

"Essential ingredients in an ecosystem approach to the conservation of tropical wildland biodiversity".

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"The ecosystem approach is the primary framework for action under the Convention... The ecosystem approach is a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (UNEP/CBD/SBSTTA/5/11, p. 1).

What is an ecosystem approach? It is a strategy that takes into account many of the different processes, forces and traits of the place where the approach is being applied, to arrive at the goal. What is the goal? In conserved wildlands, the goal is that their wildland biodiversity and ecosystems are still there, as biologically intact and functional as practicable, centuries from now. In agroscares, the goal is that they are optimally productive and healthy for their multiple human occupants, owners and users. Note that these are two very different goals in terms of their pragmatism. The ecosystem approach therefore will encompass very different actions in the two kinds of places. Both goals are extremely place-based. This land use division is aimed at bringing humanity into harmony with nature, and will generally result in a smaller number of larger conserved wildlands scattered across oceans of agroscares. SBTTA/5/11 "recognizes that humans, with their cultural diversity, are an integral component of ecosystems" - to which I would add that they are integral in very different ways in wildland ecosystems versus agroecosystems/urban ecosystems.

Essential ingredients in the ecosystem approach, as "discovered" on-site by the Area de Conservación Guanacaste, northwestern Costa Rica, in its evolution from a national park to a conservation area (1985-2000):

- 1) Have to let it work. Without a friendly government policy, and without people allowed to carry it out on-site, it will fail. The former is abetted by the Convention on Biological Diversity and much else at the national and global level. The latter is abetted by decentralization and knowledge-based adaptive management.
- 2) It is place-based. A society has to decide what will be agroscape/urban and what will be a conserved wildland. The ecosystem approach is not so much involved with choosing where these places will be, as it is focused on how a wildland will survive once designated. The willingness of society to designate is in large part derived from perception of value to society, a value which will usually be brought about through an ecosystem approach. An ecosystem can be of any size, and a given conserved wildland is likely to contain many ecosystems.
- 3) It is knowledge-based (which is actually science-based). Specific knowledge of the place drives decisions. This knowledge - taxonomy, natural history, recovery rates, human impacts and uses, etc. - is possessed by the local human (experienced) resources (both biodiversity managers and neighbors) and possessed by society at large. Knowledge shifts and grows continually, as does the custodial challenge,

leading to the essentiality of “learning-by-doing” and adaptive management towards a goal. The emphasis must be on keeping the goal at the fore, and on learning the ways to that goal along the multiple possible paths. Rigid long-term bureaucratic rules, no matter how appropriate at the moment of their invention, serve poorly as daily guidelines in this fluid biological and sociological environment.

- 4) It is community-based, participatory, decentralized. Both government and private sector institutional and human resources can and should be full participants, but it requires relinquishing of centralized political power, acceptance of local civic responsibility, honoring of biophysical boundaries, and allowing/expecting/training the staff of a conserved wildland to take full responsibility for it.
- 5) As it is place-based, it is designed around the organic traits of the particular conserved wildland and its local, national, and international society. This means that each large conserved wildland will be unique in many respects.
- 6) The conserved wildland subject to an ecosystem approach needs to be viewed as an object unto itself, rather than as an artifact of legislative action. Actions taken need to make biological sense, which means that relevant national laws and regulations applying to the conserved wildland may have to be far more flexible and general than is traditional in society at large.
- 7) It is viewed as, and allowed to be, an entrepreneurial and directly productive sector. It is a productive form of land-use, equivalent to the agroscape in general terms. An ecosystem approach applied to a conserved wildland is not passive custody (although some conserved wildlands may exist in relatively passive custody just as do some major art or science museums).
- 8) Establishment and maintenance is an optimality question, explicitly recognizing that, for example, there will always be human footprints and that it is never possible to preserve “all” wildland biodiversity.
- 9) Because the conserved wildland operates under a very different set of rules from those of the agroscape, the way a species or ecosystem is treated depends on the place where it is encountered.
- 10) Within the conserved wildland, survival of biodiversity per se, and its ecosystems, is the objective, with multiple multi-used and multi-tasked byproducts. Within the agroscape and urbania, biodiversity and ecosystems are important tools to a healthy and sane agroscape, but their survival and condition is generally not the overriding objective and uses are much more monomorphic.
- 11) The conserved wildland cannot be, and should not be, viewed as responsible for the environmental health of the agroscape. However, its knowledge, its human resources, and at times its actual biodiversity and ecosystem services, can be very valuable ingredients for intersectorial collaborations with the agroscape and urbania.

Where does the “species approach” fit? Species are simply members of ecosystems. When some particular species has attracted the attention of humanity, build on that attraction as one more tool in the ecosystem approach toolbox for the conserved wildland, and/or in the agroscape. The species approach may be used as part of the decision-making process as to WHICH wildland to conserve, or may be one of the products from an established wildland. Do not let it be the cause of festering antagonism toward biodiversity by the agroscape.

Where do bioregional approaches fit? Selection of regional biological representation is primarily part of the decision-making process as to WHICH wildland to conserve. Bioregional approaches are also useful for inter-place inferences about the technology of custodianship and use of both wildlands and agroscares. Consideration of the bioregional characteristics of a conserved wildland is one more ingredient to an ecosystem approach to conservation.

Let's not confuse two very different questions: "Which wildland places does society wish to restore and conserve in that state?" and "Once the decision is taken, how does one render that wildland a happy and productive member of local, national and global society (for its survival into perpetuity)?" The academic community, the conservation biologists, and biodiversity scientists have been focused primarily on the former. There is, however, a clear need to place much more attention on the latter. The rest of the world has largely ignored the former, or been antagonistic to it (despite paying the some bills and generally using it as a free good). However, this great majority could perhaps become much more interested and friendly if we were to aim at the latter question, as does the Convention on Biological Diversity. The latter question is what the ecosystem approach as expounded in SBTTA/5/11 implicitly addresses. I would beg that we get explicit about it.

There are five operational guidelines in SBTTA/5/11 pp. 8-9:

1. Functions of biodiversity.
2. Fair and equitable sharing.
3. Adaptive management.
4. Correct scale – decentralization.
5. Integrated among places.

All five apply equally well to the ecosystem approach to managing conserved wildlands, and to the agroscape. The nouns differ from place to place, and among these two major land uses, but the verbs are basically the same.

And the longer we argue about it, the less tropical biodiversity and the fewer healthy ecosystems there will be with which to work when we finally get on with doing it. The ecosystem approach works if you let it.

Perhaps a medical analogy is appropriate. We have victims of a catastrophic event dying on the emergency room floor. Yes, medical schools need to keep on teaching, and Ministries of Health need to keep on developing health legislation, but there is no substitute for the doctors and nurses and caregivers getting on with applying what we already know, and learning more in the process. Maybe we can even save some of the victims. "Learning by doing" is a particularly effective method for conserved wildlands.

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Relevant web sites:

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