

Comparative Studies of Nature Conservation Areas in China and Japan

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Abstract Nature reserves and natural parks are important facilities for protecting natural resources and the environment, but there are obvious differences in status and management between China and Japan.

(1) Chinese nature reserves take nature conservation as their purpose, designating the rational utilization of natural resources with a view to protection. Japanese natural parks pay equal attention to nature conservation and tourism. China and Japan therefore differ in the way areas function for nature conservation and utilization. Chinese nature reserves have achieved obvious ecological results, but poor economic and social ones. Japanese natural parks and nature reserves have achieved notable results, but unfortunately a few natural parks are over-exploited and have serious environmental problems.

(2) The management of Chinese nature reserves is managed by many departments coordinated under the overall direction of the National Environment Protection Bureau. Japanese natural parks and nature reserves are managed cooperatively by the Environment Agency, Cultural Agency and Forest Agency. Chinese nature reserves are nearly independent social and economic entities, so the administration, scientific research, protection and diversified economy are all managed by the nature reserve itself, and the management is isolated or semi-isolated. In comparison, the administrative organization of natural parks and nature reserves in Japan is simpler.

(3) Both China and Japan pay much attention to the legal institution of nature reserves and natural parks. In Japan this has a long history and the legal system is more detailed. However, in China, the establishment of nature reserves is so recent that the laws and regulations for nature conservation are not yet complete. As to investment, Japan has taken various steps, but Chinese nature reserves depend mainly on an allocation from their department in charge, so the funds are very limited.

Though China and Japan have different national situations, Japan has accumulated abundant experience on establishment, management, ecotourism and legal instruction about nature conservation facilities, whereas China has its own particular features in bringing the ecological results of nature reserves into play, with its attention to scientific research and a rational carrying out of a diversified economy. Learning from each other will be good for nature conservation in both China and Japan.

Key words: comparative study, law and regulation, natural park, nature conservation area, nature reserve, scientific management

Introductory Remarks Related to Chinese Nature Reserves

China and Japan are neighbors, whose natural and cultural backgrounds are fairly similar. The aim of this article is to compare the form and function of nature conservation areas in the two countries. The nature conservation

areas include protected areas, nature reserves, wildlife sanctuaries, natural parks, national parks, quasi-national parks, etc. China and Japan have their own systems for establishment and management of nature reserves and natural parks. Studying these characteristics and learning useful experiences from each other will be good for the understanding of

nature conservation in both countries.

One of the co-authors, M. Numata, has had a close relationship with Chinese scientists and institutes (such as, Institute of Botany, Academia Sinica) for many years, such as participation in the Tibet Plateau Symposium at Beijing in 1980, the Environment Agency Mission in 1985 to the Forest Ministry at Beijing to borrow crested ibis (*Nipponia nippon*) for reproduction, participation in the international symposia, "Ecology of Development of Tropical and Subtropical Mountain Area" at Chengdu in 1985, "Mountain Vegetation" at Beijing in 1986, and "Conservation Phytoecology" at Beijing in 1989. After the 1986 symposium, Numata had an intensive lecture programme in ecology at Lanchou University. He also gave an intensive course in ecology and conservation at Northwest University at Xian, Fudan University and East China Normal University in Shanghai, in 1990. He participated in the IUCN Commission on National Parks and Protected Areas-East Asia (CNPPA-EA) at Beijing in 1993.

From 13 to 28 July 1992, a mission composed of Ma Naixi and three other members from the Chinese Nature Reserve Research Team of Northwest University visited Japan in response to the invitation by the Nature Conservation Society of Japan, Tokyo and Natural History Museum and Institute, Chiba. During their stay in Japan, the Chinese team visited the Nature Conservation Bureau of Environment Agency, and the National Park Association (the Director General, Dr. M. Ohwi kindly selected and introduced some useful natural parks to visit) as well as the Nature Conservation Society of Japan. They investigated national parks, such as Fuji-Hakone-Izu, San'in Kaigan, Daisen-Okii, Chubu-Sangaku, Sand Dunes of Tottori, Nikko National Parks and Akiyoshidai Quasi-national Park. At the same time they carried out academic discussion on nature conservation with Japanese scholars. These various activities provided opportunities for Japanese scientists to exchange their knowledge and ideas with Chinese scientists, giving a good foundation for comparative studies of nature conservation facilities between China and Japan.

