



Declaration from the WIOMSA Scientific Community to the UNFCCC COP21

We, a community of 500 coastal and marine scientists working in the Western Indian Ocean, meeting at the 9th biennial Scientific Symposium of the Western Indian Ocean Marine Science Association (www.wiomsa.org), make this Declaration to the 21st COP of the UNFCCC and to the global community, to call for decisive action on climate change by the world's political and business leaders.

1. OUR CONTEXT: Over the millennia, the peoples of the Western Indian Ocean region have developed a diversity of cultures characterized by a strong link to the sea, influenced by ocean currents and winds, and there is a rich history of trade and cultural exchange throughout the Indian Ocean.

Today, the marine and coastal environment of the Indian Ocean continues to play an important role in our culture. We derive a range of ecosystem services from its habitats including many types of fisheries, building materials and fuels, coastal protection, as well as recreation and tourism, which together contribute to the livelihoods and well-being of millions of people in our region. Many of our ecosystems contribute directly to global sequestration of carbon.

As an association of inter-disciplinary scientists, we recognize that humans are an integral part of natural ecosystems but we also observe how our activities affect and modify these ecosystems. We start the 21st century with a youthful and growing population, and it is our wish to bequeath to our children a world in which our maritime cultures and marine ecosystem-based livelihoods will continue to thrive and prosper.

2. THE PROBLEM: According to the 2015 State of the Coast Report for the WIO region, which was approved by the 8th Meeting of the Contracting Parties to the Nairobi Convention of the Western Indian Ocean, the region is facing significant challenges regarding the sustainability of its marine and coastal environments. These include many regional and local challenges, which our national and regional institutions are actively engaged in addressing. But crucially, we are also facing critical challenges that derive from global greenhouse gas emissions and the resultant effects of climate change. These challenges can only be overcome through global cooperation and international action.

From the perspective of the Western Indian Ocean, we, the marine science community, bear witness to the following:

- Declining provision of ecosystem services resulting from changes in species distributions and biology, including declines in key resource species and increasingly impoverished corals, seagrasses, and mangroves, which are the foundation of many ecosystems;
- An increase in destructive weather patterns including severe storms and warming temperatures. These have impacts on human communities, the burden of which is borne disproportionately by the poor, while our governments struggle to find the capacity to manage these impacts;
- Globally, 2015 is the hottest year on record, and we have observed a third large coral bleaching event in our region this year. Warming oceans, as a result of climate change, represent a significant threat to our coastal communities.



3. CLIMATE CHANGE is perhaps the most significant global challenge of the 21st century given how pervasive its effects are likely to be. It has been measured and documented by scientists from across the globe, and in almost every ecosystem and its effects are already observed and experienced by ordinary people the world over. The global scientific community is taking a prominent role in not only improving our understanding of the phenomena, but of communicating this understanding to policy makers and the general public, not least through the work of the IPCC. While, the ‘Our Common Future under Climate Change’ scientific conference of July this year provided an opportunity for scientists to collectively update and agree their core message on the eve of this COP.

Our message, as a community of scientists from the western Indian Ocean, is that greenhouse gas emissions and climate change have already affected the marine ecosystems that are so important to the people of our region. In fact, some ecologies and their associated social systems in this region are approaching a threshold - at which changes may become irreversible. We are profoundly concerned by the changes we have collectively observed and by the likely future impacts on ecosystem structure and function. We are even more concerned about the impact on society in eastern Africa and the islands of the Western Indian Ocean, and the undermining of individual and family aspirations for a better life.

We submit, based on the collective body of our multi-disciplinary scientific research, that there are critical threats to the rich coastal and marine biodiversity of the Western Indian Ocean directly arising from climate change and that there will be significant negative implications for sustainable human development for the nations of the Western Indian Ocean.

4. THE UNFCCC COP 21 has the potential to be a watershed event for the future of our planet’s ecology and for human society. And we therefore call upon the delegates to COP21, and their respective governments, to realize that potential and to reduce their dependence on industries and activities that emit greenhouse gases and to significantly increase their investment in the green/blue economy. Inspired leadership and creative solutions are urgently needed but while there is much to be concerned about, there is also hope and there is still opportunity.

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On behalf of WIOMSA, the entire Western Indian Ocean Scientific Community and the friends of WIO region.