

THE ROLE OF WATERSHED MANAGEMENT

RELATING DEVELOPMENT TO ENVIRONMENT: WHAT NEEDS TO BE DONE

It is becoming evident that certain types of economic development efforts are having increasingly negative impacts on the environment. Partly, it is because our awareness of the problems is increasing. However, Partly it also is a matter of new technology becoming available can produce more and more harm with less and less human effort. Finally, there is an increasing population and, thus, an increasing number of people undertaking activities which may not be consistent with sustainable development.

‘ A watershed is the total area of land above some point on a stream or river that drains to that point; it can be as small as a few hectares for a small stream drainage, or as large as the entire Amazon River basin. Watershed management is the process of guiding and organizing land and other resource use on a watershed to provide needed goods and dces without adversely affecting soil, water and other natural resources. Watershed management concepts recognize explicitly the interrelationships among land use, soil and water and the linkages between upstream and downstream areas.

In the past, such environmental problems were largely ignored in the quest to increase rates of economic growth and development. Political boundaries were the logical ones to work with in development efforts. However, the forces of nature do not recognize nor respect political boundaries. Many natural processes, such as water flow, erosion, fish migration, and pollution, take place within, and are affected by watersheds. Similarly, many development activities including hydropower, irrigation, and transportation systems, are strongly influenced by, and in turn influence, watersheds. In fact, most activities undertaken in upland areas of a watershed eventually have some impact downstream.

Thus, watersheds are logical planning and management units from an environmental point of view, while political boundaries are logical from a political point of view. Somehow, if development and environmental protection are to be harmonized, some means has to be found to integrate the two points of view in an operational context, which means adapting a watershed management framework to the political and economic realities of the world.

Watershed boundaries are not the only ones which should be considered in development programs, but because soil and water are basic ingredients in sustainable development, and because the watershed is the natural unit for considering the management of these resources, it makes sense to use the watershed as a unit in planning and management.

Professionals working with the major international development organizations increasingly recognize this need for a new perspective. Yet, they also realize that in practice the world is far from achieving an integration of environmental concerns in economic development efforts. The grave consequences of this gap can be seen in the Sahel the Amazon, the Andes, the Indus basin and in many industrialized regions.

In the Asia and Pacific region, the activities of populations in mountainous or high plateau areas have led to almost one-third of the land area becoming seriously degraded. This degradation not only reduces the livelihood of upland inhabitants, but adversely impacts one-fourth of the world's population living downstream.~ Although the population in Africa is not as great, the land degradation problems may be even more severe. For example, deforestation and intensive grazing and cultivation of uplands in northern Morocco have resulted in a situation whereby 6 percent of the land area of the country contributes about 60 percent of all sediment leaving Morocco. Yet watershed management can reverse such degradation in an economically feasible way. For example, a watershed management project above a major irrigation reservoir in northern Morocco showed an economic rate of return of 15.9 percent.~ Economic rates of return on investment in watershed management and soil conservation projects financed by the World Bank are in the 15 to 21 percent range. With rates of return such as these, why is watershed management not given higher priority in the planning and management of resource development projects? We think the reason is largely a lack of awareness and a lack of appreciation by high-level administrators, field staff and farmers themselves that watershed management makes good sense not only from an environmental point of view, but also in terms of sustainable economic development.

Still, many people believe that little can be done to reduce the conflicts between development and environment. This belief leads to polarization of attitudes and a lack of willingness to adopt an integrating framework that helps in the reconciliation of conflicting objectives. Clearly, these attitudes have to be changed. In fact, they are changing in organizations such as the World Bank, which recently underwent a major reorganization, including an increased focus on environmental management in relation to development. What has been recognized by many development professionals—and what a watershed management framework emphasizes—is that economic growth, poverty alleviation and environmental protection can be made to complement each other, or at least a workable integration of economic, social and environmental concerns can be developed, if the appropriate approach and integrating mechanisms are used. A practical, operational framework has to be developed and then implemented by countries and development organizations. Such frameworks have been developed and tested, and could be used more widely by planners and decision makers if they were aware of them and trained in their use.

Source : <http://nagahistory.wordpress.com/2014/06/18/the-role-of-watershed-management/>