



Assessing vulnerability to climate change in the Moruga community, Trinidad and Tobago

The Caribbean Natural Resources Institute (CANARI) and Fisheries Division - Ministry of Agriculture, Land and Fisheries, Trinidad engaged fisherfolk and their organisations, other community members and the public and private sector in Moruga in 2020 to assess the vulnerability of their fisheries and wider community to climate change and identify priorities for adaptation.

How was vulnerability to climate change assessed?

The assessment utilised three tools, participatory geographic information systems (GIS), surveys and an impact and capacity matrix, for data collection and analysis as follows:

- 1. Participatory GIS** used paper maps printed to scale to capture and integrate local and scientific knowledge on resource use, livelihoods and areas critical to the fisheries sector with community stakeholders. The paper maps were then converted to digital maps that can be compared and integrated with other GIS and technical data to support planning and decision-making.
- 2. Surveys** collected information and perspectives from fisherfolk and the wider community on attitudes/ perceptions, environmental, economic, social and political issues shaping vulnerability to climate change at the local level.
- 3. Impact and capacity matrix** allowed for identification of the hazards that have the most serious impact on the community, who and what are most vulnerable, and existing and potential coping and adaptation strategies to address these hazards. This supported prioritisation of needs and actions.



Key climate change impacts identified by Moruga stakeholders



Coastal erosion and sea level rise impacting infrastructure and beach and mangrove ecosystems



Sargassum influx impacting fishers and coastal areas



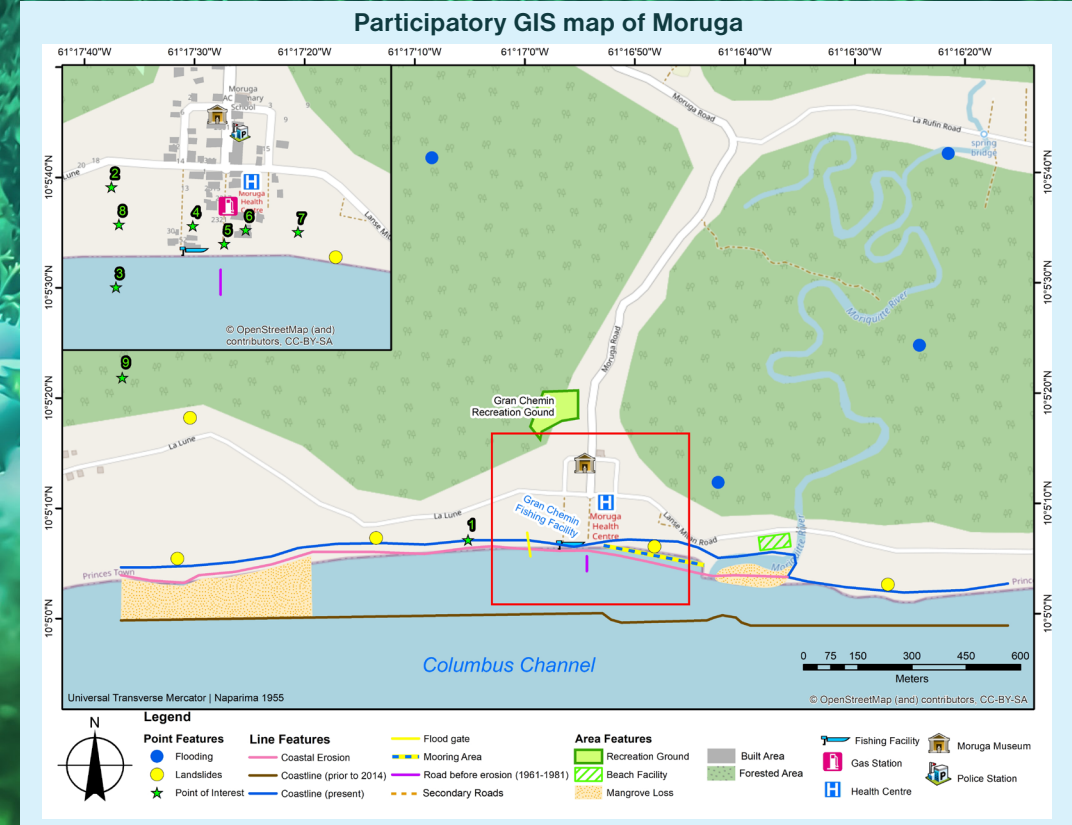
Flooding, inland and coastal, impacting infrastructure and livelihoods



Landslides along coastal cliffs and steep slopes inland



Storms, storm surges and swell events



Adaptation priorities for the Moruga community

- build a breakwater or other infrastructure for coastal protection;
- restore mangroves for coastal protection;
- replant trees with deep roots to improve soil stability and reduce risk of landslides;
- improve maintenance of beach, including regular clean-up of sargassum; and
- improve drainage and use of sandbags by households and businesses for flood protection.