



United Nations
Small Island
Developing States
Partnerships Awards

CDRI

Coalition for Disaster Resilient Infrastructure

IRAF
Infrastructure Resilience Accelerator Fund

IRIS
INFRASTRUCTURE FOR RESILIENT ISLAND STATES

Dominican Republic National Multi-Threat Early Warning System

About IRIS

Infrastructure for Resilient Island States (IRIS) is a flagship initiative of the Coalition for Disaster Resilient Infrastructure (CDRI) which aims to equip Small Island Developing States (SIDS) with knowledge, tools, and partnerships to build climate- and disaster-resilient infrastructure.

SIDS face severe climate risks in addition to challenges posed by geographic remoteness, poor connectivity, and limited economies of scale. Strengthening infrastructure resilience is key to sustainable development and safeguarding livelihoods.

Through IRIS, CDRI advocates for resilient infrastructure, deploys experts, shares best practices, and funds technical support to enhance infrastructure resilience in SIDS.



Location:

Dominican Republic



Period:

2024-2026



● Dominican Republic

Contact Details:

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Context and Background

- The Latin America and Caribbean (LAC) region, especially the Caribbean and Central America, faces frequent extreme climate events. In 2015, climate-related losses reached \$100 billion; a 2.5°C rise could reduce GDP by up to 5%. (ECLAC 2014)
- The Dominican Republic recorded 28 hurricanes and storms and 20 floods (1980–2012), causing nearly 2,000 fatalities. Around 79% of the recorded disaster events since 1970 in Dominican Republic is attributed to climate risks such as floods, droughts, and landslide resulting in annual fiscal costs as high as 1.8% of GDP.
- A 2017 review found the national Early Warning System (EWS) lacked localized, actionable alerts. In 2018, work began to strengthen Emergency Operations Center's (COE) alert system with personalized communication.
- Upgrades are still needed—better forecasting, risk mapping, multi-hazard alerts, and stronger institutional coordination to build a full Multi-Hazard Early Warning System (MHEWS).



79% of the recorded disastrous events in the country since 1970 are attributed to climate risks. The annual fiscal costs associated with weather events is as high as 1.80% of GDP.

Objective and Outputs

- Strengthen and expand Dominican Republic's early warning system framework to allow the development of early warning systems and reduce losses and damages to civil society and infrastructure through design of multi-threat early warning system framework including the development of National Risk and Vulnerability Atlas.
- Enhance Dominican Republic's real-time decision-making capacities based on information tools by strengthening the "COE-Alert" application which provides timely information to general population on imminent threats and hazards.
- Streamline the delivery of timely information and messages on incoming threats to the general population to reduce their exposure and reduce their vulnerability.

Impact

- The MHEWS will directly benefit approximately 5.83 million people, or 52.4% of the Dominican Republic's total population, by delivering timely alerts in the most densely populated cities. This will reduce human and economic losses in areas with high infrastructure concentration.
- The development of a national risk and vulnerability atlas will benefit all 11.12 million citizens by identifying disaster-prone regions. It will support evidence-based planning for resilient infrastructure, guide targeted mitigation actions, and strengthen national policies on risk reduction and emergency preparedness.
- Approximately 9.74 million people with mobile phone access will benefit from the improved COE-Alert system. It will deliver real-time, location-specific warnings, enabling faster responses to hazards, especially in the ten most populated cities.
- By highlighting safer zones and high-risk areas, project outputs will enable government and infrastructure managers to prioritize investments, plan adaptive infrastructure, and reduce exposure to future climate and disaster risks.



Nodal Government Agency

Emergency Operations Center (COE)



Implementing Partner

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