

Connecting scientists and stakeholders to assess social-ecological effects of hydroelectric dams across the Amazon

9/26/16 – Gainesville, FL



NSF-funded “Amazon Dams Network” supports co-production of knowledge on the social-ecological effects of hydroelectric dams across the Amazon.

The Amazon basin is undergoing unprecedented transformation by infrastructure development, including the construction of more than 30 large hydroelectric dams, and approximately 170 smaller dams on major rivers and tributaries. As the largest freshwater system in the world and the most extensive tract of tropical lowland forest, the Amazon basin provides critical ecosystem services to local populations, national societies and humanity at large. These infrastructure developments are planned with the goals of providing increased energy security, economic growth, improved living standards and industrialization; but the synergistic, cumulative and long-term effects of dams on rivers, forests, and social systems are still undervalued in environmental planning and decision-making. Consequently, a great deal of uncertainty remains about the social-ecological effects of dams, which has led to considerable conflict among the diverse set of stakeholders affected by these development activities.

As a result of this, in 2012, a team of Brazilian and US researchers started a collaborative effort to develop an inter- and trans-disciplinary international network to share experiences and promote cross-basin dialogue about the social-ecological impacts of hydroelectric dams across the Amazon. This initial effort has developed into a National Science Foundation (NSF) Dynamics of Coupled Natural-Human Systems



Research Coordination Network (RCN) project. The project is currently led by University of Florida researchers, working in conjunction with partners from the University of Arizona, the US Geological Survey, Northern Arizona University, University of Texas, University of Connecticut, Federal University of Rondônia, Federal University of Tocantins, and the University of Sao Paulo, among others. This is the first initiative of its kind to bring together scientists with a diverse set of stakeholders, including fishermen, indigenous peoples, farmers, and decision-makers, to integrate and coordinate research on how dam construction and operations affect people, their livelihoods, and the environment, including the fishes and the forest.

Project Co-leader, Dr. Simone Athayde from UF's Center for Latin American Studies says that "RCN investigators will focus on four critical integrative themes: 1) governance and social actors, 2) watershed hydrology and geomorphology, 3) fish and fisheries, and 4) changes in forest cover and land use." TCD Director and Project leader, Dr. Bette Loiselle, states that the focal themes "reflect the inter- and trans-disciplinary nature of the project and will advance our understanding of the social-ecological effects of dams." The TCD program is hosted at the UF Center for Latin American Studies, which is globally known for its expertise on Brazilian cultural and environmental diversity, and sits among the top 10 US Latin American academic centers. Dr. Phil Williams, the Center Director says, "the Amazon Dams Network activities initiated in UF's Tropical Conservation and Development (TCD) program, is known for its collaborative work with UF alumni and partners around the globe." Additional key faculty joining the project include project co-leaders Dr. Stephanie Bohlman and Dr. Denis Valle, from the UF School of Forest Resources and Conservation; Dr. Jynessa Dutka-Gianelli, with UF Fisheries and Aquatic Sciences; and project co-leader Dr. David Kaplan, from the UF Engineering School of Sustainable Infrastructure and Environment.

Project leaders seek to lead activities at research sites in Brazil and the US, create web-based learning and case studies modules, and archive publically available data. This will enable the network to synthesize their discoveries, aid in the dissemination of knowledge, and increase cross-disciplinary and social learning among all its participants and the public. To learn more about this project, contact [Bette Loiselle](#) or visit the [Amazon Dams Network](#) website.