

## Comparison of Conservation Systems for the Alpine Ecosystem in Chubu Sangaku National Park, Japan and Swiss National Park, Switzerland

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**Summary.** The Chubu Sangaku National Park is one of the most important mountainous national parks in the temperate region of Japan. This park covers a series of mountains with altitudes over 3000 meters above sea level and is an excellent representation of Japan's alpine forest ecosystem. However, with the rising popularity of outdoor activities in recent years, the national park faces anthropogenic disturbances due to the large number of tourists and increasing activities resulting in the exploitation of its natural resources. Therefore, the need for policy change that targets environmental protection has become extremely important.

The management system and approach to conservation of the Swiss National Park were examined and compared to that of the Japanese National Park. The Swiss National Park is known for its strict regulations formulated under the conservation concept, through which the entire flora and fauna are protected from any human interference to exist and develop under natural circumstances.

From our investigation of the Swiss National Park, several conclusions were drawn. First, it was apparent that the high number of park visitors was a threat to the natural resources. Although several regulations were laid down and enforced, further countermeasures were necessary; i.e., decentralizing park visitors and imposing stricter regulations. Second, the present park management system needs a more sophisticated approach in order to minimize discrepancies in planning and management by different official bodies in the park area. Third, in order to bring about sustainable development of the park region, it is essential to establish a legal decision-making process involving local residents as well as NGOs in the park planning process.

**Key word:** Swiss National Park, Chubu Sangaku National Park, nature conservation, legislation system, park management

### Introduction

Since the establishment of a national park system in 1934, Japan's national parks have served as recreational areas for public as well as nature conservation areas for vulnerable ecosystems. As of March 31, 2003, a total of 28 national parks have been designated as "areas of the greatest natural scenic beauty" under the Natural Parks Law. They cover a total area of 20,580.95km<sup>2</sup>,

which amounts to 5.4% of the total land area of Japan and receives more than 400 million visitors annually (National Park Division, 2002). Historically, Japan's national parks have developed along unique lines, although the American system was assumed when national parks were first established in 1934 (Nakadai, 2001). The parks were expected to reflect typical Japanese landscape in order to attract foreign tourists and serve recreational purposes rather than ensure the protection of natural ecosystems (Anezaki, 1905; Iijima, 1948; Wakimizu, 1929). Since environmental protection has become a significant political

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issue, Japan's national parks have been strictly required to preserve natural ecosystems against serious anthropogenic disturbances. To adapt to the current situation, the previous Natural Parks Law was revised in 2002 and the current law came into force in April 2003. In spite of this, many disturbances continue to occur because of intensive park use and excessive exploitation of natural resources.

As outdoor activities have become increasingly popular in Japan in recent years, the Chubu Sangaku National Park, one of the major natural reservoirs in the alpine area, has been extremely exposed to intensive use. This park includes the habitat for many rare alpine plants and wild animals that are in danger of extinction. For instance, the colony of Japanese stone pine (*Pinus pumila* Regel) is an important ecological resource as it functions as the breeding ground for rock ptarmigans (*Lagopus mutus japonicus* Clark) in the alpine area (NACRI, 2001). However, after the construction of an alpine road, significant changes in the growth patterns of Japanese stone pine have been reported in one part of the park (Ida and Ozeki, 2000; Central Japan Bar Association, 2004). This change consequently affects the population growth of rock ptarmigans, which are a protected species (Central Japan Bar Association, 2004).

The aim of this study is to identify critical factors from the Chubu Sangaku National Park management system by comparing it to the management system of the Swiss National Park (SNP). The SNP is a well-known park in the European Alps, which imposes strict regulations on the land use as well as park visitors.

### Methods

A field investigation was carried out in the SNP at the end of June 2004. The investigation was primarily a hearing survey of the national park director on the park's legal system and the management schemes for its ecosystem conservation. In addition, the actual situation of the park management was examined with a national park

ranger. The present status of Japan's legal system as well as the management schemes of the Chubu Sangaku National Park was surveyed through literature.

