

The Challenge of Communicating Marine Science to Rural Fisherfolk

By Judy Mann-Lang¹

Background:

Over the past 100 years of marine science in South Africa, research emphasis has shifted from theoretical and descriptive research to applied and management orientated research. Marine science now focuses increasingly on resources that are harvested by people and on determining levels of exploitation and stock levels. Research has shown that, although the major resources are currently sustainably harvested, many resources harvested along the coast of South Africa are overexploited. Most current levels of exploitation are unsustainable and management techniques need to be employed to ensure future sustainability.

The task facing marine scientists and resource managers is to communicate the results of their research to the resource users in a manner that will encourage a more sustainable approach to resource exploitation. In South Africa, resource users are divided into three categories, commercial fishers – who catch fish for commercial gain, recreational fishers – who fish for pleasure and subsistence fishers – who personally harvest marine resources as a source of food or to sell them to meet the basic needs of food security. Communication with all three groups needs to be addressed, however, subsistence communities will be the focus of this discussion.

Subsistence harvesters are usually from impoverished, rural communities. Almost all studies on the management of subsistence resource use have stressed an urgent need for capacity building amongst local subsistence communities. This training should be aimed at encouraging participation in the management process through improving people's understanding of both ecological and biological processes, harvesting rates and fisheries management techniques.

Challenges:

How can complex marine science be communicated to rural communities in such a way that the science has relevance to people? Is it possible to involve communities in the management of their own resources in the form of co-management structures?, bearing in mind that for effective co-management both the management agency and the local community should operate off an equal knowledge base to enable both groups to participate equally in the decision making

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Poverty

The most important challenge probably relates to poverty and associated pressures on the environment. Regardless of how aware a community is of the implications of overexploiting a resource, in the absence of alternatives, environmental care is a luxury that few can afford. Any attempts to improve patterns of resource use need to look at the entire community milieu. Alternatives for income generation and food supply are as important as providing good training in biological and scientific principles.

Logistical Challenges

In many developed countries the approach to reaching fishermen has been to produce eye-catching and informative brochures, write magazine articles or screen television adverts. However, in rural Africa such options are simply not feasible. Electrification has not yet reached many communities, many rural community members are illiterate and do not speak English. Although an effective tool for mass communication is mother tongue radio, face to face communication is usually essential, although the logistics of working in rural areas are difficult.

Cultural Challenges

In many rural areas there remains a powerful tribal authority system and cultural ties are strong. Work with a community needs to take this into account. An understanding of traditional or indigenous knowledge is important, as this knowledge has shaped many current harvesting practices. Cultural and spiritual beliefs are strong and should be sensitively incorporated into training approaches.

Political and social problems

In some areas political instability, a breakdown of community structure and violence have made attempts at community involvement meaningless. Unless the community is reasonably stable, little progress will be made.

Solutions:

In 1997, in an attempt to improve communication between scientists and local communities, the Sea World Education Centre pioneered the development of capacity building courses on the sustainable utilisation of marine resources for coastal communities. The courses assist people involved in subsistence resource use in their understanding of the marine environment, basic biology, sustainable utilisation and marine resource management. The courses help to empower local communities to take an active role in the co-management of their own resources.

Experience whilst running these training courses has shown that there are many factors that will influence the success or failure of the process. Amongst others, these include:

- ◆ Simplicity
- ◆ Use of traditional communication techniques
- ◆ Games and models work
- ◆ Group work is vital
- ◆ Timing – things take a long time.
- ◆ Communication is a two way process
- ◆ Sensitivity to local circumstances is necessary
- ◆ No preconceived ideas

I would suggest that to be effective science communicators in Africa we should challenge our approaches to science communication. We have to look at communication that will help people. I have had the privilege to run educational courses with communities along much of the east coast of South Africa. In all cases I have found that first world attitudes to science and conservation are simply not relevant to most people. I have had to challenge many of my strong beliefs in order to understand and work effectively with people. In Africa, science communication should be about people and about teaching people to live more sustainably for their own future survival.