



INNOVATION FUND

Harnessing Innovative Technologies to Support Resilient Settlements on the Coastal Zones of the Caribbean (HIT RESET Caribbean)

PROJECT CONSORTIUM



PROJECT COORDINATOR

The University of the West Indies (UWI), Trinidad and Tobago



PARTNERS

Caribbean Disaster Emergency Management Agency (CDEMA), Barbados

Anton de Kom University (ADEKUS), Suriname

LOCATION



Caribbean region

PERIOD



January 2021 – December 2024

TOTAL BUDGET



EUR 4.941.173

EU FUNDING



EUR 4.199.997

PROJECT CONTACT



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HIT RESET CARIBBEAN

CHALLENGE

Small island developing states (SIDS) in the Caribbean region are among the most vulnerable countries to the impacts of climate change and natural hazards, such as sea level rise and extreme hydro-meteorological events, with the majority of the population living in coastal areas. Informal and haphazard development, inferior construction of buildings and infrastructure in coastal settlements, combined with weak urban and research policies, are hindering adaptation to extreme weather and the changing climate.

FOCUS

The capacity of government entities, coastal development agencies and coastal communities to identify existing vulnerabilities, anticipate impacts, and plan and implement mitigation and adaptation measures, will be enhanced, allowing coastal settlements to become more climate smart and resilient.

RATIONALE

Low income levels among a significant part of the population combined with weakly enforced development standards and building codes have led to unplanned and haphazard development in urban areas and settlements, which is highly vulnerable to the impacts of climate change and natural disasters. Many settlements, especially informal ones and

shantytowns, are located in highly vulnerable areas such as riverbanks and wetlands and are regularly subject to landslips, flooding and other perennial hazards, which are exacerbated by climate and weather extremes. What's more, urbanisation is expected to increase in a region, already one of the most urbanised in the world, with more than 50% of its population living within 1.5 km of the shore and approximately 70 % in coastal settlements.

A lack of data to support planning and disaster response, weak and uncoordinated institutions with limited human and technical resources, limited collaboration between public authorities and communities, and inadequate legal and policy frameworks are areas that require urgent attention. The Caribbean does not possess a regional policy framework for science and technology (S&T) which adequately supports innovation, and the status of national science, technology and innovation (STI) policies varies from country to country. Although a regional framework for S&T was proposed in 2008, there were no translations into regional plans or policies or a funding mechanism to support innovation. In general, Caribbean countries lack dedicated agencies to promote and implement STI; there is little coordination between existing actors and no long-term supportive policies or support from the private sector.

Improvements in evidence-based planning and management are needed to enhance coastal settlements' resilience. The development and application of technologies and innovations are critical tools to support this process. Ultimately, to improve the wellbeing and livelihoods of residents in coastal regions, a sustainable innovation system is needed to address the effects of climate change and weather extremes along with increasing demographic pressure and societal demands.





Hurricane Maria in Dominica (2017)

METHOD

HIT RESET Caribbean supports innovations geared towards better management of coastal settlements and contributes to general improvements in policy frameworks that are important in transforming the Caribbean into knowledge-based economies that allow for economic and social benefits.

HIT RESET Caribbean promotes improved knowledge and use of emerging technologies by financially and technically supporting innovation projects that will be selected based on calls for proposals (see website for further details). These projects will improve our understanding of the challenges faced in developing innovative solutions for coastal settlements, translate science and research into tools that enhance the availability of data to predict the impacts of climate and natural hazards, and create a forum for inclusive and evidenced-based decision making in the planning and management of coastal settlements.

HIT RESET Caribbean improves digital literacy, particularly in coastal development agencies and amongst high-level decision makers, by exposing them to new technologies for digital data harnessing and analysis that have been developed by the selected projects, and through communication and data collection at the community level.

HIT RESET Caribbean creates synergies in the research & innovation (R&I)

ecosystem by reviving dialogues on national innovation systems and making recommendations to improve national legal and policy frameworks in support of innovations to improve planning and management of coastal settlements. These dialogues will be held at the annual Caribbean Urban Forum (CUF) meetings, where planners and technicians from coastal development agencies, policy makers, researchers from Caribbean higher education institutes (HEIs), and representatives from municipal governments and multi-lateral development agencies will discuss urban development topics in the region.

EXPECTED RESULTS

Impacts

Climate smart and resilient coastal settlements in the Caribbean region.

Outcomes

- Digital and modelling technologies utilised by coastal development agencies and high-level decision makers in CARIFORUM countries to predict the impacts of climate change and natural disasters, and to plan and manage coastal communities.
- Government entities, coastal development agencies and coastal communities in CARIFORUM countries developing urban planning policies and/or plans that are conducive to the use of digital and modelling innovations for sustainable coastal development.

Outputs

- Digital tools that are regionally replicable used to predict the impacts of climate and natural hazards and for evidence-based decision making in the planning and management of coastal settlements.
- Local applicability of digital and modelling innovations ensured by coastal development agencies and local communities.
- Government entities, coastal communities and research institutes enabled to co-develop policy recommendations to improve legal and policy frameworks that promote innovations in the planning and management of coastal settlements.

PROGRAMME PRIORITIES

Access to digital literacy, knowledge and use of emerging technologies.

Synergies in the R&I ecosystem (private sector, technology transfer, R&I uptake).

SECTOR

Urban development

KEYWORDS

climate change, natural hazards, coastal settlements, urban planning policies, environmental research, technologies



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Flooding in Guyana (2021)