



## Getting Out of the Woods

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# Getting Out of the Woods

## Quandaries of Protected Area Management in China

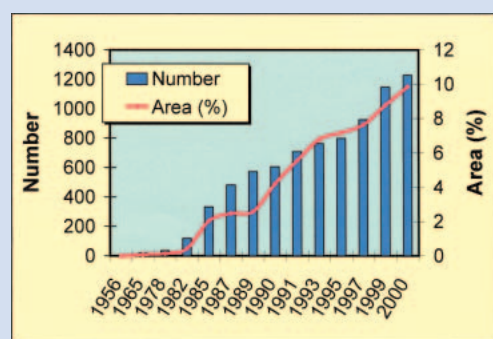
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*The number and area of nature reserves in China have increased significantly in the last 2 decades. This massive increase has not been matched by a corresponding enhancement of management inputs and capabilities. Six major problems in protected area (PA) management are identified in this article: selection of unsuitable sites for conservation, shortage of funding, rising people–park conflicts, the paper park syndrome, multiple but disparate management agents, and lack of international experience. Five management quandaries are discussed*

*to highlight the major dilemmas, ie, whether the reserves should exclude traditional resource-tapping activities, whether non-governmental organizations (NGOs) should be encouraged to help management agents, whether the management should earn income from the reserves, whether they should be the umpire or a player in the utilization of natural resources in reserves, and whether an integrated management structure should supersede the present compartmentalized arrangement. Finally, specific recommendations are obtained from the study.*

### Major management problems of nature reserves

Between 1978 and late 2000, the number of nature reserves in China increased significantly, from 34 to 1227, while their proportion of the country's territory increased from 0.13 to 9.85% (Figure 1).



**FIGURE 1** The growth of nature reserves in China in 1956–2000 by number of sites and total area.

Most reserves are located in the mountainous areas of south, southwest and north-east China (Figure 2). More than 70% of terrestrial ecosystems, 80% of wildlife species, and 60% of higher vascular plant species are encompassed by these official sanctuaries. Although the rate of designation of new nature reserves has been impressive, 6 chronic deficiencies have been diagnosed in the protected area (PA) system:

- Many PAs are too small to serve their intended functions, too damaged to meet conservation requirements, or

inappropriately located outside biologically significant areas.

- There is a serious shortage of PA funding. The China Man and Biosphere Committee (CMBC) reported that PA funding was merely US\$52.7 per square kilometer in 1999. This is far below the average of US\$157 per square kilometer in developing countries estimated by the World Conservation Monitoring Centre in 1995. PA managers commonly do not have the means to perform basic conservation tasks.
- People–park conflicts are on the rise in many PAs. The lack of effective resolution of this chronic and rather prevalent form of discord has frequently worked against conservation objectives and caused postdesignation damage to valuable ecosystems, habitats, and flora and fauna that are supposedly protected.
- Most PAs are de facto “paper parks.” At least one third are considered “3 withouts” nature reserves (without management agency, staff, and recurrent funding). The few fortunate ones are beset by deficiencies in reserve facilities, qualified staffing, recurrent funding, and biological monitoring practice.
- Too many national-level agencies are directly involved in managing nature reserves. None of them places PAs at the core of their missions, let alone making substantial efforts to promote cooperation and data sharing to facilitate conservation.
- There is a general lack of international experience in PA management and access to it. It is commonly constrained



by a sequestered mind-set and a parochial outlook.

China's decision makers are well aware that the present PA system cannot be sustainable in the long term if deficiencies continue. Since the 1990s, the central government has made major efforts to rectify problems, including reinforcing the public education program, calling for multichannel funding support, facilitating PA agencies to establish self-financing capacity, and demanding more effective enforcement of existing laws and regulations. Unfortunately, these endeavors, with few exceptions, have been unsuccessful. The persistence of an undesirable situation emanates to a considerable extent from the central government's failure to take constructive and ameliorative measures to tackle 5 thorny PA management quandaries, which are discussed below.