Some of the materials in this paper were offered by Mr. Y. Mori, Environment Agency, Japan, and we are most grateful for his help.

Type and Function of Nature Reserves

Since the first nature reserve—the Mt. Dinghu Nature Reserve—was established in 1956, China had established more than 770 nature reserves by the end of May 1994. Their total area is 66.184 million ha and covers 6.8% of the whole national land area. Among them, 90 sites are national grade; 10 sites are biosphere reserves designated by MAB (Mt. Dinghu, Mt. Changbai, Mt. Fanjing, Mt. Wuyi, Wolong, Xilinguole, Shengnongjia, Bogda, Yancheng, Xishuangbanna); 6 sites have been recorded in the List of Wetlands of International Importance, Ramsar Convention (Zhalong, Xianghai, Niaodao, Lake Poyang, Lake Dongting, Dongzhaigang).

China now has more than 480 scenic spots among which 119 sites are of national grade. Five sites, including Mt. Huangshan, Mt. Taishan, Wulingyuan Plateau, Jiuzhai Ravine and the Huanglong Area, are listed as World Natural Heritage sites. Another five are recorded in the World Cultural Heritage, the Palace Museum, Great Wall, Zhoukoudian Relics of Peking Man, Tomb of Emperor Qinshihuang and Dunhuang Mogao Caves. In Japan there are also Biosphere Reserves, World Heritage sites, Protection Forests, Ramsar Wetland sites, etc.

The construction of Chinese forest parks has also been greatly developed recently. The first forest park was established in 1982 in Hunan Province. There are now more than 600 forest parks among which 200 sites belong to national grade. These forest parks are mostly reconstructed by national tree farms with tourist resources. Based on the present situation with the above-mentioned nature conservation facilities, the on-site conservation facilities in China are divided into four kinds based on Ma Naixi's idea (Fig. 1).

Protecting natural resources and the environment is the chief task of the nature reserve of China. On the premise of good conservation, natural resources can be exploited and utilized rationally. In general, a nature reserve is divided into three different functional areas: core, buffer and experimental (multipurpose).

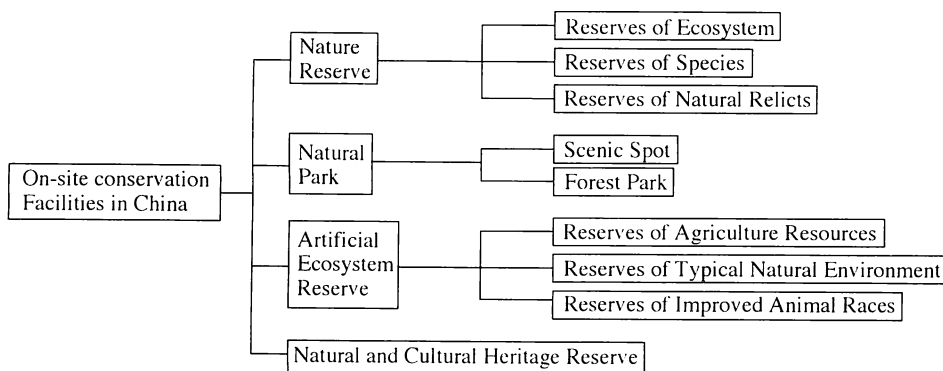


Fig. 1. On-site conservation facilities in China.

