Warning & Community Response Pathway
1 CLIMATE HAZARD
Flood
Cyclone
Drought
Heatwave
Coastal Risk
2 RISK MONITORING
GIS
Satellite
Drone
Sensors
Marine Monitoring
3 EARLY WARNING
Timely alerts and forecasts through multiple communication channels
4 GOVERNMENT & INSTITUTIONAL COORDINATION
Government agencies
Technical institutions
Local authorities
Emergency services
Resource coordination
5 COMMUNITY ALERT & AWARENESS
Community alerts
Awareness messages
Training & drills
Inclusion of vulnerable groups
5 PREPAREDNESS & RESPONSE
Evacuation & safety
Emergency response
Shelter & relief
Health & support
Rapid coordination
6 RECOVERY & ADAPTATION
Rehabilitation
Livelihood recovery
Infrastructure rebuild
Build back better
Adaptation planning
8 RESILIENT COMMUNITY
Stronger communities
Climate resilience
Sustainable development
Better prepared for future risks
Science • Technology • Collaboration • Community Action • Building a Climate Resilient Future


2025 Climate Disaster Resilience – At a Glance
SCIENTIFIC PARTNERSHIPS
IIRS–ISRO + MoES–INCOIS
Scientific research, monitoring and data-driven insights for accurate risk assessment and early warning.
LOCAL GOVERNMENT
Panchayats + Municipalities
Cooperative planning, coordination and implementation of disaster resilience initiatives.
Working Together for a Safer, Stronger & Resilient Future
COMMUNITY PARTNERS
NGOs + SHGs + Local Communities
Grassroots engagement, community mobilisation and inclusive participation for resilient communities.
EDUCATION
Schools + Educational Institutions
Climate education, awareness and youth participation for a culture of preparedness and resilience.
TECHNOLOGY
GIS + Satellite + Drones + AI/ML
Advanced tools and technologies for monitoring, modelling, prediction and decision support.
RISK AREAS
Floods • Cyclones • Droughts • Heatwaves • Coastal Risks
Comprehensive monitoring and analysis of multiple climate hazards and vulnerabilities.
RESPONSE
Early Warning + Preparedness + Mitigation + Recovery
Timely actions to reduce risks, protect lives and livelihoods, and ensure faster recovery.
GOAL
Climate-Resilient Communities
Building safer, stronger and sustainable communities for a resilient future.
Collaborate • Prepare • Respond • Recover • Adapt • Build Resilience
Science • Technology • Community • Partnership for a Climate-Resilient Future

Cooperative Planning and Institutional Collaboration

Centurion University contributes to cooperative climate-disaster resilience through engagement with scientific and technical institutions, local authorities, community organisations and educational institutions. These collaborations connect technical knowledge, environmental monitoring, community awareness and disaster-preparedness activities. The University's SDG 13 reporting identifies collaboration with IIRS–ISRO on disaster-management training and with the Ministry of Earth Sciences and the Indian National Centre for Ocean Information Services (MoES–INCOIS) on marine and coastal monitoring activities. These initiatives provide opportunities to strengthen knowledge of climate-related hazards, including floods, cyclones, droughts, heatwaves and coastal vulnerabilities.

The collaborative approach is intended to support the identification of local risks, interpretation of scientific information, dissemination of preparedness messages and development of appropriate mitigation and adaptation measures. Where activities lead to specific recommendations, local plans, institutional decisions or community interventions, these should be documented as evidence of cooperative planning.

Disaster Risk Information, Early Warning and Community Preparedness

CUTM's cooperative disaster-resilience approach connects scientific and technical information with community-level preparedness. Relevant information may include weather and hazard monitoring, GIS and satellite imagery, drone-based observations, coastal and marine monitoring, and digital environmental data. These tools can support the assessment of exposure and vulnerability and help local stakeholders understand the risks associated with extreme weather and environmental change. Community preparedness activities can complement technical information by communicating risk awareness, promoting appropriate protective practices and encouraging coordination among relevant authorities and community groups. The University's reporting also refers to the Aurassure environmental-monitoring system in the wider SDG 13 programme. Where records establish that its data were used in local risk communication or planning, the report should identify the relevant application, stakeholder, period and supporting evidence. Monitoring capability should not be described as a formally operational disaster-warning service unless that function and its implementation are documented.

