



HIGH LEVEL PANEL for
**A SUSTAINABLE
OCEAN ECONOMY**

PRESS RELEASE

Climate change set to devastate regional fisheries and cause reef tourism revenue losses of over 90%

Adaptive management processes must be fast tracked by world leaders

Madrid, December 6th, 2019: Unabated climate change could cause coral reef tourism revenue losses of over 90%, while some West African countries are forecast to see fish stocks decline by 85%¹, according to a first-of-its-kind analysis² into country-by-country climate impacts on key ocean sectors, published today as world leaders gather at the U.N. climate change conference (COP25) in Madrid.

Commissioned by the High Level Panel for a Sustainable Ocean Economy, a group of 14 heads of government³, *'The expected impacts of climate change on the ocean economy'* assesses global to local climate impacts on three of the largest sources of ocean-based revenue and jobs - coral reef tourism, wild capture fisheries and marine aquaculture.

The analysis details the wide ranging and severe impacts that climate change will have on the ocean and ocean-based economy and calls for a forward looking, cooperative and equitable global response. It emphasises the urgency of action to curb global carbon emissions, coupled with an adaptive approach to the management of our ocean resources in order to tackle an expected rise in socioeconomic inequities. Such a response would not only improve resilience and future-proof these vital industries, but could also improve profits.

Steve Gaines, co-author of the analysis and High Level Panel Expert Group⁴ representative, said: "Only now are we starting to comprehend the full force that unabated global heating will unleash on our key ocean industries - and it is chilling. To avert an impending economic crisis, widespread devastation to communities, hunger and resource conflicts in coming decades, we must urgently restore ocean health. That means taking rapid and ambitious action to curb climate change, while easing the other enormous pressures we put on the ocean. Fortunately, bold actions today could have dramatic benefits for most countries."

Using new models to assess impacts at country and regional levels, the analysis builds on estimates by the Intergovernmental Panel on Climate Change (IPCC) that climate-induced

declines in ocean health will cost the annual global economy \$428 billion by 2050 and \$1.979 trillion by 2100. It underlines that, while the severity varies significantly across countries and climate scenarios, worst impacted will be developing countries along the equator that have contributed the least to the current state of global warming and which often rely on reef tourism and fish stocks to sustain local livelihoods and ensure food security.

A major finding is the extent to which fish will migrate to cooler waters as the ocean warms and becomes more acidic under future climate scenarios⁵. This will jeopardise fishing communities in some regions and increase the potential for conflicts over shifting resources.

President of Ghana, Nana Addo Dankwa Akufo-Addo, said: “It is clear that climate change is poised to exacerbate global inequities, making it even harder for developing countries like ours to withstand its dire impacts. To achieve our objective of an Africa beyond Aid while averting the rise of resource conflicts, our response to climate change must be forward looking, cooperative and equitable. Rethinking how we manage our marine resources as species shift in and out of waters is vital, not only for our sustainable food production and prosperity, but for our very survival over the medium term.”

Reef tourism, worth US\$35.8 billion globally every year, will also be severely impacted by climate change. Country by country analysis details that, if unabated, it will cause reef tourism revenue losses of over 90% across all regions by 2100, rising to an average of 95% in Egypt, Indonesia, Mexico, Thailand and Australia, home to the five largest coral reef tourism industries. Even if action is taken to cut carbon emissions, the industry is still expected to suffer economic losses of up to 66%.

Prime Minister of Jamaica, Andrew Holness, said: “Small island states, like Jamaica, have contributed least to climate change yet, by virtue of our geography, we are left physically vulnerable, and thereby fiscally vulnerable, to its impacts. Almost a quarter of our economy is built on tourism, so rapid action to avert these catastrophic impacts on our coral reefs is imperative. Jamaica will play its part, and we look to developed nations to play theirs.”

The paper calls for a forward looking, cooperative and equitable response to managing the impacts of climate change on the ocean economy. It emphasises the importance of adaptive fisheries management and new cooperative agreements across national, regional and international boundaries to ensure species are well-managed as suitable habitats shift and change. It underlines that many countries could maintain or improve profits and catches into the future through this approach yet highlights that even the best fisheries reforms will not be able to offset the most negative climate change scenarios⁶. In these circumstances, developing sustainable and climate resilient marine aquaculture could be an important part of the solution for some countries. To help preserve the reef tourism industry, the resilience of ocean ecosystems must be enhanced through conservation and restoration and other measures, such as reducing the climate impact of tourism.

Eric Schwaab, Senior Vice President, Oceans, Environmental Defense Fund and High Level Panel Advisory Network member, said: “The magnitude of losses will be substantial if we fail to take action on fisheries management and climate change in tandem. Climate change is already fundamentally altering ocean ecosystems, impacting fish abundance and where they can be caught. But all is not lost. If we limit carbon emissions and fast track sustainable and adaptive fisheries management, the ocean can still be a major source of food, nutrition, livelihoods and wellbeing for billions of people around the world.”

Notes to Editors:

- (1) Under the least severe emissions scenario, eight countries, seven of which are in West Africa, are projected to experience reductions in Maximum Sustainable Yield (MSY) of 5-10%. Under the most severe scenario, 117 countries are projected to experience reductions in MSY of 5-100%. All 18 West African countries south of Senegal and north of Angola are forecast to experience reductions in MSY greater than 85%. The Pacific Island States will also suffer greatly with this predicament as MSY is expected to decrease, under all emissions scenarios, in all of them except Fiji, Tonga and New Zealand.
- (2) Read ‘The expected impacts of climate change on the ocean economy’ here: www.oceanpanel.org/bluepapers. This is one of a series of 16 blue papers to be published between now and June 2020. Each paper offers a robust fact base to inform the work and the final recommendations of the High Level Panel for a Sustainable Ocean Economy in 2020. This paper builds on the report ‘The Ocean as a Solution to Climate Change: Five Opportunities for Action,’ which was also commissioned by the High Level Panel for a Sustainable Ocean Economy and launched in September 2019. That report can be found at <https://oceanpanel.org/climate>
- (3) The High Level Panel for a Sustainable Ocean Economy is a unique grouping of serving world leaders with the authority needed to trigger, amplify and accelerate action for ocean protection and production in policy, governance and finance. Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Palau and Portugal are all represented on the Panel. Learn more at oceanpanel.org. World Resources Institute (WRI) serves as the Secretariat for the High Level Panel. Learn more at www.wri.org/our-work/topics/ocean.
- (4) The High Level Panel Expert Group is made up of experienced researchers and policy analysts from around the world. The group provides and reviews relevant scientific input and proposes practical solutions to the questions and challenges raised by the Panel.
- (5) See the interactive web face (<https://sfg-ucsb.shinyapps.io/fishcast2/>) for country - by - country impacts of climate change on marine fisheries around the world and opportunities to mitigate these impacts through climate-adaptive fisheries management reforms.
- (6) Globally, MSY is forecast to increase by 0.6% under the least severe climate change scenario and decrease by 21.8% under the most severe scenario.