Institutional Mechanisms for the Construction of the Qinghai-Tibet Plateau National Park Cluster (Post-print)

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Abstract

China's national park system reform has entered a new phase focused on advancing reforms based on the protected area system. The National Park Research Team of the Second Comprehensive Scientific Expedition to the Qinghai-Tibet Plateau has pioneered a proposal for constructing a Qinghai-Tibet Plateau protected area system, wherein national parks constitute the principal component in both area and function, encompassing both "small clusters" and "large clusters" of national parks. National park clusters emphasize holistic cluster-level management; however, existing protected areas on the Qinghai-Tibet Plateau still face challenges in coordinated management—not only within individual national parks, but also among national parks, and between national parks and other protected areas. In response to the new requirements of national park system reform and addressing the challenges facing coordinated management of national park clusters, it is proposed that future efforts should accelerate the establishment of a trans-provincial, state-led management system for Qinghai-Tibet Plateau national park clusters, while simultaneously improving supporting institutions related to national park establishment and financial guarantee mechanisms; multiple objectives of ecological conservation and promoting synchronized modernization of local farmers and herders should be coordinated, ensuring that the broad masses of farmers and herders participating in management and operations become continuous beneficiaries and active supporters of national park clusters.

Full Text

Regime of National Park Group Based on Protected Area System in Tibetan Plateau

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Abstract

China' s national park system reform has entered a new stage focused on advancing reforms based on the protected area system. The National Park Team of the Second Comprehensive Scientific Expedition to the Tibetan Plateau (hereinafter referred to as the "Expedition Team") pioneered the proposal for constructing a Tibetan Plateau protected area system where national parks dominate both in area and function, encompassing both a "small group" of national parks and a "large group" of various protected areas. The national park group concept emphasizes holistic group-level management. However, existing protected areas on the Tibetan Plateau still face coordination challenges—not only within individual national parks, but also among different national parks and between national parks and other protected areas. In response to the new requirements of national park system reform and addressing the coordination challenges facing the national park group, we propose accelerating the establishment of a trans-provincial, state-led management system for the Tibetan Plateau National Park Group, while simultaneously improving supporting systems such as national park creation procedures and financial guarantee mechanisms. The reform should balance ecological conservation with the goal of promoting simultaneous modernization of local herders and farmers, ensuring that the broad participation of herders and farmers in management and operations makes them continuous beneficiaries and active supporters of the national park group.

Keywords: national park group, protected area, regime, state-led, Tibetan Plateau

1 China' s National Park System Reform Enters a New Stage

China' s national park system reform has evolved from initial unfamiliarity to growing clarity, and from drawing on international experience to highlighting Chinese characteristics. This process can be divided into two major developmental stages [Figure 1: see original paper].

1.1 Reform Exploration Stage Based on National Parks Themselves (2013-2018)

The Third Plenary Session of the 18th CPC Central Committee in 2013 proposed establishing a national park system, marking the beginning of this stage. As a novel reform initiative, the central government was not yet fully familiar with the conceptual connotations, significance, and management models of national parks. Consequently, two parallel approaches were adopted. First, the Central Office for Comprehensively Deepening Reform, the National Development and Reform Commission, and other agencies actively promoted local pilot programs to draw on international experience and explore Chinese models. In 2015, the "Pilot Scheme for Establishing a National Park System" was issued, and ten local pilot projects were successively approved. Second, research on the national park system was strengthened. In 2016, the National Development and Reform Commission selected ten research topics and fourteen research institutions to conduct specialized studies on national park governance systems, legislation, heritage protection, concessions, scientific monitoring, and other areas.

Although local governments began exploring national park system reforms in the early 21st century, nationwide promotion only began in 2013 [3]. The issuance of the "Overall Plan for Establishing a National Park System" in 2017, and particularly the establishment of the National Forestry and Grassland Administration (National Park Administration) in 2018, marked the basic conclusion of the reform exploration stage focused on national parks themselves.

1.2 Reform Stage Based on the Protected Area System (Since 2019)

The issuance of the "Guiding Opinions on Establishing a Protected Area System with National Parks as the Mainstay" in 2019 signaled the beginning of this new stage. The previous stage' s explorations clarified reform requirements. The "Overall Plan for Establishing a National Park System" had already proposed constructing a unified and standardized national park system to address issues such as overlapping designations and fragmented management of various protected areas. The current reform stage, grounded in the protected area system, further implements Xi Jinping' s thought on ecological civilization and upholds a holistic and systematic perspective. Integrating and optimizing existing protected areas benefits the maintenance of national ecological security from a comprehensive standpoint and provides a systematic spatial carrier for building a Beautiful China.

