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Ecosystem Approach and Governance:

Contrasting Interpretations

Photo: USAID

The "ecosystem approach" means different things to different people. To some, it is based on the needs of the ecosystem. To others, it is based on the needs of the people who use the ecosystem.

Since the 2nd World Water Forum in The Hague in 2000, water professionals have been working to develop a "land/water integration in a catchment-based ecosystem approach." As part of the development, it is important to realise that there is an existing dichotomy in the understanding of the concept of the "ecosystem approach." The two approaches might best be described as the socio-economic user-oriented approach, and the ecosystem-oriented approach.

The biophysically founded concept

Scientifically, a biophysically founded concept has been developed in the water community, as earlier explained in Global Water Partnership's 2003 report on how to incorporate in social and economic development of water resources the protection of vital ecosystems. This interpretation focuses on organisms with different ecological functions, living in an abiotic environment, and interacting with each other.

Protection of vital ecosystems can take place on two scales. The first one refers to local-scale living landscape components and iconic sites of particular value, the second one to the catchment scale conglomerate of such local systems. In these interpretations, important concepts are in the former case key water determinants and habitat of an ecosystem, and in the latter key catchment processes of central importance for the overall functioning of the catchment ecosystem.

This water-founded conceptual development has been matched by a parallel development in the ecological community, as evident in different chapters in the recently finalised global project Millennium Ecosystem Assessment, especially the chapters on Inland Water Systems and Wetlands. Here focus has been moved from conservation of ecosystem functions and attributes to protection of ecological services provided by those ecosystems, and to recognition of the need to strike trade offs between beneficiaries of different services. In the biodiversity sector, focus has been moving from individual species towards an ecosystem-oriented perspective.

Currently, the two main approaches are being merged under the concept "river basin or ecosystem approach." This dual term is interpreted as giving due consideration to ecological functions and services, and to interaction of terrestrial and aquatic ecosystems in water policies, strategies and action plans. These concepts are more or less coinciding in the ecological community. In the water community a similar movement is taking place by its claim that land use should be incorporated in IWRM, adding an L and transforming it into ILWRM.

The socio-economically user-founded version

On the governance level, the concept of the ecosystem approach has a different meaning, based on the more diffuse ecosystem concept referred to in international legislation and treaties. This is a negotiated and politically based environmentally oriented concept, which is more linked to natural resource and environmental impact issues than to ecosystems in the biophysical meaning of the concept, such as overexploitation of groundwater, ecotourism-based economies and salinity intrusion.

The United Nations Convention on Biodiversity (CBD) illustrates the user-founded version. Article 2 of the CBD defines ecosystem as "…a dynamic complex of plant, animal and micro-organism communities and

their non-living environment interacting as a functional unit." This biocentric view has not prevailed and within the framework of the implementation of CBD it has been necessary to apply a more anthropocentric ecosystem approach that puts human economic activities in forefront.

The current ecosystem definition is politically based and embraces the idea of the lowest common denominator that attempts to balance "conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources." The CBD ecosystem approach rests on 12 principles that place a strong emphasis on societal choices and objectives, the need to manage ecosystems also in an economic context, and the ecosystem effects of human activities and conservation. The ecosystem approach is rhetorically claimed to be an important element to reach the development objectives of poverty alleviation and enhanced sustainable development.

In the socio-economic user founded version of the concept, the ecosystem approach is typically viewed as a strategy that includes integrated management of land, water, forest and living resources that promotes conservation and sustainable use in an equitable way. Within the CBD framework the concept of the ecosystem approach is still evolving, for example the most recent Conference of the Parties to the CBD noted that sustainable forest management, ecosystem based management, integrated river-basin management, integrated marine and coastal area management, and responsible fisheries approaches "may be consistent" with the CBD. The development of the ecosystem approach within the CBD framework has at times been a hard-fought political battle, such as between the North and South and between political decision-makers and scientists, and evolved over time. It is anticipated that the concept will continue to evolve and be refined as the political circumstances change within the CBD framework.

Comfort-zone based realism and sanctioned discourse

There are problems involved when translating the scientifically based version of the concept into policy making. It is, however, slowly being realised that science may best impact decision making provided that it acts within a sanctioned discourse. The reason is that mental models are not easily changed. The most of what can realistically be achieved within the decision maker community, which has the power of the agenda and remains responsible for the ultimate decisions taken, is to operate around the "lowest common denominator" of the two opposing worldviews. This means that "good ecosystem governance" will have to proceed within what may be thought of as "comfort zones" where action is seen as realistic.

Such comfort zone-based realism can basically be interpreted as taking an incremental approach in ecosystem governance, i.e. advancing step-by-step in a sequence of actions. The ultimate goal is an ecologically sustainable situation, i.e. where socio-economically based activities do not non-undermine the life support system on which societal well-being is being based.

To speed up such a slow process of good ecosystem governance will in other words require that the worldviews dominating in the decision maker community can be influenced towards a better understanding of the role of the life support system for long-term human well being and the socio-economic costs that will develop if it is being seriously undermined by destructive human action. Such an effort will have to involve a strong component of communication and persuasion.

An effort to close the gap between the two interpretations of good ecosystem governance would therefore necessitate a move also on the biophysical side to get beyond the advocacy-oriented ecological discourse that has dominated in the past. The information needed is not only WHY ecosystems have to be protected and FROM WHAT, but also HOW this can be achieved and WITH WHAT financial and institutional means. Because that is what political decisions must be about.

The current comfort zone – where economic and ecological trade-offs are made by the minute – remains unarticulated and is poorly understood. For example, why are some trade-off decisions made, while others are not?

Is there an agreed bottom-line on trade-offs? How were stakeholders involved, if at all? Are institutions in place that can implement and monitor decisions? These are some of the issues that need a more firm answer if we are to implement versions of eco-system approaches.

Efforts to close the gap would also demand considerable efforts in terms of information and outreach for transfer of scientifically based information in an easily understandable way to policy makers and politicians.

Two different views of the ecosystem

The two contrasting interpretations of an ecosystem-oriented approach in decision making and governance discussed above can be characterised in the following way. They represent the difference between a biophysically based ecosystem approach, and a broader user-oriented connotation of a socio-ecologically based approach with focus on natural resource economic potential. In the former approach, humans are not seen as part of the ecosystem but rather as disturbing agents. In the latter case the interpretation is more of a socio-economic and ecological approach where humans are part of the natural system and depend on its resources that influence the development potential.

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Ultimately, socio-economically based activities should not undermine the life support systems found in nature.

Photo: Maria Stenström