In the core area, the natural ecosystem is preserved well, and strict protection measures are adopted to avoid interference by human activities as far as possible in it. A buffer area is designated at the periphery of the core area. This is sometimes permitted for sustainable use of vegetation as before such as mushroom and bracken gathering. The experimental area encircles the buffer area. Scientific exploration and research, together with economic activities good for nature conservation, are permitted here.

As far as most nature reserves are concerned, ecotourism is the chief way to obtain a diversified economy. Ecotourism and nature conservation should be combined together in natural parks according to international standards. However, in China, the National Scenic Spot managed by the Construction Ministry and the National Forest Park managed by the Forestry Ministry do not have the unified plan and construction based on international standards (Oyadomari, 1994); a management system for National Parks has not yet been determined. All these matters await further research. There are many problems in the designation and administration of nature reserves.

The nature conservation movement in Japan was started at the end of the Meiji Era (1867–1911). The central idea of nature conservation was based on the idea of a natural monument proposed by A. von Humboldt (1807). However, some time after the Meiji Restoration there was almost no legal regulation for nature conservation. During this period many plants and animals became extinct. Since the end of

the Meiji Era, awareness about nature conservation has gradually increased.

Just after World War II, the International Union for Protection of Nature (IUPN) was organized (1948), and nine years later (1957), its name was changed to IUCN (International Union for the Conservation of Nature and Natural Resources). However, the Nature Conservation Society of Japan (NACS-J) was established in relation to a wetland conservation movement for the Ozegahara Moor against a hydroelectric power development project by an electric power company. The NACS-J also requested the Government to develop and implement environmental (nature conservation) education in schools in 1957. The Ecological Society of Japan proposed the designation of “Ten Protected Primeval Forests”, some of which were in fact designated by the Environmental Agency and Forestry Agency. On the other hand, the Science Council of Japan as a governmental organization sent a recommendation for nature conservation to the Prime Minister in 1965 along with a request to protect the “Ten primeval forests” nominated by the Ecological Society of Japan (1959). The Science Council of Japan also sent a recommendation for a Nature Conservation Law to the Prime Minister in 1971. In the same year, the Environment Agency was established following the Environmental Protection Agency (EPA) in the USA in 1970, and the Nature Conservation Law was enacted in 1972 in response to the Science Council’s recommendation (1971). Under this law, five wilderness areas and ten nature conservation areas were

designated.

The protected areas/nature reserves in Japan are:

- 1) Special Protection Areas and Special Areas in a National Park (EA=Environment Agency)
- 2) Wilderness Areas (EA)
- 3) Nature Conservation Areas (EA)
- 4) Natural Monuments (CA=Cultural Agency)
- 5) Protection Forests (FA=Forestry Agency)
- 6) Forest Ecosystem Conservation Areas (FA)
- 7) Biosphere Reserves (MAB/UNESCO)
- 8) Natural Heritage Areas (World Heritage Convention)

There are four biosphere reserves designated by the National Commission of UNESCO. These are parts of National Parks and do not actually function as biosphere reserves. These four (Yaku, Hakusan, Omine-Odai, Shiga) are not representatives of Japanese nature. The National Park in Japan has two functions, conservation and utilization for recreation, but the biosphere reserve is only for conservation including research, monitoring and education. At any rate, the biosphere reserve of MAB is legally weak, but the World Cultural and Natural Heritage Convention strengthens the function of biosphere reserves. However, Japanese Government hesitated to ratify it for 20 years.

The zoning of national parks in Japan is based mainly on a balance with forestry, because almost all the land of the national parks belongs to national forest of the Forest Agency. Even in the Special Areas (1 above), forestry is legally permitted to some extent. Numata's idea is that the buffer zone is an extension of the core area with an almost similar quality. However, nature study, monitoring and research are permitted there.

