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CONSERVATION AND SOCIAL DEVELOPMENT

A STUDY BASED ON AN ASSESSMENT OF WOLONG AND OTHER PANDA RESERVES IN CHINA

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UNRISD PREFACE

Under its programme on Environment, Sustainable Development and Social Change, the Institute is currently focusing on the social dimensions of policies and initiatives for environmental protection. The purpose of the research is to analyse the implications for livelihood and conditions of life, especially of the low income groups, of a wide variety of projects to rehabilitate degraded resources and protect wild animals and plant species in national parks and reserves. This paper, based on original research in Wolong nature reserve in the Sichuan province of China, analyses the social impacts of the creation of reserves to protect giant pandas and their habitat. It forms part of the work being carried out under this research project.

The prevailing conservation ideology seeks to maintain "ecological wilderness" and tends to prohibit resource utilization by local communities. Prospects for attracting foreign assistance and promoting the tourism industry have also played an important part in the decisions taken by many countries to accord priority to the expansion of protected areas. The impact of the establishment of parks and reserves on the lives of local populations has until recently received scant attention. In line with many other countries, there has been a rapid expansion of parks, reserves and other types of protected areas in China: they covered 0.07 per cent of national territory in 1965 and over 6 per cent in 1991. China's panda reserves in particular are a source of pride and have attracted the most attention and resources from abroad.

The paper argues that panda reserves provide a particularly auspicious setting for integrating the objectives of conservation with social development. The parks are thinly populated: their total population amounts to less than 5,000 people, mostly of Tibetan origin. In Wolong reserve, as in other protected areas which host panda populations, the pandas live and roam at elevations different from those utilized by human inhabitants for agriculture and livestock. There is therefore little or no competition for resources between pandas and people. However, people continue to be regarded as a threat to the viability of pandas. In some areas, people have been removed and forcibly resettled elsewhere. In Wolong, a resettlement plan was elaborated — but it met with such resistance from local populations that the apartment buildings constructed for them remain empty. The establishment of the reserve has led to restrictions on livestock-grazing, collection of forest products and hunting. The construction of roads and installation of electric power have benefited local people, but few resources have been devoted to improving housing, health care and sanitation for them. Nor have they benefited from employment opportunities which have arisen as a result of infrastructural development and steadily growing tourism.

The paper argues that there are enormous opportunities for enhancing the livelihood security and living standards of the local inhabitants while preserving and improving the natural habitat. These objectives can be achieved with a small proportion of the resources allocated to panda reserves. These opportunities lie in yak farming, pig breeding, collection of medicinal plants, trading, catering and lodging tourists, handicrafts production and processing of minor forest produce. The paper suggests the need for a more flexible approach to conservation and resource use, with the dual objective of improving people's living conditions at the local level and conserving forests and wildlife through their sustainable use and management. In other words, social development objectives must receive as much priority as the preservation of pandas.

The author of this paper, Krishna Ghimire, is a researcher at UNRISD and has been coordinating several of the Institute's research projects on environment and social change, including The Social and Environmental Impact of National Parks and Protected Areas.

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Dharam Ghai Director

WWF PREFACE

ABBREVIATIONS, LAND MEASUREMENT AND CURRENCY EQUIVALENT

Abbreviations

| CES | Chinese Environmental Science Press |
|--------|--|
| CCP | Chinese Communist Party |
| IUCN | The World Conservation Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FRI | Forestry Research Institute |
| MAB | Man and Biosphere programme |
| NEPA | National Environmental Protection Agency |
| NGO | Non-Governmental Organization |
| RDI | Rural Development Institute |
| UNEP | United Nations Environment Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| WFP | World Food Programme |
| WWF | World Wide Fund For Nature |

Land measurement

15 mu = 1 hectare

Currency equivalent

5.7 RMB (yuan) = US\$ 1 in October 1993

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I. INTRODUCTION

A. Broader Issues and Concepts

Many of the processes of environmental degradation occurring in developing countries — such as soil erosion, landslides, sedimentation, water depletion and contamination, overuse of mangrove and coastal areas, deforestation, desertification, drought, flooding, etc. — have become a vital concern both at international and national levels. In an attempt to halt these processes, or rehabilitate and improve environmental conditions, many conservation measures have been undertaken — soil preservation, afforestation, and protection of forests, grasslands, wetlands and freshwater resources, to name a few. Lately, much emphasis has been placed on protecting biodiversity.

The way or the extent to which a given conservation initiative can influence the social development parameters in a particular area varies. But where conservation programmes are limited to narrow protective functions, potential for social development can be frustrated. Besides the issue of "how it is done", social development through nature conservation programmes is also intimately tied to the question of "who does it". Where there is local enthusiasm for a programme, and people are free to design projects which respond to their household and community needs, the ensuing social benefits are likely to be greater than where such possibilities do not prevail.

