

Human-caused Pollution Damaging Prized Reefs

WRI analysis maps sources in Belize, Guatemala, Honduras, Mexico

BELIZE CITY, BELIZE, December 12, 2006 – More than 80 percent of the sediment and 50 percent of the pollutants entering the coastal waters of the Mesoamerican Barrier Reef originate from human activities in nearby mountainous Honduras, according to the World Resources Institute (WRI), in an analysis unveiled here today at a press conference.

The analysis is the first to determine the origin and volume of sediment and pollution that run off agricultural lands, via the region's vast river networks, into the neighboring Gulf of Honduras and Caribbean Sea. The waters are home to the Mesoamerican Barrier Reef – the largest coral reef system in the Western Hemisphere, stretching for more than 600 miles, and shared by Belize, Guatemala, Honduras and Mexico.



“As humans have altered the landscape, an increasing amount of sediment and nutrients are reaching coastal waters and the Mesoamerican Barrier Reef itself,” said Laretta Burke, a senior coastal ecosystem expert at WRI and co-author of the study. “Our analysis shows that pollution from farms in Honduras can inadvertently damage the entire Mesoamerican reef, which provides an important source of revenue from tourism and fisheries.”

To link their findings to action on the ground, Burke and co-author Zachary Sugg performed *Watershed Analysis for the Mesoamerican Reef* – released today on CD-ROM and online – as part of a project under the International Coral Reef Action Network (ICRAN) Mesoamerican Reef Alliance, and with contributions from the United Nations Environment Program’s World Conservation

Monitoring Centre. The ICRAN-MAR Alliance works to diminish the impacts to the Mesoamerican Reef by promoting best management practices in tourism, fisheries and watershed management.

Another partner in the Alliance, the World Wildlife Fund (WWF), is using WRI’s analysis to identify agricultural areas in the region that need to reduce pesticide use and soil erosion, and is setting up collaboration agreements with farmers and agricultural businesses to help them implement management practices that reduce impacts on the reef.

“We are using the analysis results to reduce pesticides and to control soil erosion from major commercial agricultural sectors while sustaining productivity,” said José Vásquez, a senior agriculture official for WWF Central America. “At present, WWF is partnering with agroindustries such as Chiquita; Dole; CropLife Latin America; The Association of Citrus Producers from Sonaguera, Honduras (ACISON); and Azucarera del Norte, S. A. (AZUNOSA), one of the major sugarcane producers of Northern Honduras.”

On December 5, AZUNOSA signed a memorandum of understanding with WWF. AZUNOSA’s general manager, engineer Mario Hernández, voiced his company’s commitment to quick results, adding, “The most effective and responsible way of doing business is by contributing to the society in which we

operate, creating job opportunities, taxes for public services, and protecting the environment. Working with WWF will be a beneficial experience for Honduras and for our region.”

WRI’s Burke added, “Our results show that investments in these types of efforts are likely to be worth it in the long term. Based on our simulation, we see reductions in sediment and pollutant runoff if better land management practices are implemented.”

Other key findings within the analysis include:

- Along with more than 80 percent of sediment, more than half of all nutrients (both nitrogen and phosphorous) originate in Honduras.
- Guatemala was identified as a source of about one-sixth of all sediments and about one-quarter of all nitrogen and phosphorous entering coastal waters along the Mesoamerican reef.
- Compared to the other countries, relatively minor percentages of the regional sediment load come from Belize and the Yucatan Peninsula in Mexico. Belize contributes between 10 to 15 percent of nutrients and Mexico is estimated to contribute about 5 percent of the nutrients from all modeled watersheds.
- Of the 400 watersheds in the region, the Uluá watershed in Honduras was found to be the largest contributor of sediment, nitrogen, and phosphorous. Other large rivers found to be significant contributors of sediment and nutrients are the Patuca (in Honduras), Motagua (in Guatemala and Honduras), Aguan (in Honduras), Dulce (in Guatemala), Belize (in Belize), and Tinto o Negro (in Honduras).
- Under land-use scenarios which favor free markets and little policy regarding the environment, nutrient delivery is likely to increase by about 10 percent by 2025, while sediment delivery might increase by 13 percent or more.
- If environmental policies that favor sustainable development are implemented, nutrient and sediment delivery are likely to be reduced by at least 5% from current levels, promoting recovery of degraded corals.

– 30 –

*The **World Resources Institute** (www.wri.org) is an independent, non-partisan, and nonprofit organization with a staff of more than 100 scientists, economists, policy experts, business analysts, statistical analysts, mapmakers, and communicators developing and promoting policies that will help protect the Earth and improve people’s lives.*

The International Coral Reef Action Network – Mesoamerican Reef Alliance (ICRAN-MAR) seeks to promote the adoption of best management practices in the areas of tourism, fisheries and watershed management. With financial support from the United Nations Foundation (UNF) and the United States Agency for International Development (USAID), the project brings together important conservation experts who coordinate activities that promote the creation and strengthening of local capacities, the development of tools for decision making, the adoption of best practices, and the creation of alliances with the private sector.

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