A sound basis for the ecological zoning of protected areas may be similar to the biosphere reserve proposed by MAB. The core area and buffer zone, including the cultural (multiple use) zone, are the most important as a protected area. Recently the Forestry Agency of Japan adopted the concept of biosphere reserve for the Forest Ecosystem Conservation Areas (6 above). On the other hand, Protection Forests, Special Protection Areas of the National Parks, and the Wilderness Areas designated so

far consist only of a core, there being no buffer. The Forestry Agency abolished an old notification on Protection Forests (1915), and a new notification (1989) on Forest Ecosystem Conservation Areas etc. including the core area and buffer zones has been adopted following the guideline of the biosphere reserve.

In Natural Parks of Japan there are first-, second- and third-class special areas surrounding the special protection area. These special areas have a similar spatial relationship as the buffer zone to the core area. However, a large part of the park area belongs to the national forest (under the Forest Agency). Therefore, even in a special area, a balance between nature conservation and agriculture, forestry and fisheries is maintained. In a first-class special area, cutting of up to 10% of the growing stock of trees is permitted by the "single tree selective cutting system". In a second class special area, selective cutting of up to 30% of the growing stock and clear-cutting of areas less than 2 ha are permitted. In the third class special area, there is no restriction on cutting. In addition, a part of the National Park is in private ownership, and have the private utilization of hotels, etc. cannot be prohibited.

The Forest Ecosystem Conservation Area mentioned above will have a core area and buffer zone which do not exist in the National Park in the real sense. The Forestry Agency is the owner of national forests, and so it makes its own decisions as to how to apply the MAB biosphere approach.

Japan has a large quantity of natural parks—about 384—covering 14.10% of the total land area (Table 1). However different parks may differ markedly in their characteristics. For example, even though Mt. Fuji, Mt. Chubu Sangaku, Mt. Daisen and Nikko are all National parks and have volcanic scenery, they are all very different.

Most natural parks have facilities for conservation, education and ecotourism, etc. The main task of the conservation of mountainous natural scenery is to protect forest vegetation. Because of the need for timber, Japan imports a great deal of wood from foreign countries. Forests used to cover almost 70% of Japanese land, so there are green wooded mountains and

Table 1. Natural parks in Japan (1996).

Categorization	Quantity	Area (ha)	Ratio to total land Area (%)*
National Park	28**	2,051,190	5.43
Quasi-national Park	55**	1,332,370	3.53
Prefectural Natural Park	301	1,943,046	5.14
Total	384	5,326,606	14.10

*The total land area is 37,772,737 ha. **There are 58 Marine Parks, located in 10 National Parks and 13 Quasi-national Parks.

clear waters everywhere, especially in natural parks famous for their natural scenic beauty. In order to prevent mountain calamities and to give security to tourists, the government has spent heavily, especially in providing small refuges in areas where disasters have often taken place.

Management System and Function of Nature Reserves

The management system of Chinese nature reserves is coordinated by many ministerial departments under the unified administration, supervision and coordination of the National Environment Protection Bureau. The ministerial departments responsible for nature reserves in China include the National Environment Protection Bureau, Forestry Ministry, Agriculture Ministry, National Ocean Management Bureau, Geology and Minerals Ministry, Chinese Academy of Science and all levels of local government. It is well known that the Forestry Ministry is in charge of forest and wildlife sanctuary and forest parks. It has supervised more than 500 nature reserves with a total area of 50.59 million ha and covering 5.27% of the whole national territory. The Agriculture Ministry is responsible for grassland and aquatic wildlife nature reserves and has established 12 grassland and 10 aquatic wildlife nature reserves. The National Ocean Management Bureau is in charge of marine nature reserves and has established more than 10 sites such as the Changli Golden Seashore, Dazhou Island and Shankou. The Geology and Minerals Ministry is in charge of natural relics reserves and has established more than 10 sites such as Fengmen, Daluo and Liuqing reserves. The Chinese Academy of Science only supervises the Mt. Dinghu nature reserve. The