#### For people or park?

In defusing people-park conflicts, the central government finds it difficult to take sides. On the one hand, a daunting 60 million local people live inside and around nature reserves, over 75% of whom are peasants. Marginalized and impoverished local residents usually rely heavily on natural resources as a primary or supplementary means of subsistence. By imposing various PA regulations that greatly restrict traditional rights of use, giving little in return to local communities and failing to help them find alternative means of livelihood, the frontier reserve managers often incur the wrath of villagers and must confront "a sea of popular hostility" that militates against cooperation.

On the other hand, allowing local communities to tap natural resources without limitation is obviously a poor

**FIGURE 2** The outstanding natural beauty of the erosional granitic landscape of Huang Shan in Anhui Province, China, has been aptly accorded PA status. (Photo by C. Y. Jim)



alternative (Figure 3). The State Council unequivocally highlighted inappropriate human activities such as enlarged settlements, excessive tree-cutting, overgrazing, and unplanned land reclamation as the main culprits responsible for loss of biodiversity in nature reserves. Accordingly, PA managers are required to effectively wield the legal instrument to suppress illegal activities conducted by local people. Enforcing the rather draconian “fences and fines” strategy, in many cases, has aggravated rather than mitigated people–park conflicts.

#### **With or without nongovernmental organizations?**

To realize a desirable “win–win” scenario for people and parks, there is growing awareness and support among decision makers for a fundamental shift in management paradigm. The anachronistic paramilitary tactic of unrealistic exclusion of local uses could be replaced by a participatory one, calling for cooperation, engagement, and active participation by local communities. With this new move, a variety of internationally accredited community-benign conservation approaches have been introduced in China, including Communities Comanagement, the Integrated Conservation and Development

**FIGURE 3** The minority Yao people preserve their traditional practice of hunting wild animals in the forests of the Shimentai Nature Reserve, as illustrated by the trapping of a rare flying squirrel, which will be sold as game meat to restaurants in a nearby city. (Photo by Steve Xu)



Project, and the Microcredit Program for local communities.

Although the key rationales of the participatory paradigm are convincing if not compelling, changes so far have had limited success. Many PA managers found it practically impossible to subscribe to the new idea. To make a fundamental shift possible, the central government should initiate new measures to assist indigenous environmental nongovernmental organizations (NGOs), who could in turn support PA managers in matters such as mediating people–park conflicts, training PA staff, and providing financial and technological backup to reserve work.

In proportion to the vast size and population of China, few independent NGOs operate in nature reserves. This dearth of autonomous NGOs stems from policies of the central government, which does not favor nonstate social organizations operating largely outside its normal locus and scrutiny. It remains extremely cautious if not apprehensive about the prospect of a sizeable number of international and especially domestic independent NGOs operating in remote PA areas. Meanwhile, the paramilitary paradigm, with its attendant features of simplicity and familiarity, remains popular among frontier PA managers.

#### **Government funding or self-reliance?**

Since the early 1980s, the central government has de facto given up its responsibility for allotting recurrent funding to nature reserves. Only a minority of nature reserves (13% in 1997) continue to receive recurrent funding from the national budget; most have national administrative rank and were established before the early 1980s. The rest, as prescribed in the Nature Reserve Ordinance, are the responsibility of provinces, prefectures, and counties (Figure 4). As most reserves are located in impoverished and mountainous areas, local governments are unable and reluctant to regularly channel resources from their scarce budgets to underwrite new PAs.

The financial predicament forces the central government into a strategy that is tantamount to playing with fire. The controversial approach urges reserve agencies



**FIGURE 4** The attraction of Huang Shan is likened to a honey-pot that draws a huge patronage of visitors from all over the country and beyond, the impacts of which have threatened the natural features, especially the fragile vegetation and soil cover, of the nature reserve. (Photo by C. Y. Jim)

to foster a self-financing capability (Table 1), commonly realized by directly promoting entrepreneurial activities or indirectly tapping natural resources within nature reserves. Central and local governments sometimes offer tax benefits and concessional loans to support these activities. As a result, at least 80% of the reserves agencies have engaged in some profit-oriented activities, with considerable damage to PAs. Although central authorities stipulate that commercial activities should be subordinate to protection, reserve managers seldom comply. The lack of clear guidelines on permissible commercial activity certainly does not help.