Coastal Resilience and Scientific Cooperation

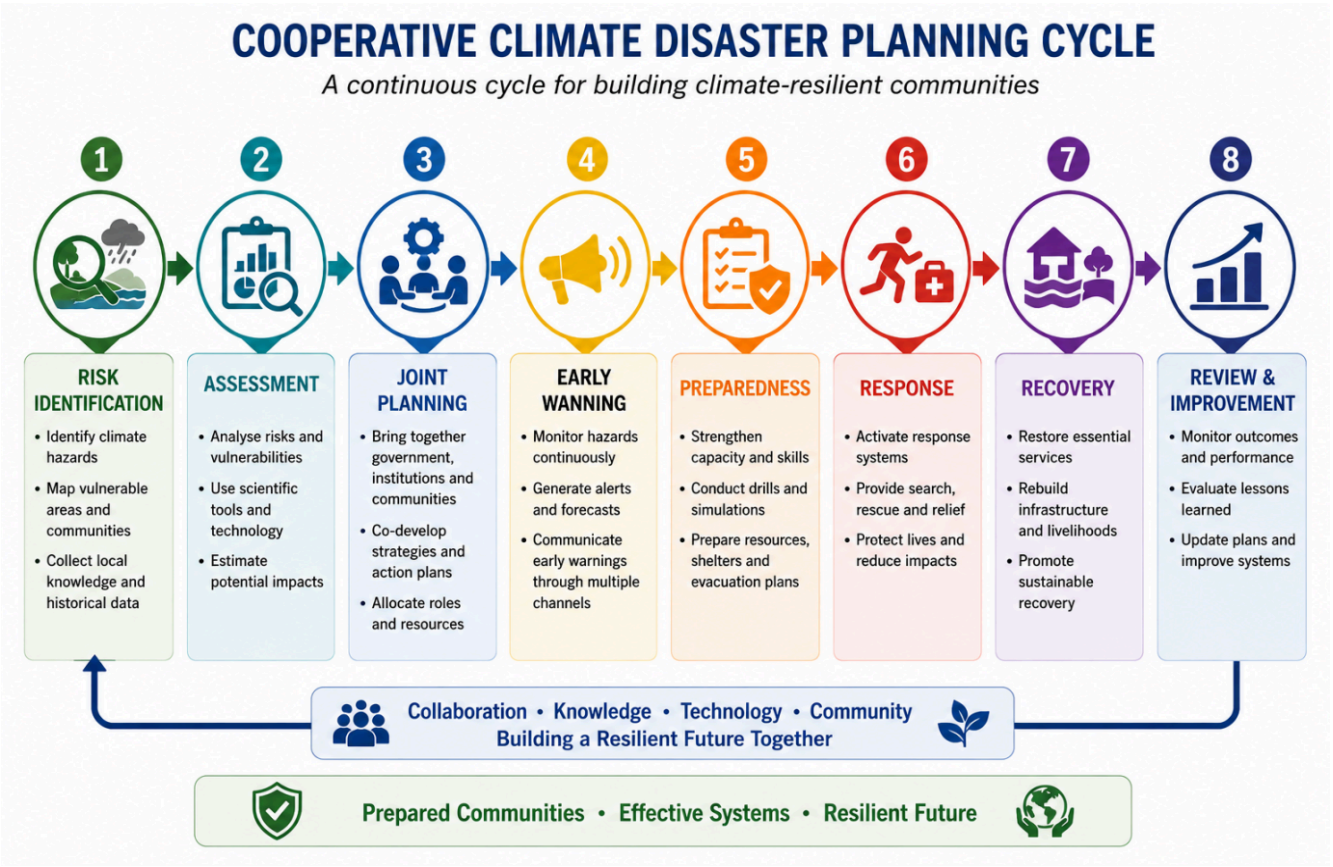
CUTM's reported cooperation with MoES–INCOIS and participation in marine and coastal field activities provide a relevant basis for describing scientific cooperation on coastal resilience. The activities are associated with understanding marine and coastal environments, assessing vulnerabilities and strengthening awareness of climate-related coastal risks.

Community Participation and Inclusive Disaster Preparedness

Cooperative climate-disaster planning should incorporate the knowledge and needs of communities that may be especially vulnerable to floods, cyclones, droughts, heat stress and coastal hazards. CUTM's engagement with Panchayats, municipalities, NGOs, SHGs, schools, farmers and other community groups provides a platform for communicating risks and promoting preparedness.

6. Cooperative Climate Disaster Planning Cycle

CUTM follows a collaborative cycle in which climate and disaster risks are identified through scientific and community inputs, assessed using technical tools, addressed through coordinated preparedness and mitigation planning, and reviewed following implementation.



7. Key 2025 Cooperative Climate Disaster-Resilience Outcomes

- Strengthened collaboration with government and scientific agencies for climate-disaster resilience
- Conducted disaster-management and climate-adaptation capacity-building programmes
- Strengthened community participation in climate-resilience planning
- Expanded use of GIS, satellite imagery, drones and AI/ML for disaster-risk assessment
- Strengthened coastal and marine monitoring through scientific partnerships
- Promoted early-warning awareness and community preparedness
- Integrated sustainability and climate education into disaster-risk reduction activities

8. Conclusion

Centurion University's cooperative approach to climate-disaster planning brings together government agencies, scientific and technical institutions, local authorities, NGOs, educational institutions and communities to strengthen preparedness, early warning, mitigation, adaptation and recovery. Through collaborations with IIRS-ISRO, MoES-INCOIS, Panchayats, municipalities, NGOs, SHGs, schools and local communities, CUTM integrates scientific knowledge, technology-enabled monitoring, community awareness and participatory planning into climate-resilience activities.

The University's approach can be represented as:

Science + Government + Technology + Community → Cooperative Planning → Preparedness → Resilience