nature reserves managed by the environment protection service have more types: for wildlife, such as the Wild Camel nature reserve in Xinjiang; for desert ecosystems, such as Mt. Aljin; for wetlands, such as Yancheng; on oceanic one, such as Snake Island; for natural relics, such as Jixian Geologic Section; for desert/grassland, such as Anxi; for model plots to harness deserts, such as Shapotou. There are also more than 100 sites managed by local government at various different levels, including complex sites. For example, Wudalianchi nature reserve is managed by Heilongjiang province, Dongdao nature reserve by Hainan and Dongping River nature reserve by Foshan municipal government. The scenic spots of China are managed by the Construction Organization. Some nature reserves are also scenic spots such as Jiuzhai Ravine and Jinyunshan; similarly, some forest parks are also scenic spots, such as Zhangjiajie in Hunan. Those overlapping roles show that an independent management system for national parks has not yet been established in China. The formation of a management system is concerned with two aspects: the division of functions and powers for each department and the tradition of the nature reserve of China. For example, the Forestry Ministry is in charge of the nature reserves for forest and wildlife, a wide area with a long history. This is mainly because most nature reserves in China were initially to protect natural primeval forests.

This management system has some virtues:

Firstly, it can stimulate each department to take part in the protection of natural resources and the environment, especially in a situation where funds are short. Money collected from different departments is used for the construction of nature reserves. Secondly, the nature

reserves are managed by their respective departments, so all management is within the same framework. However, this kind of management system also has shortcomings: it leads to a lack of unified criteria for management regulations over the whole country, which affects the rational spatial distribution and the overall beneficial results in all kinds of different departments of science and technology, information exchange and the training of manpower; it also easily forms the network of nature reserves in the whole country in a separated situation of different department. Although it is impossible for the nature reserves of China to be managed by one department immediately, plans should be made to realize this transformation.

Management of Chinese nature reserves is always divided into national and local levels. For example, in the case of the nature reserves of the Forestry Ministry, the national nature reserves are managed cooperatively by the Forestry Ministry and the forestry agency of the province (or autonomous region), the local level nature reserves are managed separately by the provincial (or autonomous region's) forestry agency and forestry department at the country level. Most Chinese nature reserves are nearly independent economic entities. The problems in nature reserves are chiefly resolved by the management organization of the reserves. The national and provincial nature reserves always set up the management or office and the protection station under this. There is a staff about 50 to 100 in each

management department. The nature reserves at the country level, however, only set up a management station, with no more than about 30 staff. The management of other departments is similar to the Forestry Ministry. With a particular province (or autonomous region) the different nature reserves are therefore managed by different ministerial departments.

According to Ma Naixi's idea, Chinese nature reserves have diverse types, different levels, scales and management patterns, but as far as the fundamental function of management is concerned, the management system of nature reserves can generally be divided into four management sub-systems: administration, scientific research management, resource and environment management, and management sub-systems (Fig. 2). Chinese scenic spots and forest parks are also classified into two categories: the national level and the local level. However, most are managed by local related departments.

Japanese nature conservation facilities are also managed in categories by different departments such as the Environment Agency, Forestry Agency, Cultural Agency, etc. Each department administers its own nature reserves and natural parks according to the regulations enacted by the Government. Local participation is an important condition for the construction and management of nature conservation facilities. Social organizations such as the Nature Conservation Society of Japan (NACS-J) do much work in nature conservation, and their activities lead to a positive effect on