### Results

#### Swiss National Park (SNP), Switzerland

The SNP is located in the alpine area in canton Graubünden, in the southeastern part of Switzerland (46°40'00"N, 10°07'00"E), within the altitudinal range of 1400 and 3174 meters above sea level. The park area is publicly owned land and belongs to five local municipalities: Zernez 66.5%, S-chanf 13.5%, Scuol 13.2%, Valchava 4.7%, and Lavin 2.1%, respectively. The total park area is 17,240 hectares and as of 2004, approximately 150,000 visitors visit the park annually from June to the end of October. There is no admittance to the park during winter, but during the high season, there is no limit to the number of park visitors.

The SNP is the largest protected area in Switzerland and is the country's only national park. The entire area of the SNP has been designated by the International Union for the Conservation of Nature (IUCN) as a Category I, Nature Reserve (highest protection level - strict Nature Preserve/Wilderness Area) (Kopainsky et al., 2001). This was the first national park in the Alps of central Europe and was founded in 1914 (Central Japan Bar Association, 2004). Historically, heavy forest exploitation in the region of the national park during the 19<sup>th</sup> century radically altered the landscape (Central Japan Bar Association, 2004). The park has consequently served only for natural conservation, research and information for the public. As a result, the SNP became a well-known national park that imposes strict regulations.

The federal law governing the national park (National Park Law) was laid down in 1980 (Nationalparkgesetz, 1980), and they clearly defined the purpose of the park's existence. According to the Law, the SNP is a reserve in which the entire fauna and flora are protected

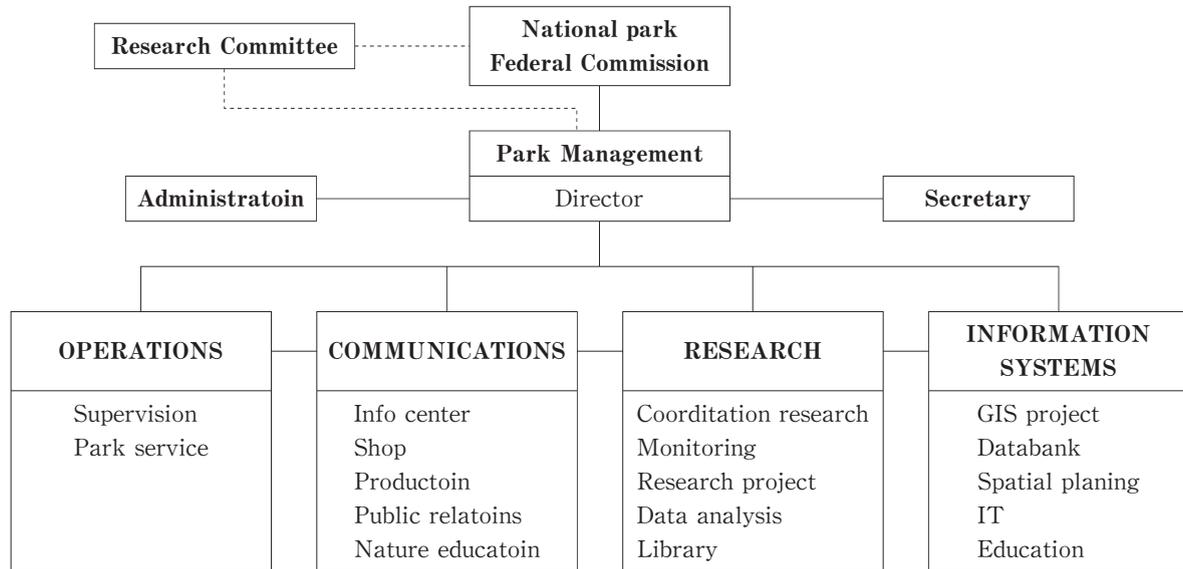
from any human interference and are left to their natural development except for research purposes (Nationalparkordnung, 1983). Hence, agriculture, forestry, hunting and other activities are strictly prohibited in the park. Since all nature and ecological processes are completely protected from human activity, the concept, so-called “protection of processes” also involves any case of natural disaster. For instance, forest fires are treated as part of the forest ecosystem regardless of whether they are human or nature induced. All forest fires are not necessarily extinguished within the borders of the park and only handled when fires are situated in areas that threaten human settlements or third parties (Allgöwer et al., 1997). The National Park Law provides the framework for the conservation of the national park. The detailed regulations covering the aims of conservation, paths, prohibitions and penalties are laid down within the cantonal ordinance (Table 1).

