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Gail Gallessich

World's Global Carbon Cycle Revised by Researchers Studying Rivers and Flood Plains of Amazon Basin

Amazon waterways, including streams and flood plains, are releasing much more carbon dioxide than originally thought, as a result of decaying plants that fall into the water, according to the April 11 issue of the journal Nature.

Previously researchers had no measurements of flooded area along rivers in tropical rainforests. Now a Brazilian and NASA-sponsored research project has a new tool to map the wetlands of the Amazon Basin.

Using new satellite data from the Japanese Earth Resources Satellite, University of California, Santa Barbara researchers John Melack, professor of biology, and Laura Hess, researcher, developed new methods for measuring flooding and wetland vegetation, a critical step in the calculations reported in the Nature paper.

"The current study shows the importance of linking the terrestrial and aquatic systems," said Melack. "For example, leaves fall into the water, decay, and wind up releasing carbon dioxide from the many rivers and lakes of the Amazon."

Lead author Jeff Richey of the University of Washington describes the release of carbon dioxide from the rivers and lakes as degassing, or "river breath."

Other authors on the paper are Anthony Aufdenkame, who just completed his doctorate with Richey at UW, and Victoria Ballester of the Centro de Energia Nuclear na Agricultura, Sao Paolo, Brazil.

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To reach Jeff Richey e-mail (jrichey@u.washington.edu) or call his hotel in Argentina at (5411)4328-6800. (He will be back on Thursday and available at (206) 543-7339.) For photos, call Sandra Hines at UW, telephone (206) 543-2580 or e-mail (shines@u.washington.edu).

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