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How much are coral ecosystems worth?

Try \$172 billion--A year

By John Platt

Coral ecosystems are worth an amazing \$172 billion a year to the world economy, according to research presented last week at the DIVERSITAS biodiversity conference in Cape Town, South Africa.

The value of coral reefs comes from a variety of “services,” including food and raw materials, moderation of extreme ocean events, water purification, recreation, tourism and maintenance of biological diversity.

Individual coral reefs vary in value, but according to United Nations Environment Programme economist Pavan Sukhdev, head of a Cambridge, England–based project called The Economics of Ecosystems and Biodiversity (TEEB), the average is \$130,000 per hectare (10,000 square meters). Particularly vital reefs have much higher values, all the way up to \$1.2 million per hectare.

Sukhdev’s estimates are based on valuation studies of more than 80 coral reef ecosystems.

Of course, that financial benefit is threatened by rapidly warming ocean waters and ocean acidification, which are killing coral reefs around the world. At the conference, Sukhdev said that atmospheric carbon dioxide levels need to be reduced to 350 parts per million, and that anything higher would be “a death sentence on the world’s coral reefs.” Carbon dioxide levels are currently at 390 ppm, and climate activists fear that December’s international summit in Copenhagen will set future goals at 450 ppm.

He isn’t the only one concerned. This week, the Center for Biological Diversity (CBD) filed a petition seeking to protect 83 coral species under the U.S. Endangered Species Act (ESA)—they all live in U.S. coastal waters. “Coral reefs are the world’s most endangered ecosystems,” said CBD Oceans Director Miyoko Sakashita in a prepared statement.

“Preventing the extinction of coral reefs and the marine life that depends upon them is an enormous undertaking,” Sakashita said. “The Endangered Species Act has an important role to play in that effort. But without rapid CO2 reductions, the fate of the world’s coral reefs will be sealed.”

The ESA currently protects just two species of coral.