

## Marine Conservation on Paper

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I have been studying dolphins in Mediterranean coastal waters over the past two decades. Ten years ago, I started working with short-beaked common dolphins (*Delphinus delphis*) in western Greece. In the transparent blue waters surrounding the island of Kalamos there were plenty of these marine mammals, over 100 in a small area. They surrounded the boat every day and played with our inflatable. For a cetacean researcher, it was paradise. Today, only a few dolphins are left. We used to see them every day, now it's once a month.

Together with the dolphins, tuna and swordfish also declined in my study area. Their prey, anchovies and sardines, were wiped out by overfishing. My colleagues and I have been trying to promote management action aimed at preserving the local ecosystem, but the chances to make a difference are few. Sometimes, it seems so hopeless; I am not the only one who feels this way. Many people engaged in marine conservation share an increasing sense of frustration with regard to our present chances of improving the status of our species of interest. Where does this sad feeling come from?

In the recent past, the main challenge facing Mediterranean scientists concerned with whale and dolphin conservation was that we knew so little about these animals and the threats affecting them. We believed that if only we could describe cause-effect relationships and document the main threats, there would be ways to reduce the impacts of human activities and improve the animals' chances for recovery (where necessary) and persistence. We therefore devoted much effort to investigating population status and trends through hard work in the field, in laboratories, and at computers. In some areas, several years of research allowed us to assess how the animals were doing; in many cases they were not doing well.

At least in portions of the Mediterranean basin, reasonable explanations were evident for low cetacean densities, declining population trends, or excessive mortality. At that point, there was hope that science-backed evidence would lead to action. Cetacean conservation people put on smiles and believed their work was worthwhile; they thought they were contributing to "saving" a portion of nature, however tiny.

The next steps were to communicate the new evidence to regional managers and to draw up and promote conservation (or action) plans and other tools with which to inform policy. The UN Environment Programme's Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) was in the forefront, providing an ideal framework for the

preparation of such plans and creating links between scientists, nongovernmental organizations, and policy makers. There was a good feeling about the effectiveness of this process. Considering that most Mediterranean governments formally committed to cetacean conservation by ratifying ACCOBAMS and several other conservation treaties, we thought that once the formal plans were available, there would be no more impediments to management action. This was not the case.

The grim reality is that after a great deal of research and the creation of conservation plans the tendency has been to celebrate and record these “successes” in the documentation from meetings or workshops and then to procrastinate on the subject of implementation. An example close to my own heart is the 90-page Conservation Plan for Mediterranean Common Dolphins prepared for ACCOBAMS in 2004. This plan was the last in a series of steps that included field research, a comprehensive scientific review on the status of the population, a proposal to the World Conservation Union (IUCN) resulting in the listing of Mediterranean common dolphins as endangered, and a press campaign targeting the European media. In this instance, the Mediterranean parties to the ACCOBAMS agreement chose to “welcome” the plan in principle but then proceeded to commission additional planning projects rather than coming to grips with implementing the recommended actions on behalf of common dolphins.

A problem with large-scale conservation plans laden with recommendations (often appropriately referred to as laundry lists) is that they often turn out to be so exceedingly expensive that they generate frustration on the part of the people responsible for their implementation. Invariably, the available financial resources are far out of proportion to the need. What’s more, conservation plans almost always call for policy changes that conflict with powerful socioeconomic interests. Calls to reduce fishing pressure or to stop offshore dumping, for instance, are likely to cause trouble for government representatives charged with implementation, and this induces them to back off. Sometimes this is done straightforwardly; at other times it happens through a call for one more step in the long process that precedes action.

Sadly, conservation-oriented research and action plans and the call for more workshops, meetings, studies, and reports risk adding up to nothing more than “conservation on paper.” Scientists and conservationists spend much of their life frantically writing documents and recommendations, but little or nothing happens in the real world. Is paper, and then more paper, all that governments really want from us? When will the time for action come? Are we allowing ourselves to be lost in the illusion of doing conservation while in fact we are mostly just producing conservation tools that are rarely used?

There is always a good reason to call for another report, a more detailed investigation, a new meeting. These are fine initiatives, but only if they lead, eventually, to concrete steps that improve the status of the animals. Unfortunately, this is a rare outcome. Even sanctuaries and protected areas sometimes function as an excuse, as a way of allowing officials to say, “Look, we just created a new protected area - what more do you want?” But the questions we should all be asking are: Did the cetaceans living in the protected area get any benefits from the new designation? Have conservation measures actually been implemented? Has the environment improved? or Is this just one more paper park, a high-profile gesture that will be used to justify another decade of studies, meetings, and inaction?

