

SOCIO-ECONOMIC CONSIDERATIONS IN PROTECTING SHOREBIRD SITES IN THE DEVELOPING WORLD: SOME PRIORITIES AND IMPLICATIONS FOR THE DIRECTION OF FUTURE RESEARCH

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Throughout the less-developed world, rural societies are closely dependent on wetland resources. Accordingly, it is argued that if current concern for migratory shorebirds is to result in effective conservation of the sites upon which they depend, much greater attention must be paid to the concerns of the human communities which depend on the same wetland resources. Particular attention needs to be paid to ways through which wetland conservation can better contribute to meeting the needs of the rural poor. The paper discusses the implications of this argument for identification of research which will contribute more effectively to meeting the needs of shorebird conservation.

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INTRODUCTION

In 1984, 140 million of the 531 million people of Africa were fed almost entirely with grain from abroad (Brown and Wolf 1985). In 1985 the estimated requirements for cereal food aid for the continent were in excess of 5.5 million tonnes (IUCN 1986a). In economic terms the 1984 food imports cost some 20% of total export earnings, a figure which compares with the additional 22% required to service the region's international debt (Brown and Wolf 1985).

Striking as these statistics are, they may at first sight seem to be of little relevance to shorebird conservation. However they underline one crucial message, achieving an increased and sustainable level of food production is the top national priority in most African countries. And, as governments and the development assistance community have strived to address this priority, we are today experiencing mounting pressure upon the wetlands of Africa. To quote Dr. B.N. Okigbo, Deputy Director-General of the Nigerian-based International Institute of Tropical Agriculture, "there is no doubt that wetlands, if properly utilised, have the potential of significantly reducing the food deficit that has plagued sub-Saharan Africa during the past 15 years".

There is indeed no doubt that wetlands, not only in Africa but throughout the world, are among the most productive of ecosystems. For centuries they have supported some of our planet's most important civilisations, and today many millions of people are directly dependent upon wetlands' productivity for their daily food requirements. The question then is not whether wetlands can contribute to solving Africa's food problems, but rather it is one of how this can be done best, and how it can be made sustainable?

As the conservation and development community focus increasing attention upon this question, it is important to consider the implications for shorebird conservation. In particular, what is the role of the conservation and scientific communities who are concerned with the conservation and study of shorebirds? How can

their work best contribute to shorebird and wetlands conservation in the developing world? The purpose of this paper is to explore these questions, and by emphasising the relationship between rural communities and shorebird conservation, to stimulate consideration of future research priorities.

RURAL COMMUNITIES AND SHOREBIRD CONSERVATION

There are few wetlands sites in Africa which are not used, and often intensively, by rural communities. For example, the inland inner delta of the river Niger in Mali, a site of major international importance for many species of ducks, shorebirds and other wading birds, is also one of the most densely populated regions of the Sahel. Some 1.3 million people inhabit the region (IUCN 1986b), and the delta supports over 1.2 million cattle as well as 1.5 million sheep and goats (Gallais 1984). In addition the Bozo and Somono fishermen inhabiting the delta harvest some 90% of Mali's fish harvest (Driver and Marchand 1985).

In the coastal wetlands and mangroves of Africa, Latin America and much of South-east Asia, shorebirds share the creeks and mudflats with local fishermen, many of whom live in, and depend for their livelihood upon, the mangrove zone.

Given the importance of these shorebird habitats to human society and the growing problems of food self-sufficiency and development in these regions, four major conclusions can be drawn.

1. Wetlands conservation will in most situations only be given the necessary priority and afforded the necessary funding if it is seen to benefit the rural communities dependent upon these resources.
2. The local population must be fully involved in the design and implementation of conservation measures intended to protect wetland sites. Only with their support is conservation likely to succeed in the long-term.
3. To obtain this support, the conservation measures must be seen to bring clear

benefits to the rural communities, and take account of local cultural perspectives. There is little place in many countries for the Northern conservation ethic.

4. While protective measures need to be implemented, there is need to allow multiple use of the resources. Only rarely will a total halt to exploitation be a viable management strategy, e.g. in mangrove sites of particular importance as fish nurseries.

IMPLICATIONS FOR RESEARCH PRIORITIES

Given the considerations highlighted above, those of us concerned with shorebird conservation in developing countries must examine where our research priorities lie. Here again several points emerge.

1. While information on shorebird distribution in Africa, Latin America and Asia is of limited detail, a wide network of sites has now been documented. Yet the future of most of these sites on all three continents is insecure. Very few are under any form of protection and the long-term security of most existing protected areas is questionable. Accordingly, while it would be of great interest to document more fully the winter distribution and precise use of sites by migratory and resident shorebirds, we must question whether this is a top conservation priority. Rather I suggest that greater efforts should be made to study the means by which to conserve sites which are already known to be of great importance.
2. In Europe, North America and Australia, the results of detailed study of shorebird migration, feeding ecology and habitat requirements, have been used to significant effect in arguing against destruction of estuarine wetlands. In the face of powerful special interest groups in these industrialised regions, in particular the petrochemical industry, such detailed argument has proved essential to the conservation case by demonstrating the crucial importance of specific sites for migratory birds.