The SNP is a foundation under public law (ENPK, 2002). The park is managed by a founding board, called National Park Federal Commission (NPFC), and an operational service (Fig. 1). The SNP has a very clear purpose for the environmental protection outlined by National Park Law. The management schemes and structures are orientated along this purpose. The distinctive features of the SNP are its operational services that are focused on research activities and information systems. The management schemes, such

as the route paths and the monitoring systems in the park, are carefully planned using Geographic Information System (GIS). The NPFC deals with all administrative and legal duties concerning contracts with land-leasing municipalities. After the designation of the SNP, the national park foundation has been leasing the entire area except for a small section that it has purchased. The NPFC also tries to designate a buffer zone around the park. However, the local people deny including their lands in the buffer zone, as they feel that park regulations will be imposed on their land. (Personal communications with the park director). The members of the founding board are elected by the government. There are nine members with representatives from the following organizations: Swiss Confederation (2 members), canton Graubünden (1 member), park municipalities (1 member), NGO (Pro Natura; 3 members) and the Swiss Academy of Sciences (2 members). There is also a subsidiary research committee consisting of scientists and experts (Forschungskommission des Schweizerischer Nationalpark). The local people do not officially participate in the park management. However, there are opportunities for them to discuss the park’s management with the park staff (personal communication with the park director). The Founding Board makes decisions about the strategic park plan, and the operational service carries out the management of the park.

**Table 1.** List of regulations to park visitors in the Swiss National Park (Nationalparkordnung, 1983)

| Category                      | Details of prohibitions  |
|-------------------------------|--|
| Routes and Trails             | Do not leave the marked trails   |
| Young and group park visitors | No unaccompanied children under the age of 15<br>No young groups without responsible person or guide<br>Groups more than 20 persons need registration  |
| Hunting and fisheries         | No hunting and fishing   |
| Others                        | No fire<br>No overnight stays, not even in the parking areas<br>No logging and pasturing<br>No litter left<br>No dogs, not even on a lead<br>No winter sports, nor cycling<br>Do not remove anything (plants, mushrooms, berries, animals, insects)<br>No commercial filming |



**Figure 1.** The structure of the organization and the responsibilities of divisions in the Swiss National Park (ENPK, 2002). The research committee supervises research workers in the park and provides advise to the park management (break line).

#### Chubu Sangaku National Park, Japan

The Chubu Sangaku National Park was designated in 1934 and classified by IUCN as a category II protected area (National Park), which is managed mainly for the conservation of ecosystems and recreational use (Hayes and Egli, 2002). The Chubu Sangaku National park is located in the Japanese Alps (36°18'00"N, 137°40'00"E) in the temperate climatic zone. It represents Japan's alpine forest ecosystems, comprising a series of mountains with altitudes over 3000 meters above sea level. The total area is 174,323 hectares across four prefectures: Toyama (43.9%), Nagano (37.6%), Gifu (13.9%), and Niigata (4.6%) (1999). The Chubu Sangaku National Park, a major national park in the mountainous area of Japan, receives more than 10 million visitors annually (Environmental Policy Bureau, 2003). The most attractive sightseeing spot in this park is the Kamikouchi, which has an area of 80.2 hectares. In 2003 alone, about 1,925,000 people visited this particular spot (Regional environment office, 2003). According to the Ministry of the Environment (1999), the land ownership of the park area has been divided into nationally owned land (89%), publicly owned land (3%) and private land (8%). For the nationally owned land, major areas are covered with

national forests that belong to the Forestry Agency in the Ministry of Agriculture, Forestry and Fisheries of Japan.