2 The Value of Coordinating the Construction of the Tibetan Plateau National Park Group

Through analysis of the global significance, authenticity, and concentrated distribution of the Tibetan Plateau' s natural-human ecosystems, as well as the similarity of representative natural and cultural heritage resources across regions, the Expedition Team first proposed the concept of the "Earth' s Third

Pole National Park Group" —the Tibetan Plateau National Park Group—and advocated advancing the construction of the plateau' s national parks and protected area system through a group-level architecture [1]. In this new stage of national park system reform, this forward-looking scientific concept holds significant value and meaning.

2.1 First to Propose a Protected Area System Construction Plan with National Parks as the Main Body

Nationally, while the central government has proposed establishing a protected area system with national parks as the mainstay, academic circles have not yet reached a consensus on the role of national parks within this system or the future composition and structure of the protected area system. For instance, regarding the term "mainstay," does it require national parks to dominate in area, function, or both? Localities are still exploring these questions.

The Tibetan Plateau National Park Group has pioneered a model for the plateau' s protected area system where national parks serve as the main component. The Expedition Team' s 2017 conceptual proposal included ten national parks in the interior and on the margins of the Tibetan Plateau [1]. Subsequent in-depth research produced a second version covering approximately 320,000 km^2 with 21 national parks, and a third version encompassing 570,000 km^2 with 13 national parks [4]. In the third version, national parks account for about 63% of the existing protected areas on the Tibetan Plateau and cover the core regions of the plateau' s ecological security barrier construction [5]. According to this plan, national parks will dominate both in area and function within the future Tibetan Plateau protected area system.

2.2 Innovating the Construction Model of the Tibetan Plateau' s National Ecological Security Barrier

China' s 11th Five-Year Plan proposed strengthening the ecological security barrier construction on the Tibetan Plateau. To date, this has been implemented primarily through major ecological projects, including grassland ecological protection and construction, forest ecological protection and construction, comprehensive water and soil erosion control, and desertification control projects [5–7]. These major ecological projects have significantly enhanced the plateau' s national ecological barrier function [5, 8].

Moving forward, major ecological projects must continue. However, considering the time-limited nature of these projects and potential short-term variability, a long-term mechanism for enhancing the Tibetan Plateau' s ecological security barrier function must be established. A protected area system centered on national parks innovates a new model for constructing the plateau' s ecological security barrier. Once established and operating effectively, it will undoubtedly form a long-term mechanism for Tibetan Plateau ecological security barrier construction.

3 Coordinated Management Challenges Facing the Tibetan Plateau National Park Group

The national park group concept emphasizes holistic construction and management, encompassing both the "small group" of individual national parks and the "large group" of various protected areas including nature reserves and natural parks [1, 4]. Through the construction and demonstration of the national park group, the entire Tibetan Plateau' s ecosystem protection and utilization should be coordinated to enhance sustainable development quality. However, as the national protected area system reform is still in progress, inherent institutional barriers remain inadequately addressed, and existing protected areas on the Tibetan Plateau continue to face coordination challenges.

3.1 Fragmented Management Across Administrative Regions Within Individual National Parks

Among the Tibetan Plateau' s pilot national parks, all except the Sanjiangyuan and Potatso National Parks involve cross-provincial administrative regions and face fragmented management issues within the park boundaries. The Giant Panda National Park, for instance, implements a three-tier management system during its pilot period: National Park Administration—Provincial Administration—Management Branch [Figure 2: see original paper].

The Giant Panda National Park Administration was established in Chengdu, Sichuan Province, based on the Chengdu Special Commissioner' s Office of the National Forestry and Grassland Administration. Its main responsibilities include formulating unified national park plans, ecological protection policies and standards; coordinating with the Ministry of Natural Resources on ownership registration; organizing the preparation of central investment budgets and fund allocation; conducting preliminary approval of major projects within the park; guiding and supervising pilot work; and coordinating major cross-provincial issues.

Giant Panda National Park Provincial Administrations were established in Sichuan, Shaanxi, and Gansu provinces, operating under a "one team, two signs" model with provincial forestry and grassland departments. Their main responsibilities include protection, construction, management, and other related work within their respective provinces. Giant Panda National Park Management Branches were formed by integrating and streamlining existing management institutions of various protected areas within the park boundaries, with their functions determined by the National Park Administration and Provincial Administrations.