There seems little doubt that in Europe, North America and Australia, this detailed research needs to be expanded and refined. And it is clear that the Wader Study Group, IWRB and other associated research groups, will continue to play a major role in this field. However, it is equally clear that there are geographical limitations to the value of this approach. Indeed in most countries of the developing world, such detailed argument is largely irrelevant to the decision-making process. Rather in the developing world, most wetlands are lost because of a conviction, on the part of governments and development assistance agencies, that wetlands conservation will hinder rather than help the process of economic development. As a result, a major focus of our wetlands conservation effort in these countries, and by implication our shorebird conservation effort there, must be to confront and remove this misconception. In particular, a greatly increased effort is needed to study and demonstrate means by which rural communities can obtain greater sustainable benefits from natural

wetlands, either through direct exploitation of the products they yield, or indirectly as a result of the ecological and hydrological services which they provide.

3. The expanding volume of information which documents the use made of tropical wetlands by birds which breed or winter in, or migrate through, Europe, North America and Australia has provided a powerful argument for greatly increased involvement by conservation organisations in these countries in the conservation problems of wetlands in the developing world. For example, despite the current climate of budget restrictions in the USA, the limited funding allocated to the US National Parks Service and US Fish and Wildlife Service for work in Latin America, is available largely because of the Western Hemisphere Convention. Similarly, the increasing involvement of European NGOs in wetlands conservation in West Africa is because research there has made possible the detailed demonstration of the importance of these sites for Palaearctic shorebirds. Thus, while detailed understanding of migration routes and feeding ecology may be of limited practical application in pursuing wetlands conservation in most developing countries, this information can be of great value in building government and non-governmental support in the developed world for appropriate action in the wetlands of the developing world.
4. There is no doubt that some of the strongest lobbyists for wetlands conservation have become so through their work on waterbird biology. Consequently a continuing shorebird research effort may, in certain developing countries, provide an important stimulus to the development of a wetlands conservation lobby. Nevertheless in most such countries this lobby will be restricted to a scientific elite. Only in a few countries and cultures is this elite, on the basis of shorebird concerns alone, likely to generate the same enthusiasm for wetlands conservation found in Europe and North America.

TOWARDS A STRATEGY FOR RESEARCH IN SHOREBIRD CONSERVATION IN LESS DEVELOPED COUNTRIES

When considering how research can best contribute to the conservation of shorebirds in the developing world, there are three major groups of target audience to be considered. First, are the public and government agencies who can provide support to wetlands conservation abroad. Second, are the technicians who manage protected wetland sites. And third, are the rural communities, governments and development assistance agencies concerned with utilisation and development of wetlands in the developing world.

However, while the first of these is that concerned with the allocation of conservation funds, and the second with their use, the third is considerably more powerful than either, having ultimate control over the use of wetlands, even in most sites under nominal protection, and having access to substantial funds for wetlands conversion.

Thus, while as argued above, the northern audience has been, and will surely continue to

be, influenced by the results of shorebird research, their power to influence directly the rate of wetlands destruction in the developing world, and therefore the future of many populations of shorebirds, is rather limited. And while the technicians may well make use of information on site use by shorebirds to identify habitats requiring top conservation priority, their ability to contribute to long-term conservation by applying this information depends upon the existence of governmental and international support for the principal of wetlands conservation. Yet ironically it is the governments and assistance agencies, those which have the greatest influence over the future of the sites used by shorebirds in the developing world, which have historically been least concerned with the details of shorebird migration and site use.

Given these considerations, one major question emerges. Is the information on shorebird biology which is already available sufficient to maintain support in the North for wetland and shorebird conservation in the South, and at present, to manage effectively those sites for shorebirds which are already set aside for conservation purposes? If so, and I venture to suggest that for many species this is indeed the case, the most valuable research contribution to shorebird conservation will be that which helps to demonstrate both the importance of wetlands to rural populations, and the means by which conservation of wetlands can contribute to sustainable development.

What does such a conclusion imply for the future conservation role of shorebird biologists? That indeed is a question for all of us to consider. As a stimulus to thought on the issue I offer three suggestions.

1. While research in Europe and North America continues to pursue the detailed understanding of shorebird biology required to achieve conservation goals in these regions, shorebird biologists concerned with shorebird conservation in the developing world, should be urging that the emphasis of the research effort there, should be upon more vital research on the socioeconomic issues I have highlighted here.
2. We must examine whether the northern funds that are invested in shorebird conservation in the South, should be directed less towards survey and research, and increasingly towards more direct conservation action which seeks to demonstrate how shorebird sites can be conserved, in harmony with the rural population dependent upon them. If the answer is yes, we should promote action and allocation of funding by the appropriate agencies.
3. When shorebird expeditions to Africa, Asia and Latin America are being planned, the planners should examine what are the real conservation priorities. And even if this means that the shorebird research component of the expedition is severely reduced, the composition of the expedition team should be such that a major effort is placed upon study of the socioeconomic importance of the wetlands sites being visited.

No doubt such a change in focus from birds to people and study of the socio-economic aspects of site conservation will mean that many opportunities for most interesting research on

shorebird biology must be ignored. However, given the pressures now facing most wetlands in most parts of the developing world, we must begin to ask more frequently the most important questions and, no matter how difficult it may be, ignore many of the more interesting ones.

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