Erschienen in: Science ; 347 (2015), 6220. - S. 355
https://dx.doi.org/10.1126/science.aaa6998

Rethink the Nicaragua Canal

At the end of 2014, construction began on the Grand Canal in Nicaragua, a project shrouded in secrecy since its inception 2.5 years ago. The Nicaraguan government showed scant evidence of having accounted for the impact on the environment and on local residents, or of having adequately consulted the public in selecting the final 278-km route. Such disregard should be alarming to everyone. Projects of this magnitude warrant dialogue among all stakeholders. As construction is projected to span 5 years, there is still time to reconsider it and convene independent assessments and meetings that are transparent, inclusive, and respectful of different perspectives, to guide the project toward the best outcome.

Declared an income generator by the Nicaraguan government, the Grand Canal is owned by a Chinese company (HKND). It will enter Nicaragua from the Pacific through the Brito River, cross agricultural land and forests, and traverse Lake Cocibolca (the largest tropical lake of the Americas). On the Caribbean side, it will cross pasturelands, forests, natural reserves, wetlands, and indigenous communities, entering the Caribbean close to the Punta Gorda River.

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At an international multidisciplinary workshop convened in Managua in November 2014, experts from the Academy of Sciences of Nicaragua (ASN) and the InterAmerican Network of Academies of Sciences, with support from the International Council for Science in Latin America and the Caribbean, explored technical and scientific aspects of the canal and shared their scientific concerns with the public, HKND, and the government.* The final communiqué highlighted the importance of environmental impact assessments (EIAs) on biodiversity and regional water resources, including Lake Cocibolca, which supplies drinking water to the surrounding population. Particularly disquieting is how the initial construction and recurrent dredging of the lake channel might affect the trophic dynamics, water quality, and sedimentation of local rivers, along with implications for domestic water supplies, crop irrigation, and fisheries. Also planned is an artificial lake to serve the canal and lock system. The potential impact of "Lake Atlanta" and the canal on forests, wetlands, and coastal ecosystems has been grossly underexplored. Species cohesiveness and migration are also at risk. Although a private EIA was commissioned by HKND undermining its independence it will not be completed before April 2015, diminishing its influence.

Most countries follow rigorous environmental guidelines before approving large infrastructure projects. The Nicaraguan government's decision to grant the canal concession without public consultation, feasibility studies, or EIAs departs from such practices and increases the project's risks. Without independent EIAs, unintended and irreversible impacts on wildlife and indigenous populations are more likely. Social unrest is growing along the canal route. Government and security forces are responding by harassing, repressing, and jailing opposition protesters and leaders, increasing fear among the populace.

It is incumbent upon scientists, human rights advocates, nongovernmental organizations, and wildlife protection organizations to share knowledge, voice concerns, provide guidance, and demand a greater role for science in the design and construction of this massive project. There is tremendous need for the international scientific community to join ASN and global organizations such as the Association for Tropical Biology and Conservation and the International Society of Limnology to analyze design plans of the canal and its subprojects for safety, social responsibility, and sustainability; make recommendations to protect the region's water resources and biodiversity; and draft statements urging the Nicaraguan government to halt construction until studies can be performed and evaluated by experts. In this matter of great urgency and importance, this is an opportunity to exercise scientific leadership, raise awareness, and contribute to averting a potential environmental disaster.

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