Economic Development, Watershed Health and Water Policy[1]

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The Problem

Economic growth and population increase brings about increases in water demand. The major user of water in the Philippines is the agriculture sector, followed by the industries and the domestic and municipal sectors. At the supply side, the watershed degradation contributed to the increasing scarcity especially of surface water. This inflicts damage to about half of the Philippine population living in rural areas and are dependent on agriculture for their livelihood.

The Solution

Solutions to the water problem are urgently required, but identifying and implementing them is a task with many dimensions. The strongly *spatial* nature of the surface water problem indicates that addressing it requires locally-based action as well as policy and institutional initiatives at water basin and national levels. The *economic* dimensions of the problem likewise demand careful consideration of potential linkages between policies addressing water issues and those aimed at other aspects of economic growth and management. There is a need for good-quality *data* linking the water problem to other areas of economic life and policy concern.

The Case Study

This discussion paper illustrates the problem at a watershed scale in Lantapan, Bukidnon. This site is representative of many upland Philippine areas. It also has for almost a decade been the focus of intensive data-gathering, analysis and action at farm, community, project and local government levels. Many of these have taken place under the auspices of a single project, the Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program (SANREM CRSP).[3]

Who is the culprit?

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[1] Discussion Paper Presented at the Kapihan sa Malaybalay, October 7, 2002, Malaybalay, Bukidnon, Philippines. This Kapihan participants were members of the non government organizations (NGOs) in Bukidnon.

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[3] SANREM CRSP brings together researchers from universities and specialist institutes in the Philippines, the U.S., and other countries as well as the International Agricultural Research Centers (IARCs) to work with farmers and other natural resource managers, communities, civil society institutions, and government agencies at local and national levels in the search for the means by which upland communities will be enabled to make better natural resource management decisions. The project is funded primarily by the US Agency for International Development.

Conversion of forests for agriculture is the single most important contributor to diminished watershed function. The rampant logging and forest fires opened the virgin forests of Lantapan to agriculture use. Annual and erosive crops such as corn were cultivated in steep slopes. Because of favorable prices the higher elevation were planted to temperate crops, introduced by the Ifugao migrants in early 1950s. The recent favorable local policies enticed the agribusiness firms, all intensive water users to locate their operations in the pristine environment of Lantapan.

What are the effects of economic policies and land use on the water resources of Lantapan and its society's welfare?

Monitoring the quality and quantity of surface water from the 4 sub-watersheds in the study municipality showed the following:

1. Because of soil erosion, sedimentation and siltation have been a serious problem. Desilting the reservoir of the local NAPOCOR had been expensive.
2. There were some observed instability of stream discharges causing abrupt flooding and drought cycles. This has caused additional infrastructure expense to the LGU. This also resulted to the shrinking of irrigation service areas especially in the dry season.
3. Increase in E. Coli bacteria also results to increased public health costs.
4. Water pollution from farm chemicals was also observed by the residents. River water is no longer safe for animals and humans alike. This is a big expense for the households who are dependent on river water for their basic needs.
5. There is a correlation between demographics, land use and water resources and the picture is becoming bleak.

How can one "turn the tide" and avert the demise of the water services in areas such as those of Lantapan?

The root of the watershed degradation problem as pointed out is the changes in the land use due to favorable economic policies. This issue highlights the need for environmental and economic policies that are mutually consistent. The other set of proposed strategies that could be considered in the design of water policies are: 1) an national integrated water body that will regulate the river basins and synchronize water policies both at the local and national levels; 2) a local /river basin management plan that will, among others, internalize the externalities; and 3) empowerment of the LGUs with their current functions by instituting a funded entity for monitoring environmental quality.

Reference:

Rola, Agnes C. Ian Coxhead, William Deutsch and Antonio Sumbalan. 2002. Economic Development and the Use of water resources: lessons from Lantapan, Bukidnon. Paper presented during the Policy Forum on Water Resource Management, PIDS/UPLB/SANREM-CRSP, August 12, 2002, Makati City, Philippines.