Drawing on the preliminary results generated from a larger research programme on the social and environmental impact of protected areas in developing countries, as well as the author's previous work on the topic, this paper seeks to explore the hypothesis that the social development component may very often be totally overlooked in planning and implementation of protected areas. This is tested by examining the panda protection initiatives in China. The discussion of panda reserves is important not only because they are well-known, but also because pandas are considered as both "unique" and a "flagship species" by leading conservation scholars and organizations. However, while there has been enormous scientific interest in the species since the end of the last century, the socio-economic impacts of the panda protection initiatives have not been carefully studied. This paper is a preliminary attempt to fill that gap by focusing primarily on the socio-economic and political aspects of such conservation schemes. Before looking at the panda reserves, however, it is appropriate to review briefly the broader issues and concepts associated with the establishment of protected areas in developing countries, as well as our understanding of what social development is about.

Why are national parks and reserves an issue? Parks and reserves are being established in increasing numbers in developing countries. They cover significant tracts of national land and water resources, and conservationists seek to bring many remaining forest and aquatic resources under such protective régimes. Even gazetted forests, watershed areas and village woodlots are frequently turned into rigorously protected parks and reserves guarded frequently by national armies or special armed forces. Access to these protected areas is often limited to purposes of education, research and recreation. The fact that national parks and reserves are relatively better protected against unauthorized uses has led to an increasing official emphasis on these forms of protection (as compared to other forms).

National parks and reserves can greatly help to preserve biodiversity, maintain watershed areas and generate income from tourism. There also exist many forest or aquatic products within protected areas which are important to local consumption and income. Some studies tend to over-emphasize the benefits from establishing protected areas (e.g. Dixon and Shermann, 1991). In fact, their establishment also has many undesirable consequences, especially at the local level. While the benefits are difficult to quantify, or take a long time to materialize, or are disproportionately distributed amongst different sections of the population, the costs are often immediate, enduring and onerous, in particular for poorer households in and near the protected areas.

When national parks are established, local people are frequently removed from their settlements and provided with few or no alternative sources of employment or income. Where resettlement provisions are made, they are generally insufficient or inappropriate. For example, people are often transferred to entirely different socioeconomic or climatic zones, or are given land which is inadequate or unsuitable for the type of agriculture or other production activities that they have customarily practised. Even where people are not displaced from their settlements, they are usually forbidden to use park resources. Grazing, hunting and fishing, and gathering of food, wood and other useful biomass products are prohibited in parks. Social groups which traditionally rely heavily upon these activities, such as pastoral, tribal or landless people, are subjected not only to economic hardships, but also to difficult social and cultural adjustment processes.

In most park management activities, emphasis is on the management of natural resources found within the designated area and little or no care is given to areas outside the reserve. Ironically, the establishment of parks and reserves has often tended to lead to an increased level of deforestation, since households losing land in and around the parks must move to new locations and clear forests for settlement. Those who are unable to migrate to new destinations are often obliged to over-exploit forest and land resources which remain relatively accessible (e.g. forests outside of the park, village commons). How or to what extent people's subsistence activities are based on the use of local biomass is rarely evaluated. For instance, restrictions on grazing in parks and reserves can lead to the concentration of cattle in smaller areas outside the park or reserve, resulting in the degradation of rangeland and erosion and compaction of soil. Moreover, there is no incentive for local communities to manage protected areas because they simply view them as "lost village resources". Consequently, nearby areas much larger than the park or reserve can become degraded.

The establishment of national parks and reserves and accompanying restrictions on the utilization of resources also sometimes produces open social conflicts. Although sporadic in nature, organized protests and rallies, attacks on park guards, poisoning of animals and deliberate burning of forests are becoming common events in many developing countries. Management of the park becomes expensive and ineffective when the area has to be protected from an unco-operative and hostile local population. Any success of a protected areas scheme in the long run requires the active support of local communities.

What is meant by social development? In the context of this paper, "social development" basically means the recognition of the human factor in conservation. The central question is whether protected areas are able to promote economic, social and cultural improvements along with conservation. This issue has received little attention from natural scientists, as well as economists and other social scientists. By the very nature of their vocation, the first group of scholars has remained biased in favour of protection of flora and fauna, unless this mandate is directly threatened by public opposition. But social scientists too have failed to look systematically at the interactions between human beings and the natural environment in protected areas. This is because the prevailing justification and ideology of nature conservation assert that far too much environmental destruction is occurring and that the integrity of the environment is therefore not negotiable.

Natural scientists and conservation organizations imply that conservation initiatives, by definition, are social because they are designed to protect natural ecosystems and biodiversity, which are essential to human life-support systems and activities. In theory this is quite logical. Much however depends upon how such initiatives are carried out. Artificial nature conservation measures (i.e. human intervention in natural processes and management) can bring about — along with the positive changes in ecosystems and biodiversity — important destabilization in evolutionary processes due to natural and human impacts. For example, wetlands can be transformed in a matter of a few decades through replenishing, if leaves and grasses are left to decompose and trees are allowed to grow by curtailing their human use. Certain types of species can increase much faster than others when hunting or extraction processes are modified, thereby affecting the existing relative equilibrium in habitat structure, food availability and predator-prey relations (e.g. Gomez-Pompa and Kaus, 1992; Hobbs and Huenneke, 1992).

As hinted earlier, there are also direct human costs when protected areas are established; people living in these areas are removed or human use is restricted. Certain external actors such as tourist interests usually profit at the expense of the local inhabitants.

Social development depends upon a conservation programme placing high

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