

## **Effects of Climate Change and Implications for Land Tenure: A Community Case Study from Palawan Island, Philippines**

By,  
Rebecca L. Austin, Ph.D.  
Assistant Professor of Anthropology  
Department of Marine and Ecological Sciences  
Florida Gulf Coast University  
Fort Myers, FL 33967  
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The perception of climate change is now often associated with rising sea levels, but little has been documented about its consequences for land tenure among already marginalized fisherfolk. In the Philippines, degradation of the coastal environment has been of increasing concern throughout the last two decades. Palawan Island, known to be the least degraded of the Philippine Islands, is home to a number of international conservation initiatives, and has some of the highest marine and terrestrial biological diversity in the world. At the International Oceans Conference held in Washington D.C. in 2005 scientists from Ateneo de Manila University and Xavier University in the Philippines highlighted concerns regarding climate change impacts to rising sea-levels of Philippine coasts. The typical forms of environmental degradation include: development, erosion, siltation from illegal logging, and unsound fishing practices, are now compounded by rising tides and other forms of degradation, in part as a result of global warming, and have had an enormous impact on the coastal ecosystem of Honda Bay, Palawan. All of these factors have resulted in food shortages and exacerbated conditions of poverty. Rising tides along the coastlines of Philippine waters have serious effects on landless fishers, already marginalized as a result of lack of land ownership, declining fish productivity, as well as generally poor living conditions and health.



The Milwang River empties into Honda Bay around the bend (left): This estuary was low enough to wade across in the 1970s. Now a raft must be used to connect the communities on each side of the river. School children cross using a raft on their way home (right).



A child carries drinking water collected from a nearby village and transported by boat back to his village in Honda Bay (left). Community members work together to manually dry dock a boat (right).

In 1998, El Niño/ La Niña caused a severe drought throughout Southeast Asia resulting in shortages of fresh drinking water, and the first major incident of coral bleaching. In the tiny village of Lucbuan, Honda Bay, Palawan, local wells dried up for several days at a time during the early part of the normal rainy season, forcing locals to seek out new sources of fresh water from neighboring villages, and to use coconut juice as a source of water for consumption. Even worse, coral bleaching, due to higher than normal water temperatures, is said to have damaged as much as 20% of total coral in Palawan, degrading habitat for local marine resources, and resulting in lower fish productivity at a time when locals were just beginning community-based coastal resources management programs (CBCRM) throughout Palawan. These community-based programs are aimed at protecting and regenerating coastal ecosystems. Despite these setbacks, locals have continued to work to rehabilitate their coastal ecosystems, setting up small community-based marine sanctuaries, with the goal of increasing fish productivity and conserving the local ecosystem, as well as helping to make the areas resilient to the effects of global warming.

Despite these laudable goals and aid from non-governmental organizations (NGOs), such as the Environmental Legal Assistance Center (ELAC), small-scale fisherfolk in the Philippines have generally occupied a low social status; being landless is just one way in which this has manifested itself. Over 60% of the Filipino people live in the coastal zone, the vast majority being of a “peasant” or landless class. Security of land tenure has been proposed as one route to poverty alleviation in the Philippines, and in Palawan, NGOs, have been instrumental in aiding coastal communities through CBCRM with a variety of legal instruments utilized in attempts provide security of tenure to local fisherfolk. ELAC’s Palawan office has provided aid to fisherfolk seeking land title through national land reform programs.

These arrangements were thought to aid in human rights causes, to give land title, or stewardship agreements to marginalized farmers or indigenous peoples, but land tenure is an issue that one wouldn’t normally associate with fishers. Currently, in the Philippines, Community-Based Forest Management Agreements, one solution to the land tenure issues,

proposed in the uplands, are rarely awarded to fisherfolk in coastal communities. The Comprehensive Agrarian Reform Program (CARP) was designed to aid farmers, and not specifically intended to assist fishers in obtaining legal title or stewardship of their land. Many families in coastal Palawan would have been qualified to receive land title under CARP, but shifting tides and forced relocation caused most of them to be ineligible to receive full benefits from CARP, which expired in 1997.

One major reason that land reforms have not traditionally succeeded for fishers is that the status of the land that they occupy may change with rising tides and shifting seascapes. For example, one family in a village in Honda Bay explained that, at the time of settlement in the 1970s, their house was built approximately 30 meters from the high tide line. Public land is legally deemed to be the strip of land within 20 meters inland from the high tide line, so if the high tide line tide would have stayed roughly the same, they could have applied for land that included their house under the CARP. Instead, with the assistance of ELAC in 1997, they applied for CARP and won, but their house is technically still on public land because, due to rising tides, it is now only 15 meters from the high tide line. The changing tides actually change the legal boundaries of public and private land.

This one case is representative of the kinds of legal and tenurial issues that people living in coastal areas around the world are likely to face. They already occupy marginalized status for reasons described above, and they are usually not eligible for various initiatives aimed primarily at indigenous peoples and upland forest communities. And yet, any attempts to aid them with land reform, will no doubt be affected by shifting tides and shifting legal boundaries. Without adequate protections in future land reform and stewardship programs the Filipino fisherfolk, who comprise over 44 million people, will face ongoing obstacles to improving their quality of life and coastal ecosystems, and always face shifting legal boundaries even if they are offered more land reform or stewardship agreements. Ultimately land awarded to fisherfolk in the coastal zones will encroach upon adjacent privately owned adjoining lands, while the legal zone of public land pushes them inland, imposing yet another hardship on already stressed coastal communities.

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