United Nations
Framework Convention on
Climate Change

Private Sector Initiative actions on adaptation

Title of case study	**Wave Energy Converter**
Name of organization(s)	**Nova Oceanic Energy Systems Inc.**
Business sector	Energy and Utilities
Region(s) relevant to case study	☐ All regions ☐ Africa and the Arab States ☐ Asia and the Pacific ☒ Caribbean and Central America ☐ Europe ☐ Least Developed Countries ☐ North America ☐ Polar regions ☒ Small Island Developing States ☐ South America
Country(s) relevant to case study	Dominican Republic and other Caribbean States
Adaptation sector(s) relevant to case study	☐ Business ☐ Education and training ☐ Food security, agriculture, forestry and fisheries ☐ Human health ☒ Oceans and coastal areas ☒ Science, assessment, monitoring and early warning ☐ Terrestrial ecosystems ☐ Tourism ☒ Transport, infrastructure and human settlements ☐ Water resources ☒ Other (please specify): Renewable energy
Adaptation activity	The development of near shore wave energy converters that act in the same way as submerged breakwaters in reducing coastal erosion in island states and tropical regions, while simultaneously converting absorbed wave energy in distributed clean power generation for desalinization and electric power. Nova Oceanic Energy Systems Inc, in partnership with a number of other organisations, has started to introduce this technology in a

	number of Caribbean States, to evaluate its use for both adapting to and mitigating climate change in rural coastal communities. Coasts are experiencing the adverse consequences of hazards related to climate and sea level, and are highly vulnerable to extreme events, such as storms which impose substantial costs on coastal societies. This technology is particularly suitable for tropical regions, which are particularly vulnerable to these threats and also often lack to resources to adequately protect coastal communities. The distributed power generation and production of desalinized sea water would contribute to poverty reduction through the creation of new productive opportunities especially in arid communities or coastal communities far from drinking water sources. Also, the possibility of rehabilitation of beaches forbidden for public use (for example, in the communities of the Barahona Province, Dominican Republic) will have a major impact in communities' ability and capacity of income generation due to national and international beach tourism. Another aim of the project was to help provide predictive data on wave heights and strengths 2-3 days in advance of their arrival, allowing communities to make suitable preparations.
Cost-benefit	While still an emergent technology, it has been shown to be an effective solution in reducing coastal impacts while also being potentially very profitable. A number of businesses in the Dominican Republic and neighbouring states have expressed an interest in deploying the technology commercially.
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