Although a top-down hierarchical management structure nominally exists under the leadership of the Giant Panda National Park Administration, with clearly defined responsibilities for coordinating cross-provincial issues, the administration lacks necessary personnel and financial control mechanisms in practice, making holistic management difficult . Provincial Administrations are directly

under provincial governments, with personnel appointed by provincial authorities and basic operational funding primarily arranged by provincial finances. Consequently, the Giant Panda National Park Administration lacks effective control over Provincial Administrations and sufficient authority to resolve cross-provincial issues.

Similar coordination problems exist between Provincial Administrations and Management Branches. Although branches are nominally dispatched agencies of Provincial Administrations, personnel appointments and budget arrangements depend primarily on local municipal governments. In Sichuan, for example, seven management branches in Chengdu, Mianyang, Aba, and other areas are under dual leadership of provincial authorities and local municipal governments, but primarily led by the latter, with branch directors typically served by deputy mayors or prefecture governors.

3.2 Coordinated Management Issues Across National Parks and Other Protected Areas

Currently, no comprehensive management system has been established for protected areas spanning provincial-level administrative regions on the Tibetan Plateau. While provincial-level coordination mechanisms exist, they still face challenges in coordinating management across different national parks and other protected areas.

Even Qinghai Province, which has implemented the most extensive national park system reforms, faces coordination issues. According to national institutional reform plans, the Qinghai Provincial Forestry and Grassland Administration should coordinate management responsibilities for all protected areas. The Qinghai Provincial Government has clarified the agency' s functions accordingly. However, the Sanjiangyuan National Park operates independently outside Qinghai' s protected area management system .

The Sanjiangyang National Park Administration is a provincial government dispatched agency at the departmental level, while the Qinghai Provincial Forestry and Grassland Administration is a provincial government directly affiliated institution, also at the departmental level. Both have equal administrative rank. The Sanjiangyuan National Park Administration' s leadership is appointed by the Qinghai Provincial Government without reporting to the Provincial Forestry and Grassland Administration, and its operational funding is separately budgeted by the provincial finance department, bypassing the Provincial Forestry and Grassland Administration. This separation of administrative rank, personnel authority, and budget sources makes Sanjiangyuan National Park relatively independent, creating coordination management issues between it and other national parks and protected areas.

The current management system relies on hierarchical delegation by business supervisory departments, which is related to insufficient management resources. Before the institutional reform that consolidated protected areas under unified

management, national supervisory departments typically had only one division responsible for protected area management. After the reform, the National Forestry and Grassland Administration has only one department overseeing protected areas and one division managing national parks. This power structure results in inadequate national-level management capacity for national parks and other protected areas. Consequently, supervisory departments have adopted a management model emphasizing local management with departmental guidance, delegating responsibilities to local authorities. However, local administrative structures face similar or even more severe constraints, leading to further delegation down the hierarchy. This continuous delegation results in increasingly fragmented management.

4 Reform Recommendations for Promoting the Construction of the Tibetan Plateau National Park Group

In response to the current stage of national park system reform and addressing the coordination challenges facing the national park group, we recommend accelerating the establishment of a trans-provincial, state-led management system for the Tibetan Plateau National Park Group, while simultaneously improving supporting systems for national park creation and financial guarantees. The reform should coordinate multiple objectives of ecological protection and promoting the simultaneous modernization of local herders, ensuring that the broad participation of herders and farmers in management and operations makes them continuous beneficiaries and active supporters of the national park group.

4.1 Establish a State-Led Management System for the Tibetan Plateau National Park Group

Building on the foundation that protected area lands are state-owned and funding directly or indirectly comes from the central government, we should actively explore a state-led, group-level coordinated management model. Land use types in Tibetan Plateau protected areas are primarily grassland and forest. The Expedition Team found that forests on the plateau are mainly state-owned forest farms, while grasslands are also basically state-owned land. After the founding of the People' s Republic, land reforms in Tibet differentiated between agricultural and pastoral areas, implementing different policies. While smaller agricultural areas implemented household-based land allocation similar to inland rural areas, the vast pastoral areas (including semi-agricultural and semi-pastoral areas) only distributed livestock without allocating grassland to households. Grasslands continued to be used according to traditional grazing practices. Similar to Tibet, only agricultural counties in Qinghai implemented household-based land reforms, while extensive pastoral areas were not involved. Consequently, grasslands after socialist transformation remained basically state-owned [8]. Across the entire Tibetan Plateau, local fiscal expenditures directly or indirectly come primarily from central government transfer payments [Figure 3: see original paper]. In 2020, local fiscal revenue in Tibet, Qinghai, and other

Tibetan-inhabited prefectures accounted for only 12.77% of local fiscal expenditures. Excluding the Liangshan Yi Autonomous Prefecture (which includes one Tibetan autonomous county) and Qinghai, the ratio of local fiscal revenue to expenditure in Tibet and other Tibetan-inhabited prefectures was generally below 10%. Considering the net transfer payments between local and central finances in Tibet, Qinghai, Sichuan, Yunnan, and Gansu, we can conclude that Tibetan Plateau local fiscal expenditures mainly originate from central government transfer payments.