A dispassionate look at the Mediterranean reveals that most or all of the big threats are still present and at least some are probably getting worse. Mediterranean cetaceans die in pelagic gillnets by the thousands (after 15 years of effort to stop this nonselective, destructive kind of fishing). The animals decline together with their overfished prey. They are exposed to ever-increasing noise and pollution levels. In the meantime, the marine conservation community has its job to do. We are writing a new report, publishing a new paper, or traveling to another important meeting to present our latest findings. Will we ever manage to make our case?

Last summer, I talked with fishery scientist Daniel Pauly. This venerable person -- who has published some of the most influential papers on marine conservation and has recently received a Cosmos Award and an SCB Distinguished Service Award for his lifetime commitment -- is in my view one of the few who has succeeded in making their case (Pauly's work concerns the ocean-wide impact of overfishing). When I approached this luminary to ask for advice and encouragement, I did not expect him to express disillusionment and to emphasize how little difference his own work has made in actually influencing public opinion and fishery management. "The case is never made," he said.

The case is never made. All too often, it is not just a matter of publishing another paper, writing another action plan, attending a new workshop. There will always be something left undone. Some evidence may be missing, and a declining trend in a graph may be due to environmental shifts rather than human impact. In response, one does what is needed, but finds -- again -- the case is not made. Perhaps this time the human impact is clear, but the socioeconomic aspects were not considered or the needs of all the stakeholders were not taken into account. This seems to be the game today. We are charged with documenting the problem, communicating it to the public and the institutions, proposing mitigation measures, and approaching the right managers and institutions to convince them that they should do something. But the bottom line is that few decision makers are willing to face the big challenge of affecting people to protect the environment. They are rarely serious about doing conservation that may result in unpopular action, no matter how thick the pile of scientific articles, workshop recommendations, and action plans on their desks. Most decision makers are in charge for a relatively short time, and they tend to favor action carrying immediate benefits rather than entering into conflict with short-term interests for the sake of future human generations.

This is not to say that government people are all uncaring. Governments have many faces, as do human societies. Some managers, particularly in environmental departments, are highly committed and do care. Still, they must confront the much stronger powers of the fishery, commerce, or defense departments because they are concerned primarily with economic and political issues. This is why a country such as Italy may ratify an agreement for the conservation of cetaceans and a number of conventions for marine conservation but then strongly support fishery policies that threaten marine ecosystems. There may be internal conflicts and contradictions within individual governments, but it is the powerful that normally win.

There may not be a way out, but there appears to be a way through, and it is helpful to be reminded of the teaching of anthropologist Margaret Mead: "Never doubt that a small group of thoughtful, committed

citizens can change the world: indeed, it's the only thing that ever has." Most of the time, success stories in marine conservation come from painstaking, long-term commitment by individuals or groups who do not allow themselves to be overcome by frustration.

In addition to solid science and well-conceived action plans, what is desperately needed to promote marine conservation is public pressure. Politicians and governments are highly concerned with signals coming from their electorate. If the public were more demanding and managed to raise their collective voice in calling for serious efforts on the part of governments to preserve marine ecosystems and animal populations, regardless of the social and economic costs, there would be a greater chance for the action plans to be removed from the drawer and put back on the agenda.

Such public awareness and attitude are obviously a long way off in most Mediterranean countries, where marine conservation is not a priority. Therefore, colossal work is needed to set the stage for a new and widespread appreciation of nature. Only major changes in values and sensibilities will bring about the kind of political will and commitment that is implied in most action plans and workshop reports. What the marine environment needs is a mass of people who value and care about it. This means people who not only express feelings of admiration and awe for whales and dolphins, but who also recognize the complexities involved in achieving meaningful protection and are ready to become engaged. For example, consumers need to understand the implications of buying Mediterranean swordfish and refrain from doing so.

Managing to build this kind of awareness among the general public is probably the greatest of all conservation challenges. Changing human behavior even slightly and influencing the public perception of what is truly valuable and worth protecting is essential. We may state in action plans that public awareness is needed, but does anyone listen? Too often, no one does. In addition to doing our work as scientists and individuals committed to marine conservation, it is therefore necessary to envisage effective ways of conveying our conservation message directly to the general public.