



Recommendation for supporting investments in the natural infrastructure of reefs and mangroves to increase climate resilience

*Adopted on December 9th 2017, at the 32nd ICRI General Meeting (Nairobi, Kenya)
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Recognizing that coastal zones are the **areas with the highest population density on the planet**;

Concerned that coastal communities and infrastructure are increasingly at risk from **storm impacts, which can be exacerbated by climate change, including heavy rainfall and storm surge**;

Recognizing that scientists and the insurance industry have found that reef and mangrove restoration are among the most cost-effective actions for coastal adaptation in island states¹;

Recognizing that reefs reduce up to 97 percent of wave energy that would otherwise hit coastlines², averting tens to hundreds of millions of dollars in flood damages every year for many nations³;

Recognizing that mangroves have been found to reduce flood damages to people and property by 25% annually⁴;

Recalling the ICRI Decision on Reef Restoration (2001);

Noting that about 3% of the value of coastal investments are dedicated to conserving and restoring coastal ecosystems including reefs and mangroves, known as natural infrastructure⁵;

Noting that a **significant amount** of global spending on both gray and natural infrastructure in coastal regions comes from national governments and multilateral institutions such as the Global Environment Facility, the World Bank, and regional development banks.

The International Coral Reef Initiative

Commends previous investments in reef and mangrove restoration that have improved ecosystem health and climate resilience;

Recognizes that restoration should only be undertaken once current threats to coral reefs and mangrove forests have been addressed and reduced;

Recognizes the need to further increase global financial investment in coastal natural infrastructure such as through reef **conservation and** restoration, particularly where human communities are most at risk from climate change impacts;

Encourages efforts to identify specific opportunities for conserving and restoring reefs and mangroves, and to select sites where this natural infrastructure will most effectively mitigate risks associated with climate change;



Recognizes the need to develop innovative funding mechanisms for coral reef and mangrove conservation and restoration;

Encourages development banks **and agencies to develop** funding approaches to better support natural **and hybrid** infrastructure for risk reduction **as cost effective and sustainable solutions**;

Encourages governments to **promote the consideration of** natural infrastructure alternatives such as mangrove **forest** and reef **conservation and** restoration in assessments of the cost effectiveness of risk reduction measures;

Encourages the insurance and finance sectors to develop new tools such as Resilience Bonds that could support the **conservation and** rebuilding of mangroves and reefs for risk reduction;

Calls upon ICRI members to promote the development of natural approaches for increasing coral reef health and climate resilience;

Encourages efforts to strengthen partnerships between local communities, governments, international agencies, and the private sector to identify mechanisms for funding natural infrastructure projects.

¹ CCRIF. 2010. “Enhancing the Climate Risk and Adaptation Fact Base for the Caribbean.” Grand Cayman, Cayman Islands: Caribbean Catastrophe Risk Insurance Facility.

www.ccrif.org/sites/default/files/publications/ECABrochureFinalAugust182010.pdf

² Ferrario F, MW Beck, CD Storlazzi, F Micheli, CC Shepard, & L Airoidi. 2014. “The Effectiveness of Coral Reefs for Coastal Hazard Risk Reduction and Adaptation.” *Nature Communications* 5 (May): 1–9.

³ Beck, M. W., I. Losada, B. Reguero, P. Mendendez, L. Burke. 2016. *Breaking Waves*. M. Spalding, R. Brumbaugh, E. Landis, eds. Atlas of Ocean Wealth, TNC, Arlington, VA.

⁴ Losada I, P Menéndez, MW Beck, D Trespalacios & S Narayan. 2017. Technical Report- Valuing the Protection Services of Mangroves in the Philippines. World Bank, DC.

⁵ McCreless E & MW Beck. 2016. “Rethinking our Global Coastal Investment Portfolio.” *Journal of Ocean and Coastal Economics* Volume 3, Article 6.