Since mountainous area is widespread across the country and productive area is topographically very limited due to the high population density in Japan, land use patterns are extremely complex with small land ownership patterns. In order to regulate land use patterns, the then Cabinet adopted a zoning system, which allows the government to designate areas as national parks, irrespective of land ownership without renting or purchasing land. The national park therefore contains a wide range of land types from wilderness to developed areas, including local communities and tourist sites. Agriculture, forestry and tourism industries are also undertaken within the park. These zoning systems are known as a regulatory plan for conservation purposes (Komoda et al., 2000). In general, a national park is classified into various zones according to management purposes. The proportion of the land use classification in the Chubu Sangaku National Park is summarized in Table 2. The location of park facilities, roads and trails is carefully planned by the zoning system. Areas of land are classified into Special Protection Zones, Class I, Class II and Class III, Special Zones and Ordinary

Zones according to natural conditions and the utilization patterns of the park. The Special Protection Zones are the most strictly protected from human activities, whereas in the Ordinary Zones the nominal construction of huts, paths, and visitor centers are allowed. According to the classification, 56.3 % (98,076 hectares) of the Chubu Sangaku National Park is covered by Special Protection Zones and Class I zones.

Regulations over the land use in national parks are provided in the Natural Parks Law to ensure the conservation of natural environment (Natural Parks Law, 2002). The previous Natural Parks Law was revised in April 2002 and the new law governs currently 28 national parks and 55 quasi-national parks designated by the central govern-

ment and 308 natural parks managed by prefectures (Central Japan Bar Association, 2004). The Law aims to conserve prime scenic areas and their ecosystems; promote their utilization; utilisation and contribute to the health, recreation and environmental education of the people (Natural Parks Law, 2002). No legal prohibitions but regulations are laid down differently according to the zoning classifications in the park (Table 2).

To carry out any regulated activities in the designated zones, the permission by the Minister of the Environment of Japan is required. In the revised Natural Parks Law, further regulations on land use can also be laid down by designating "land use adjustment zones" with the permission of the Minister of the Environment of Japan

**Table 2.** The fraction of zoning types in the Chubu Sangaku National Park (Nature Conservation Bureau, 2003) and the type of regulations according to the zones (Natural Park Law, 2002). Zoning classification of Japan's systems determined by the characteristics of the landscape and level of protection needed.

| Zoning Classification    | Proportion of area<br>(as of July 1999) | Description   | Type of regulations                    |
|--------------------------|---|---|--|
| Special Protection Zones | 36.8 %<br>(64,129 ha)                   | Core areas maintaining the greatest landscapes of particular significance and original status   | 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 |
| Class I Special Zones    | 19.5 %<br>(33,947 ha)                   | Zones with great landscapes next to Special Protection Zones, which require the most protection for landscapes and scenic beauty among special zones  | 1,2,3,4,5,6,7,8,9,10,11,12,13,14       |
| Class II Special Zones   | 22.8 %<br>(39,776 ha)                   | Zones requiring coordination with the activities of agriculture, forestry and fisheries   |  |
| Class III Special Zones  | 7.8 %<br>(13,642 ha)                    | Zones where the maintenance of the scenic beauty is less necessary and ordinary activities of agriculture, forestry and fisheries are expected to be less influential on the landscape maintenance. |  |
| Ordinary Zones           | 13.1 %<br>(22,829 ha)                   | Zones other than special zones, for scenery protection.   | 1,3,4,6,8,9                            |

- |   |  |
|---|--|
| 1 Building new construction, modification and renovation of constructions   | 9 Cultivation and changing land form   |
| 2 Tree logging (include bamboo) and planting  | 10 Plant collecting and damaging   |
| 3 Mining (minerals, soils, rocks)   | 11 Hunting wild animals and collecting insects                                       |
| 4 Activities affecting water level of rivers and lakes  | 12 Modifying colours of roofs, walls, fences and other constructions                 |
| 5 Sewage discharge to the designated watershed areas around lakes and wetlands (within 1 km) by the Minister of the Environment | 13 Entry of the area within the period designated by the Minister of the Environment |
| 6 Advertisement   | 14 Use of vehicles, horses and motor boats and landing aircrafts                     |
| 7 Storage of materials (soil, stones and others)  | 15 Grazing   |
| 8 Land reclamation  | 16 Bonfire   |

(Kato, 2004).

