The Climate and Ocean Risk Vulnerability Index: Measuring Complex Climate Threats in Coastal Cities to Enable Action

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Abstract

Coastal cities are at the forefront of the climate crisis. Rising sea levels, extreme storms, and heat events are amplifying the vulnerability of city residents. At the same time, cities face underlying economic and social concerns, such as expanding populations, aging infrastructure, and governance gaps. These interlocking risks threaten ocean and land-based ecosystems, which coastal cities rely on for their economic and food security. However, climate finance remains inadequate, with an estimated $30 billion allocated to climate adaptation in 2018. This amount stands in stark contrast to $180 billion, which the Global Commission on Adaptation estimates is needed every year to build resilience to current and future climate impacts. In this resource scarce environment, decision-makers need targeted risk information to increase financial flows and ensure that limited resources are being directed to safeguard people, their livelihoods, and to build a more resilient future. In response, the Stimson Centre developed the Climate and Ocean Risk Vulnerability Index (CORVI), an analytical decision-support tool which compares a diverse range of ecological, financial, and political risks connected to climate change, to produce a coastal city risk profile. With the Western Indian Ocean Marine Science Association (WIOMSA), the Stimson Centre is now conducting two city assessments in Mombasa, Kenya and Dar es Salaam, Tanzania. By integrating information and resilience work already underway across the land-seascape, these projects will culminate in innovative new datasets and a risk profile that can be used to prioritize further resilience actions, provide evidence to upscale projects, and access additional climate finance.

It is recommended that.

- The Secretariat, working with WIOMSA, and other partners to build capacity and integrate climate risk into coastal city planning, can use this information as part of the implementation of the Climate Change Strategy for the Convention.
- The Secretariat, WIOMSA, and other partners can also apply the CORVI method to other coastal cities in the WIO region. As more cities are added to the CORVI data matrix, a comparative body of city level data will emerge, providing greater insights into the risks these cities face.
- Ministries of Environment and Finance, in collaboration with coastal cities authorities and other partners, can use this information to further integrate climate risks into their city planning and development.

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