AQUATIC LIFE: AMMUNITION, NOT COLLATERAL, IN THE STRUGGLE FOR BETTER WATER MANAGEMENT

by

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In managing water, too little attention is paid to aquatic life including commercial fish and the multitude of non-commercial organisms which live in and depend on water. Consequently, the livelihoods of fishers and the food and other services derived from aquatic life often suffer when emphasis is only given to improving use of water for major consumptive uses such as agriculture, urban supply, power and other industry. The impacts of altered water use may be remote and are often a great distance from the original action, such as downstream, on the coast or even out to sea. Hence, impacts on aquatic life are treated as collateral damage.

Yet fully considering aquatic life in water management options would provide ammunition to the struggle to treat freshwater, coastal and marine environments as a management continuum (Serageldin 1995). Such consideration would also greatly help the many people who use and depend on aquatic life.

One form of ammunition is economic analysis of coastal and fisheries resources which aims to evaluate alternative development scenarios and helps to explain the magnitude of these impacts and interactions as measured in monetary terms. However, when using economic evaluation tools, two major areas of difficulty are often encountered: (1) how to place monetary values on various goods and services, some of which are not commonly bought or sold; and (2) how to analyze various alternative development options (Dixon 1991).

In attempts to evaluate resource and ecosystem services, the value of water and water-related services is large. One recent attempt to estimate the economic value of ecosystem services indicated that about 83% of the global value is attributed from marine, wetlands and lakes/rivers (Costanza et al. 1997). Among the important ecosystem services emanating from these biomes include gas regulation, disturbance regulation, water regulation, water supply, erosion control, nutrient cycling, waste treatment, habitat/refugia, food production, recreation and cultural. Many of these services depend on the integrity of aquatic life systems in them.

This paper will describe how aquatic life tends to be ignored in water management decisions and will propose alternative approaches whereby aquatic life, and the services it provides, is given more explicit consideration. We propose that economic and other accounting for living organisms makes economic, social and ecological sense since they and their services are of economic value and they often are good indicators of general ecosystem health and productivity, whether managed or natural systems. The paper concludes by suggesting ways to form closer working coalitions between those who use, manage and study water and the life, including our own, it supports.

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