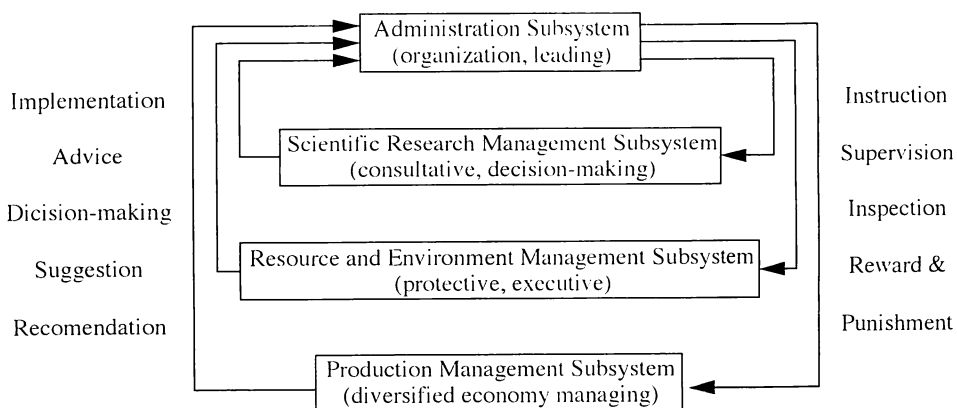


Fig. 2. Scientific management system of nature reserves in China.

nature conservation.

The main tasks of the Nature Conservation Society are:

- (1) Researching problems of Japanese nature conservation, providing proposal and opinion for governmental decision-making and giving service to the development of nature conservation.
- (2) Organization and participating in investigation in some key regions of Japan including important vegetation and wildlife, guiding and taking part in the planning and designing of natural parks and nature reserves.
- (3) Taking part in international nature conservation activities, academic exchanges and scientific investigations.
- (4) Editing and publishing nature conservation issues, works and spreading other materials, and promoting the development of nature conservation education.

Resource Utilization

The lands in China belong to the country, so the main problems in nature reserves are as follows:

1. Problems about the right of land utilization and the ownership of partial natural resources

In many nature reserves, before their establishment there are many local inhabitants and also buildings and facilities related to tourism, construction, historical relics, religion, and transportation. Therefore, after the establishment of nature reserves, various contradictions concerning land utilization inevitably take place with the local government, local inhabitants, religious interests, and the departments related to the activities mentioned above. Moreover, problems about the ownership of forest resources are obvious in some nature reserves. There are three forms of forest ownership in China: national, public (or collective) and private, as in Japan. The ecological environment of the nature reserves suffers from great damage because both public and private forests are often felled improperly. Though some nature reserves have a history of more than several decades, the problems of ownership have not been solved completely. According to the related national laws and regula-

tions, the local government coordinates and solves problems about the rights of land utilization, forest and resources in the nature reserves. The productive activities of local inhabitants can only be carried out in a multipurpose area. Through the publicity about the importance of establishing nature reserves, people will realize that every citizen has an obligation and responsibility to conserve natural resources and the environment.

2. Production and living problems of local inhabitants

After the establishment of nature reserves, some of the traditional productive ways should be changed. Activities such as hunting, felling, collecting and reclaiming should be strictly limited. The inhabitants of a core area must sometimes move to another place. The main measures adopted for nature reserves are:

- 1) In order not to destroy natural resources and the environment, some traditional productive and living patterns are changed, and the coordinated development of the natural ecosystem and social activities are maintained.

- 2) The land is utilized rationally and a diversified economy is carried out.

- 3) To spread modern knowledge of science and technology; to improve the benefits of economy and ecology.

- 4) To recruit the local educated youth into participating in the management of nature reserves.

- 5) To subsidize or raise funds to build public facilities such as small hydropower stations, bridges, roads, etc.; to improve the local productive and living conditions gradually.

In brief, the construction of a nature reserve should improve the welfare of the local people. Work on this aspect is at present insufficient in China.

3. Special policies for the nature reserve

Most of the nature reserves in China are located in remote regions with inconvenient transportation, an undeveloped economy and poor working and living conditions. Some favorable policies are being adopted by related departments to guarantee the proper development of nature conservation work. For example, the nature reserves of the Forestry Ministry always build their management organiza-

tion and housing in nearby towns.

Similar to the Chinese nature reserves, the Japanese natural parks also have a series of contradictions. For example, Japan has 28 National Parks, with a total area of 2.05 million ha: 61.6% are national lands, 13.8% public, 24% private and 0.6% unknown. There are some difficulties in managing the private and public lands. Japan imports a large amount of timber each year, and fells and renews the national forest in a planned way to protect the forest and natural environment, so the percentage of forest cover of Japan is maintained at 68%, some 6% of the total forest area of the world. Japan has better laws, a higher average living standard, a good social habit of loving and protecting nature, and various facilities for education and recreation. However incidents that damage nature in natural parks sometimes happen.

