Research team begins first mapping project to determine health, future of the Great Lakes

September 24 2009

(PhysOrg.com) -- A University of Michigan-led research team is creating a comprehensive analysis and mapping of threats to the Great Lakes that will guide decision-making in the United States and Canada for years to come.

The mapping and analysis project will produce the first regional synthesis of human impacts on the Great Lakes, thereby helping regional planners and conservation groups to prioritize their activities. The Erb Family Foundation is funding the $500,000, two-year project.

"Building on previous efforts to map each threat and priority individually, for the first time we now have the ability to generate synthetic maps of threats and their predicted impacts for the entire Great Lakes basin," said David Allan, a professor of aquatic sciences at the U-M School of Natural Resources and Environment, and the lead researcher on the project.

"Though challenging, this effort is requisite to achieving a full understanding of the current and future state of the lakes, and will be particularly valuable in the current era of rapidly expanding human impacts, including anthropogenic climate change," Allan said.

"The Erb Family Foundation, with its commitments to supporting initiatives to restore the Great Lakes basin, is pleased to fund the Great

Lakes Threat Mapping Project," said John M. Erb, president of the Birmingham, Mich.-based organization. "The Erb Family Foundation views its grant making through the lens of sustainability—the harmonizing of economic, environmental and social interests while meeting the needs of the present without compromising the needs of the future."

The project will produce the first high-resolution map of cumulative threats to the Great Lakes, providing a critical tool for catalyzing and coordinating regional conservation efforts. A similar mapping effort of the world's oceans drew international attention last year and has transformed agency and nongovernmental organizations' conservation priorities for marine ecosystems along the U.S. coasts and around the world.

The University of Michigan-based research team will convene a series of workshops to gather quantitative maps of a wide variety of threats, from land-based pollution to exotic species.

After acquiring these data, the team will use expert knowledge to assign weights to the impact of each threat on each type of ecosystem. Combining the threat maps and weights will yield a single, integrative threat map spanning the entire basin. Users of the maps will be able to focus on locales of particular interest, or evaluate restoration needs at larger scales. The resulting synthesis will provide timely guidance for the allocation of federal investments under the Great Lakes Restoration Initiative and other programs.

Along with Professor Allan, the project's leadership team includes Peter McIntyre from U-M and Ben Halpern of the National Center for Ecological Analysis and Synthesis. McIntyre is a research investigator at the School of Natural Resources and Environment and a leader in synthesizing the biodiversity and threats to large lakes and rivers around

the world. Halpern is an associate research biologist at the University of California Santa Barbara and led last year's synthesis project on global ocean threats.

The leadership team will work closely with a working group of scientists, management agencies and conservation organizations from both the United States and Canada. Central to the mission of the project is ensuring that its results can be translated into effective guidance for the policy and management communities charged with restoring the Great Lakes.

Provided by University of Michigan (news : web)

Citation: Research team begins first mapping project to determine health, future of the Great Lakes (2009, September 24) retrieved 3 May 2024 from https://phys.org/news/2009-09-team-health-future-great-lakes.html