Under the zoning system and the Natural Parks Law, the management plan for the Chubu Sangaku National Park is prepared at a regional office of the Ministry of the Environment of Japan. The management plan takes into special consideration matters concerning the management of landscape and ecosystems, regional development, education and improving regional beauty and scenery (Komoda et al., 2004). The park service of the Chubu Sangaku National Park has established several councils to regulate the access of vehicles to the sightseeing spots. These councils are composed of the members from regional offices of related ministries, prefectures, local municipalities and other local bodies such as a tourism association and local companies (Central Japan Bar Association, 2004). Local citizens or civilian groups (NPO, NGO) are currently not involved in the councils. Currently, involvement of local citizens and NGOs in the park planning system does not exist (Central Japan Bar Association, 2004). The park plan has been determined by several authorities: the Ministry of the Environment of Japan, authorities of prefecture, the related local bodies such as tourism association and forestry group (Central Japan Bar Association, 2004). Usually citizens and NGOs merely advise on park planning and management informally (Nature Park Subcommittee, 2004).

### Discussion

The SNP accounts for only one-tenth of total area of the Chubu Sangaku National Park. The Chubu Sangaku National Park receives more than 10 million visitors annually, while only about 150,000 visitors visit the SNP annually. The estimation of the density of annual park visitors illustrates the difference between the two national parks explicitly: the densities of annual park visitor (persons per hectare) in the Chubu Sangaku National Park and in the SNP were 57.4 and 8.7, respectively.

In the SNP, the density does not necessarily mean the optimal carrying capacity of the park.

However, the number of park visitors in the SNP seems to be an acceptable level in such a vulnerable mountain ecosystem, since no problems relating to the exploitation of natural resources and severe disturbances by the park visitors exist. In the Chubu Sangaku National Park, the densities can vary widely throughout the park, since major park visitors are especially concentrated on several sightseeing spots. One should also take into account that the park area is categorized into different zones and the whole area does not fall under the special protected zone that can be compared to the SNP. Nevertheless, it is obvious that the strain of park visitors on the natural environment is much more significant in the Chubu Sangaku National Park than that in the SNP.

The SNP is the only national park in Switzerland. Therefore, the National Park Law deals solely with the SNP. The law provides the purpose of environmental protection and determines the organisational structure of the SNP. The detailed regulations covering the aims of conservation, paths, prohibitions and penalties are laid down within the cantonal ordinance. These laws ensure that the direction of management schemes achieve environmental conservation in the SNP. In contrast, the Japan's Natural Parks Law governs all national parks, quasi-national parks and natural parks managed by prefectures. It secures a legislative framework for all types of natural parks in the country but not detailed systems for individual parks. The law provides only general purposes and regulations with penalties that are compatible to all designated natural parks. Every natural park is required to prepare a more sophisticated management plan for the protection of nature. Since the Natural Parks Law has been legislated, it has proposed two issues: the conservation of nature and the promotion of public utilization in the scenic areas. This dual-purpose has, however, limitations in the management of the natural parks for the people-based nature conservation areas, since the primary objective of the law remains to secure areas for human activities in scenic areas rather than conservation of

the natural environment (National Park Division, 1981; Komoda et al., 2000).

Most of the park area of the SNP consists of publicly owned land belonging to five local municipalities. After the designation, the national park foundation has been leasing most of the areas except for the purchased areas. The SNP has consequently a less complicated land use structure and fewer conflicts between ownerships than the Chubu Sangaku National Park. Under the zoning system, Japan's national parks contain various ownerships as well as land use types that sometimes makes it difficult to manage within the purposes of natural parks. Furthermore, in the zoning system, the imposing of appropriate regulations according to the management purposes even in the nationally-publicly owned land is a constraint. Although 89 % of the total area is owned by the government in the Chubu Sangaku National Park, the ownership overlaps between two different authorities. This area is managed by the national park office of the Ministry of the Environment of Japan and the Forestry Agency under the Ministry of Agriculture, Forestry and Fisheries of Japan. The major portion of the park areas belongs to the Forestry Agency and has its own management plan for timber production and forest protection in the national forest. Recently, it has also designated its own protection area (Forest Ecosystem Protection Area, 4,452.33 hectares) in the area of the Chubu Sangaku National Park (Chubu Regional Forest Office, 2001). While the park is managed by the Chubu Regional Office for Nature Conservation, Ministry of the Environment, there are two different management schemes set by the national authorities in the same park. This makes the management system of the Chubu Sangaku National Park more complicated than that of the SNP. It could also lead to discrepancies in its management, if the authorities change the management schemes.