Legal Institution and Investment

Loving and protecting nature is a traditional virtue of human beings. The simple idea of nature conservation came into being some 4000 years ago with Chinese dynasties issuing decrees on nature protection. It is much later that modern nature conservation appears in China. China established its first group of nature reserves in 1956. The construction of nature reserves has now achieved a more stable development and the legal institution of nature reserves is also taken more and more seriously. The laws and regulations of Chinese nature reserve are categorized into two kinds: Basic Laws and Related Laws. The Basic Laws are as:

(1) The Draft of Forestry Ministry about the Designation of Natural Felling-forbidden Area (Nature Reserve, 1956).

This paper is based on a bill "The Proposal on Designation of the Natural Forest Felling-forbidden Area and Reservation of Natural Vegetation for the Purpose of Scientific Research in Each Province (or Autonomous Region)". This is the first important regulation about the construction of nature reserves in China. Then, the history of the construction of Chinese nature reserves begins.

(2) The instruction of the State Council to Pro-

tect Positively and Utilize Rationally the Resources of Wild Animals (1962).

(3) The Notice of the Agriculture Ministry to Protect, Develop and Utilize Rationally Precious Trees (1975).

This Last Lists the regulations dealing the first and second grades of precious trees, the first having 14 species and the second having 11 species.

(4) The Notice to Strengthen the Management, Designation and Scientific Exploration of the Chinese Nature Reserves by Forestry Ministry, Chinese Academy of Science, National Science Committee, National Agriculture Committee, Leading Group of Environmental Protection, Agriculture Ministry, National Aquatic Total Bureau, and Geology Ministry (1979).

(5) The Management of Nature Reserves of Forests and Wild Animals (the State Council, and Forestry Ministry, 1985).

(6) List of Rare and Perishing Plants Under Protection.

The book "A Red Book of Chinese Plants—Rare and Endangered Plants" (1st Volume) was published in 1992 and lists 388 species. The number of near-extinct species is 121, rare 110 and endangered 157.

(7) Law for the Protection of Wild Animals (1988).

This is the first law about the protection of wild animals in China.

(8) List of Wild Animals Specially Protected by the State (1988).

This list includes 257 species of wild animals: 96 species are first-level protected, 161 are second level.

(9) Enforced Regulations for the Protection of Terrestrial Wild Animals (State Council, 1992).

(10) Regulation for Nature Reserves (State Council, 1994).

There are more related laws and regulations about the nature conservation such as the Constitution of the People's Republic of China, Chinese Programme Law, Water and Soil Conservation Law, Marine Environment Protection Law, Land Management Law, Water Law and the Provisional Regulations of the Management of Scenic Spots.

There are still three key problems in the legal organization in China: 1) The related laws

and regulations are not complete and perfect; a more complete law system from the Center to the Local has not come into being. 2) There are still phenomena such as not complying with the law, not enforcing the law strictly, and not investigating laws that are broken. 3) People's awareness of nature conservation and legal ideas is poor. Cases of stealing forest trees and capturing and killing rare and near-extinct animals happen in nature reserves even now.

Japan has such a system of laws on nature conservation with strict management that these natural parks not only protect the natural environment and resources, but also provide many good resorts for tourists. In 1931, the government established the National Park Law, revised in 1957 and turned into today's Natural Park Law. In 1971 the Environment Agency was established, and in 1972 the Natural Environment Conservation Law was issued. Shortly after that, the government presented new laws or revised a series of laws one by one such as the Forest Act, the Hot Spring Act, the Shore Act and the Soil Act.

