

OCEAN ACIDIFICATION SET TO SPIRAL OUT OF CONTROL



The continued release of greenhouse gases into the air is set to bring about huge changes to land ecosystems as they are forced to adapt to rising temperatures.

But the marine world — which is just as integral to human existence yet receives little attention during climate negotiations — will endure a similarly tumultuous time as emissions rise, scientists say.

“Changing oceans will cause massive destruction of coral reefs, which, with their rich biodiversity, are the jungles of the sea,” says Luis Valdes, the head of ocean science at UNESCO’s Intergovernmental Oceanographic Commission (IOC-UNESCO), and co-author of a forthcoming report into ocean acidification.

This is expected to hit marine species used for food and have knock-on effects on

coastal communities, especially in developing countries.

Business-as-usual carbon dioxide emissions will lead to the acidity levels of oceans rising by 170 per cent by 2100 compared with pre-industrial levels, according to a report to be launched next week at COP 19 (Conference of the UN Framework Convention on Climate Change).

The report will be published jointly by the International Geosphere-Biosphere Programme, the IOC-UNESCO and the Scientific Committee on Oceanic Research.

As carbon dioxide levels in the atmosphere rise, some of this extra carbon is absorbed by the oceans and converted into acidic compounds.

While some organisms such as seagrasses and phytoplankton will likely thrive in increasingly acidic waters, most will not be so lucky.

Coral reefs and shellfish — both important sources of food — will be hit hard, with higher acidification levels predicted to halt all new further growth of reefs by the end of the century.

It will be poor coastal communities, especially those in small island states whose existence revolves around coral reefs and fishing, which will bear the brunt of this change, says Valdes.

“Poor communities are more dependent on the sea and have fewer options to mitigate effects if their current lifestyles become unsustainable,” he adds.

Creating marine reserves to provide a safe environment away from human pressures to ease species' transition to this altered world may be a way to minimise the damage, but ultimately the only way to prevent major problems is to halt the carbon emissions, says Valdes.

But their effect on marine habitats is often absent from climate negotiations and Valdes calls for policymakers to pay more attention to the issue over the next week in Warsaw.

Source : <http://www.scidev.net/global/climate-change/scidev-net-at-large/ocean-acidification-set-to-spiral-out-of-control.html>