

Food-Energy-Water Nexus

Water Governance progress after a Crisis: El Niño-triggered Drought and Water conflict in Southern Guatemala



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Student Union Tiered Room 169



Abstract: Conflict over the extraction of water from rivers in southern Guatemala was on the brink of violence in 2016. Even though the conflict started over 25 years before, an El Niño-triggered drought played a role in the escalation of conflict. This presentation will provide information on the relationship between precipitation during the rainy season and river flow levels in the subsequent dry season. It explains critical levels of flow in 2016 associated to the very strong El Niño event that took place all through 2015, and how it triggered nearly violent actions. The paper also explains how conflict was managed and led to better water governance in the region. With one of the lowest scores in the level of Integrated Water Resource Management in the continent, Guatemala is likely to face higher levels of conflict despite having abundant water resources. Extreme events, both in terms of drought and flooding, can trigger escalation in water conflicts. The successful case of the rivers in southern Guatemala over five years (2016 to 2021) can provide lessons to advance in water security. Not only has conflict reached low levels but restoration of river flow, restoration of riparian forests, more rational water use, as well as improved community access to rivers have derived. This case can serve as an example of what authors such as Wolf have found in terms of water conflicts around the world, that crises bring about cooperation rather than war, which is radically different from the generalized notion that water wars will be common in the future

Biography: Alex Guerra has been the General Director of the Climate Change Research Institute in Guatemala since 2010. He holds a Master's in Water Science, Policy and Management and a PhD in Geography and the Environment, both from the University of Oxford, UK. Alex was a lecturer at a master's program at the Del Valle University in Guatemala from 2012 to 2017. Previously he worked as a researcher in water resources at the Sierra de las Minas Biosphere Reserve. He is a Young Affiliate Member of TWAS LACREP 2018, and a member of the National Academy of Medical, Physical and Natural Sciences of Guatemala since 2015. He is author or co-author of several publications on disaster risk, water resources and climate change mitigation and adaptation. In the past two years, he has been the chair of the Guatemalan National Science System on Climate Change (SGCCC).