Regarding natural monuments as a basis for nature conservation, a Law for Preserving Scenery and Historic and Natural Monuments was promulgated in 1918, and it was included in the Law for the Protection of Cultural Properties in 1950. Nature and culture are philosophically opposed concepts, but in the Law of 1950, nature is included in culture. This is logically wrong.

Just as the IUCN lists extinct, endangered, vulnerable and rare species, the Nature Conservation Society of Japan and Worldwide Fund for Nature (WWF)-Japan published "the Red Data Book for Plants" in 1989, and they are now preparing to publish "the Red Data Book for Plant Communities". In relation to this, the Law for Regulation of Conveyance in Endangered Species of Wild Fauna and Flora was enacted in 1988. Its prototype is CITES (Washington Convention).

Widespread participation of the people is very important to achieve these aims. An impressive example is the establishment of the "Nature Conservation Chapter" in 1974. Its first resolution was decided at the 8th General Assembly of National Parks in 1966. After that

the Secretarial office was made at the Nature Conservation Society of Japan, and discussion meetings were held many times with 141 NGOs. The People's Conference to establish the Nature Conservation Chapter was held as the will of the people, with the attendance of the Crown Prince and Princess (now the Emperor and Empress). There the co-existence of man and nature is stressed; there is no subordination of nature to man; if nature is destroyed, its restoration requires a very long time.

The funds for the construction and management of nature reserves by the state are at present limited in China. Recently, the relevant departments have gradually started to increase their investment and to encourage the nature reserves to adopt good conditions to utilize rationally their natural resources and to improve gradually their self-sufficiency in order to achieve the ecological, social and economic status of nature reserves. In Japan; the National Trust Movement, an NGO, has recently been set up to buy and designate land, old houses etc.

Japan invests huge funds in natural parks and nature reserves. Besides the funds invested by the Environment Agency, Cultural Agency and Forestry Agency, local government and related financial groups also invest. All these Funds are important for guaranteeing the rapid development of nature conservation in Japan.

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中国と日本における自然保護地域の比較研究

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自然保護地域も自然公園も、自然環境や資源を守るために重要である。しかし中国と日本とでは、これらの参与や管理の面で同じではない。主な特徴は以下のとおりである。

1) 中国の自然保護地域は自然資源の合理的利用と自然保護のため指定された地域である。日本の自然公園も同様に自然保護とツーリズムのために指定されている。したがって、中国と日本では、保護と利用に関して個々の形態や機能には違いがある。中国の自然保護地域は明らかに生態学的効果をうんでいるが、経済的社会的効果は明確でない。日本の自然公園と自然保護地域は、指定の結果いい結果をうんでいるが、いくつかの自然公園では過剰利用による環境問題が生じている。

2) 中国の自然保護地域は国家環境保護庁の巨視的かつ統一的な指導のもとに、多くの政府機関による調整的な管理がなされている。日本の自然公園や自然保護地域は、環境庁、文化庁、林野庁による協力的な管理がなされている。中国の自然保護地域は、社会的、経済的に独立しており、したがって、科学的研究、保護と経済効果も、すべて自然保護地域が個々にすすめており、管理も独立あるいは半独立に行われている。日本では管理システムが比較的に単純であるといえる。

3) 中国と日本はともに、自然公園と自然保護地域の法制化に力をいれている。日本はその点、詳細な法制化に長い歴史をもっている。しかし中国では、自然保護地域の指定がおそく、自然保護の法制化も完全ではない。投資については、日本ではいろいろのステップをとっているが、中国ではいくつかの政府機関が関係し、財源も限定されている。

中国と日本は国家として異なった状態にあるが、日本では自然保護地域の指定・管理、エコツーリズム、法制化について多くの経験をつんできた。中国は、自然保護地域の生態学的効果を高めるため、独自の特色をもたせるようにし、科学的研究に注意を払い、経済効果についても合理的に検討してきた。中国と日本では、以上多くの点について学びあうことによって、自然保護を大いに推進することが可能となるであろう。

(Accepted on 28 November 1995)