IDDRI

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The Ocean and Climate Negotiations

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The ocean moderates anthropogenic climate change by absorbing large amounts of the heat and carbon dioxide that would otherwise accumulate in the atmosphere. It also receives all water from melting ice. But this service is provided at a huge cost for the ocean: warming, acidification, deoxygenation and sea level rise.

The IDDRI Policy Brief *Interwined Ocean and Climate implications for international climate negotiations* just released in four languages, explains the significance of these ocean changes. It is based on a scientific paper published in Science in July 2015, which synthesizes recent and future changes to the ocean and its ecosystems, as well as to the goods and services they provide to humans. Two contrasting CO2 emission scenarios are considered: the high emissions scenario (also known as “business-as-usual” and as the Representative Concentration Pathway 8.5, RCP8.5) and a stringent emissions scenario (RCP2.6) consistent with the +2°C target of the Copenhagen Accord.

Four key messages are emphasized:

1. The ocean strongly influences the climate system and provides fundamental services to humans;
2. Impacts on key marine and coastal organisms, ecosystems, and services are already detectable and several will face high risk of impact well before 2100, even under the low emissions scenario (RCP2.6). This makes the +2°C target the upper acceptable limit for future emissions. These impacts will occur across all latitudes, making this a global concern beyond the North/South divide;
3. As atmospheric CO2 increases, the options for the ocean (i.e., mitigate, protect, repair, adapt) become fewer and less effective, thus decreasing humankind’s room for manoeuvre;
4. Immediate and substantial reduction of CO2 emissions is required at the global scale. Limiting emissions to the RCP2.6 pathway is indeed absolutely necessary to meet the objectives of the UNFCCC. A substantially different ocean would result from any less-stringent emissions scenario.

To this end, COP21 represent a major, unique first building block to put the world and its ocean on the right track.

CLIMATE OCEAN