4.2 Reform the Local Application System to State-Led Creation for National Parks

For a long time, China has relied on a local application system for establishing protected areas, including national parks. Typically, local governments where protected areas are located submit applications to higher-level governments for approval, with national-level protected areas requiring central government approval and provincial-level ones requiring provincial government approval. This application system has fostered a local government management system for protected areas, creating administrative barriers to coordinated management. Although the 2018 institutional reform achieved unified departmental management of various protected areas, it did not change this traditional application system.

Considering the long-term stability of the Tibetan Plateau' s large-scale natural-human ecosystem, we recommend reforming the local application system and exploring a central government-led national park creation system. Guided by national and provincial-level functional zoning plans that define ecological security strategic patterns, and building on existing protected areas, we should integrate and optimize various protected areas in conjunction with territorial spatial planning and ecological protection red line demarcation. This would enable holistic planning and scientific determination of the Tibetan Plateau' s protected area system pattern centered on national parks. By leveraging the advantages of a unified leadership system and aiming to protect nature, serve the people, and achieve sustainable development, we can solve cross-regional fragmented management problems and actively explore a coordinated management system for protected area creation.

4.3 Establish a State Financial Guarantee System for the National Park Group

Internationally, funding sources for national park management and operations align with management systems. For centrally managed national parks, funding primarily comes from central government appropriations, as clarified in the "Overall Plan for Establishing a National Park System."

Moving forward, while ensuring central fiscal funding for the national park group, we should gradually develop a multi-channel, diversified funding mechanism with self-sustaining capacity. This includes: innovating and expanding

a green financial product system for the national park group based on sustainable utilization revenues from protecting the authenticity and integrity of the natural-human ecosystem; formulating financial support policies adapted to national park system piloting and construction; conducting concession activities according to approved lists to generate income for ecological protection, infrastructure construction, and community development; and establishing a social donation system to widely solicit investments and donations from domestic and international enterprises, social organizations, and individuals.

4.4 Form a Community Synergy Mechanism for Herdsmen to Continuously Benefit from and Actively Support National Park Group Management

National parks are internationally recognized as a "win-win" model for achieving both ecological protection and sustainable use [9], and represent one of the few pathways for the vast pastoral areas of the Tibetan Plateau to achieve simultaneous modernization in line with ecological civilization requirements [1]. Therefore, we should focus on forming a community synergy mechanism that enables herders and farmers to continuously benefit from and actively support national park group management and operations.

We must continue improving the mechanism from "compensating individuals" to "compensating activities," ensuring herders benefit continuously from participating in national park group management [10]. First, we should expand and optimize herders' income structures by: providing the vast majority of national park employment opportunities to local herders; encouraging the transition from part-time ecological positions to full-time positions with full social insurance benefits, thereby increasing wage income; encouraging herders to provide nature-based recreation services to obtain business income; and promoting the "three transformations" reform where resources become equity, funds become share capital, and farmers become shareholders, transforming herders' house ownership and land use rights into rental and equity income. Second, we should continuously innovate and improve the "dual enhancement" mechanism for value and price, including: establishing a national park group service quality star-rating and promotion mechanism to reward high-quality service providers with high returns; and creating a national park group geographical and green certification system to increase product prices so that herders can maintain income even when high-quality agricultural product yields decline.

We should also establish a relatively flexible and open national park management system that welcomes broad participation from herders and farmers. On one hand, existing national parks should leverage their spatial radiation and driving effects. National park systems should not rigidly isolate parks from surrounding areas through "one policy inside the park, another outside." Instead, existing national parks should enable herders both inside and outside to deeply appreciate the benefits of national parks and allow as many herders as possible to participate in management and operations. On the other hand, we should continuously

enrich and expand the national park-centered protected area system in terms of quantity and spatial coverage, while improving the protected area policy system. National parks should mutually support and promote each other, as well as other protected areas and ecological zones, through the establishment of inclusive ecological compensation and green development mechanisms. This will enable herders to enjoy the benefits of national park construction and support the national park group and protected area system, thereby consolidating the socio-cultural foundation for sustainable development on the Tibetan Plateau.

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Note: Figure translations are in progress. See original paper for figures.