The Earth's oceans´acidity rates have not been higher for the last 300 million years.

A new report issued today at the UN Climate talks in Warsaw shows that the oceans are being forced to absorb more and more planet-warming carbon dioxide (CO2) emissions, causing them to acidify at a rate not seen for the last 300 million years.The oceans supply the oxygen in every second breath we take, and also absorb at least 33 percent of the CO2 human beings produce. The report is a summary of the state of scientific knowledge on ocean acidification. Scientists from across the globe involved in the research urged countries in Warsaw to work towards limiting the global temperature increase to less than two degrees Celsius by the end of this century.

Ocean acidification not only limits the capacity of oceans to absorb CO2 but has the potential to affect food security. Within decades, large parts of the polar oceans will become corrosive, particularly affecting marine organisms unprotected by shells, such as squids.

Fisheries support the livelihoods of 540 million people, or eight percent of the world's

population. However, very little is known about the direct effects of ocean acidification on fish that are the target of commercial and subsistence fishing, which results in high uncertainties in predicting changes in fisheries in the future.

But what scientists do know more about is the impact of these changes on molluscs such as squid, oysters and cuttlefish. The scientists estimate that by 2100, declines in mollusc production could lead to annual global economic losses of more US$130 billion (at 2010 price levels) if man-made emissions remain as they are.

One of the major concerns is whether the ocean has reached a limit beyond which it would be unable to absorb more heat. According to Richard Feely, a senior scientist at the US government's National Oceanic and Atmospheric Administration (NOAA), computer-generated climatic models "suggest a decreasing trend in the fraction of CO2 emissions caused by human activity, taken up by the oceans over this century, but the observations have not been able to confirm this trend yet because of the uncertainties in the measurements as well as a lack of complete coverage of the oceans with measurements. Consequently, this is a topic for which more research is required."

There is, however, hope if countries aim to lower emissions so that the global increase in temperature by the turn of century remains less than two degrees Celsius.

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