In the SNP, civilian groups are directly involved in the decision making process for the park management, though the local residents are not members on the Founding Board. The IUCN guidelines suggest that protected areas in the

mountains should be planned and managed in accordance with full participation of the local communities, both inside and outside park boundaries (Hamilton and McMillan, 2004). Indeed, there is a strong interdependence of local communities and the national park in the regional and national economy. Stakeholder involvement improves understanding of the economic and social values of the national park to the regional and national economy (Hamilton and McMillan, 2004). Park management should initiate dialogues with wide stakeholder groups ensuring that they are engaged in the planning and operational aspects of the national park. Securing such participation is fundamental in realizing goals of the park management. The Ministry of the Environment began managing national parks in cooperation with local communities including local authorities and local residents through programs such as the "Green Worker Program" (Nature Conservation Bureau, 2003). However, local citizens and civilian groups are only allowed to advise the park planning and the park management schemes. So far, there is no legal decision-making process with citizens in park planning (Central Japan Bar Association, 2004; Kato, 2004). In practice, the Central Japan Bar Association (2004) strongly proposes a civilian management committee involving various stakeholders for the national park.

### Conclusion

The conservation systems of the two national parks were compared and discussed. Through this approach, we could identify several critical factors prevailing in the current management system of the Chubu Sangaku National Park. The difference in the number of annual park visitors between the two national parks was large. The density of annual park visitors in the Chubu Sangaku National Park was about 6.5 times higher than that in the SNP. It is obvious that the pressure of park visitors on the natural environment is much more significant in the Chubu Sangaku National Park. Imposing stricter regula-

tions or further decentralizing measures will have to be considered in order to accomplish the protection of the vulnerable ecosystem in the Chubu Sangaku National Park. It has also proved that the legislative condition as well as the management system of the Chubu Sangaku National Park was more complex than that of the SNP. The Japan's Natural Parks Law particularly characterizes the wide range of applicability by supporting its purpose and regulations so that the law can be applied for various types of natural parks in Japan. The zoning system in Japan's national parks is effective for the designation of parks under complex land use patterns and land ownerships. However, every natural park strongly needs to prepare more sophisticated management systems as well as schemes for the accomplishment of nature protection within the law. In addition, the need to involve local civilian groups in decision-making process was recognized. Establishing a legal decision-making system in planning and management could ensure the nature conservation goals of national parks in the future.

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## **Eine Vergleichende Studie der Alpinenökosystemschutzsysteme des Schweizerischen Nationalparks im Kanton Graubünden und des Chubu Sangaku Nationalparks in Japan**

**Zusammenfassung :** Der Chubu Sangaku Nationalpark zählt zu den wichtigsten Gebirgsnationalparks in Japan. Mehrere Gipfel des Parks ragen über 3000 m hinaus. Der Park stellt eines der beeindruckendsten alpinen Ökosysteme Japans dar. Die stetige Besucherstromzunahme der letzten Jahre ging mit einer damit verbundenen Steigerung der Störungen des Nationalparks einher. Um die bisherigen Naturschutzmaßnahmen weiterführen zu können, und jene unerwünschten Störungen einzuschränken, ist eine Reform der derzeitigen Verwaltungsplanung im Nationalpark dringend nötig.

Schweizerischer Nationalpark stellt ein Reservat dar, in dem die Natur vor jeglichen Eingriffen des Menschen geschützt ist. Die gesamte Fauna und Flora wird ihrer natürlichen Entwicklung überlassen. Der Nationalpark ist für sein weitblickendes Erhaltungskonzept bekannt. Sowohl Aktivitäten der Parkbesucher als auch Landnutzungen im Park sind genau geregelt.

