

MPA NEWS



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MPA Perspective: The Development and Establishment of Coral Reef Marine Protected Areas

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[Editor's note: Graeme Kelleher has been at the forefront of MPA science and policy since the 1970s. From 1979 to 1994, he served as chairman and chief executive of the Great Barrier Reef Marine Park Authority; he is now a senior advisor to the IUCN World Commission on Protected Areas. He has edited and authored landmark publications on MPAs, including IUCN's *Guidelines for Establishing Marine Protected Areas* (1992). In the following essay for MPA News, he offers his perspective on lessons learned from his years in the MPA field.]

Introduction

"How complex and unexpected are the checks and relations between organic beings, which have to struggle together in the same country." (Charles Darwin, 1882)

Charles Darwin was referring to living organisms. I am quoting him here because the complex, interrelated environmental problems which the world is seeing at the end of the 20th century reveal that his observation is equally applicable to the checks and relations between human political and administrative organizations.

We are at last realizing that everything is connected to everything else and that the world operates as a complex process with characteristics which ensure that it will function chaotically. That is to say, precise predictions of events and states a long time ahead will not be possible.

The best reaction to such a situation is to proceed strategically -- that is, to adopt policies that will put us in advantageous positions from which to take specific actions which will contribute to our attaining our objective. Our goal is, of course, ecologically sustainable development.

My aim is to suggest strategies which might contribute to this goal in relation to the establishment and successful management of marine protected areas. In doing so, I shall draw on experience from around the world that demonstrates which approaches usually work and those which usually fail. The ubiquity of these lessons in social and natural sciences and management reflect the apparent commonality of human attributes in all societies.

Lessons from experience

1. The most important attribute of an MPA manager is integrity. Many managers have made the mistake of believing that they can fool some of the people some (or even all) of the time. The consequence of this is that the manager appears to win a series of battles, but he or she loses the war because of the accumulation of loss of trust. This eventually leads to failure.
2. Local people must be deeply involved from the earliest possible stage in any MPA that is to succeed. This involvement should extend to their receiving clearly identifiable benefits from the MPA.
3. Time spent in preparation is an essential investment that will be repaid many times over.
4. Financial sustainability needs to be built in from the beginning.
5. Almost all MPAs contribute to the maintenance or restitution of both biological diversity and abundance, both of which are relevant to sustainable fisheries.
6. It is not feasible in today's marine environment to divorce the questions of resource use and conservation, because marine natural resources and their living space are all sought now by many different users for many different purposes.
7. The tendency in some areas to oppose the recognition of fishery reserves as MPAs seems to be counter-productive, inhibiting cooperation between fishers and environmentalists in creating and managing MPAs.
8. Individual MPAs and systems plans should be designed to serve both sustainable use and environmental protection objectives, and relevant agencies should work together in planning and management. In almost all areas of the world, there has been a long history of conflict and lack of cooperation between environmental and fisheries management agencies. This lack of joint action inhibits progress in establishing MPAs and managing them wherever it is manifest.
9. Socioeconomic considerations usually determine the success or failure of MPAs. In addition to biophysical factors, these considerations should be addressed from the outset in identifying sites for, selecting, and managing MPAs.
10. It is better to have an MPA that is not ideal in an ecological sense but which meets the primary objective than to strive vainly to create the "perfect MPA".
11. It is usually a mistake to postpone action on the establishment of a MPA because biophysical information is incomplete. There will usually be sufficient existing information to indicate whether the MPA is justified ecologically and to set reasonable boundaries.
12. Design and management of MPAs must be both top-down and bottom-up.
13. An MPA must have clearly defined objectives against which its performance is regularly checked, and a monitoring program to assess management effectiveness. Management should be adaptive, meaning that it is periodically reviewed and revised as dictated by the results of monitoring.
14. There is a futile global debate about the relative merits of small, highly protected MPAs and large, multiple use MPAs. Much of this dispute appears to arise from the misconception that it must be one or the other. In fact, nearly all large, multiple use MPAs encapsulate highly protected zones that have been formally established by legislation or other effective means. These zones can function in the same way as individual highly protected MPAs. Conversely, a network of small, highly protected MPAs in a larger area subject to integrated management can be as effective as a large, multiple use MPA.
15. Because of the highly connected nature of the sea, which efficiently transmits substances and forcing factors, an MPA will rarely succeed unless it is embedded in, or is so large that it constitutes, an integrated ecosystem management regime.

Conclusion

The overriding conclusion from case studies of various MPAs around the world is that success or failure is not usually determined by complex factors unique to that particular MPA. On the contrary, they result from failure to apply these fairly simple strategic principles. And it is usually the socioeconomic rather than the biological factors that determine success or failure.

Why do managers fail to apply these simple, well-proven approaches? My conclusion is that it derives from the natural tendency of humans to prefer immediate gratification to long-term benefits. It takes a lot of self-control for a manager to refrain from responding in-kind to insults, or to deliberately raise difficult issues with possible opponents in order to resolve them. It is much easier, and perhaps more "natural", to avoid difficult matters and hope that they go away, or to apply the dictum of "an eye for an eye".

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