#### **Umpire or player in resource utilization?**

In China, local communities *de jure* hold a fair share of and in some cases all PA land. Tenure was unveiled by a survey of CMBC. For the 85 nature reserves sampled, 21 reserve agencies (25%) were not *de jure* landowners at all; 44 (52%) partly owned the protected territories, with the remaining lands partly owned by local communities. The remaining 20 nature reserves were owned *de jure* by reserve authorities but *de facto* by local communities or local governments.

This complex landholding situation renders the role of reserve agencies highly controversial in terms of self-financing strategies, for they act as both umpire and player. As umpires, they are expected to outlaw “illegal” exploitive activities carried out mainly by local people. Under the circumstances, they actually deal with (former) landowners who are in effect exercising

legitimate rights to their own possessions. But as players, they are expected to actively promote entrepreneurial activities on the same land and exploit the same natural resources, sometimes in competition with local people.

#### **Integrated or compartmentalized administration?**

The PA regimes of China subscribe to a paradoxical combination of both integrated and compartmentalized administration. Compartmentalized administration legitimizes the status quo of disbursed responsibility for nature reserve management among functional government agencies at the local and national levels. At the national level, at least 7 agents share administrative responsibility, depending on the natural attributes of reserves. Each agency has its own PA funding source and

**TABLE 1** The proportion of self-generated revenues accounting for the total expenditures in the 85 nature reserves of China. (Source: China Man and Biosphere Committee 2000)

R/E <sup>a</sup> (%)	National Rank Reserves		Reserves of All Ranks	
	Number	%	Number	%
<20	21	40.4	33	40.8
21–40	11	21.2	14	17.3
41–60	10	19.2	13	16
>60	10	19.2	21	25.9
Total	52	100	85	100

<sup>a</sup>R/E denotes the ratio between revenues and expenditures.



**FIGURE 5** The minority Yao people who live within and adjacent to the recently designated Shimentai Nature Reserve (Yingde, Guangdong) practice some arable cropping and supplement their livelihood by tapping natural resources from the adjacent forests. (Photo by Steve Xu, together with Yao villager)



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mandates, formulates its own development scheme, and directly administers some reserves. The dominant agencies are the State Forestry Administration (in charge of more than 70% of PAs in 1999) and the State Environmental Protection Agency (SEPA). At the local level, fragmented responsibility is further divided by a host of local functional agents.

In response to excessive administrative compartmentalization, the central government authorizes SEPA to harmonize the work of disparate agents. SEPA is expected to coordinate protection efforts and resolve jurisdictional disputes, especially when a nature reserve cuts across administrative boundaries or incorporates more than 1 natural attribute. Unfortunately, SEPA is beset by a conflict of interest. And as a second-rank (noncabinet) ministry, it is not adequately empowered to strengthen cross-sectoral protection efforts.

#### Conclusions and recommendations

The recent growth of PAs in China has been striking. Despite major designation efforts, PAs are still widely plagued by old and new management problems. Deficiencies are partly due to the myopic and sequestered mind-set of the central government, which is accustomed to seeking cures from a confined administrative perspective. More fundamentally, the central government is reluctant to recognize the deficiencies of PA management.

Without introducing institutional and constructive efforts to confront and resolve chronic problems, there is little possibility of turning “paper parks” into “parks par excellence” in China. To effect

such a change, systematic efforts by the central government need to be directed to the following:

- Giving a green light to the formation of a supportive network of indigenous environmental NGOs. The government acting alone cannot properly handle vexing people-park conflicts, despite good intentions and strong commitment.
- Adopting an IUCN PA classification system based on management objectives to supersede the present confusing scheme, which hybridizes natural attributes and administrative ranks. The major justification for reclassification is the pressing need to assess in detail the natural and socioeconomic conditions of existing reserves, using objective, stringent scientific methods. Reevaluation can help determine the primary conservation objectives and priorities in each reserve and more reliably estimate the nature and amount of management inputs.
- Setting up a new PA institution funded and staffed at the national level—a China Nature Reserves Service. The management of a small selection of key nature reserves of national or international significance could be assigned to this new body. The rest could remain the responsibility of local governments, with the possibility of receiving subsidies from the national budget.
- Adopting the participatory management paradigm by working closely with local communities, helping them to find livelihood alternatives, to serve as the clinching step to achieve the healthy “win-win” people-park synergy (Figure 5).