Die Studie vergleicht das Managementsystem und die Naturschutzmaßnahmen des Chubu Sangaku Nationalparks mit jenen des Schweizerischen Nationalparks und versucht potenzielle Probleme bei der Umstellung der Ökosystemschutzkonzepte des Chubu Sangaku Nationalparks aufzuzeigen.

Aus den Vergleichsuntersuchungen zum Schweizerischen Nationalpark wurde festgestellt, dass die wesentlich höhere Parkbesucheranzahl im Chubu Sangaku Nationalpark zum Grossteil für die dortigen Probleme verantwortlich zu machen ist. Es werden daher die Maßnahmen einer Wegenetzplanung, zur Dezentralisierung der Parkbesucher, sowie die strikte Regelung der Landnutzungen, für die Sicherstellung der Nationalparkziele, als unumgänglich angesehen. Die Vereinfachung des Raumordnungssystems, welches derzeit von verschiedenen amtlichen Organen durchgeführt wird, stellt ein weiteres Ziel dar.

Dadurch können Diskrepanzen der Nationalparkplanung und des Nationalparkmanagements, zwischen den einzelnen Organisationen, vermieden werden. Als weiterer wesentlicher Punkt wird die Einbeziehung der betroffenen Anrainer, in den Entscheidungsprozess der Nationalparkentwicklung, angesehen.

**Schlüsselwörter:** Schweizerischer Nationalpark, Chubu Sangaku Nationalpark, Naturschutz, Nationalparkgesetz, Parkmanagement

## 中部山岳国立公園とスイス国立公園における山岳生態系保全システムに関する比較研究

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### 要 約

中部山岳国立公園は標高3000メートルを越える山々を含む温帯の山岳生態系を代表する自然保護地域である。しかしながら、人間活動の生態系への負荷を軽減する必要性から、適正な山岳生態系保全を行うための新たな公園維持管理のあり方が問われている。2003年4月に施行された改正自然公園法のもとで将来の中部山岳国立公園管理の方向性を模索するため、厳しい自然保護政策を実施し、中央ヨーロッパの脆弱な山岳生態系を長年維持管理しているスイス国立公園で現地調査を行った。両公園の現状、自然環境保全のための法体制ならびに管理運営を比較することによって、今後の中部山岳国立公園における生態系保全のあり方について考察を行った。

両公園における単位面積当たりの年間推計利用者数の比較では、中部山岳国立公園はスイス国立公園の約6.5倍であった。また、中部山岳国立公園はスイス国立公園に比べて公園規模が大きく、制度上複雑な土地利用形態と土地所有構造を呈していた。一方、スイス国立公園は園内が全て保護区域に指定されており、土地利用の混在が無く土地所有形態も公有地の借用と購入地のみであった。それら条件の違いが両国立公園における過剰利用の有無ならびに人為的な自然環境の攪乱の度合いに影響を及ぼしていると考察された。また、両公園の間には法体制の相違による異なった公園管理のあり方が存在することが認識された。スイス国立公園は現時点において連邦唯一の国立公園であることから、そのための固有な国立公園法と州法が存在し、自然保護を目的とした公園の運営体制や規則、権限が法で厳格に規定されていた。スイス国立公園法の目的は人間の手を一切加えず自然の復元プロセスに則って山岳生態系を保全することであり、公園はその目的達成のため自然保護、研究、情報提供活動を三つの柱にして管理を行っていた。加えて、スイス国立公園では地元自治体だけでなく NGO や地元住民等と連携しながら公園管理計画を決定してゆく体制が既に整っており、公園地域の恒久的な維持管理に重要な役割を果たしていることが認識された。

中部山岳国立公園における山岳生態系保全のためには、現在行っているゾーニングや規制強化に加え、利用者の局所集中を避けるための園内の観光ルート計画など、地域全体を見据えた独自の管理体制を整える必要性が確認された。また、地元住民ならびに NGO 等が管理計画策定に合法的に参加できるような法制度整備の重要性が認識された。

**キーワード:** 国立公園, スイス, 環境保全, 法整備, 公園管理