

China's 14th Five-Year Plan: Implications on Ecosystems & Biodiversity

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Executive Summary

The 14th Five Year Plan (FYP) was approved in March 2021, amid an ongoing pandemic, marked economic pressures and an increasingly uncertain geopolitical landscape. The FYP will guide China's social and economic development for the next five years. Ecosystem protection and restoration is one of its priorities. Part 11, which encompasses environment and climate issues, addresses the quality and stability of ecosystems via Ecological Red Lines, National Parks, and Eco-Compensation. The challenge in the 14th FYP period (2021-2025) will be to address gaps between policy design and implementation within each of these three programs. Financing gaps, government coordination, and local population livelihoods are some cross-cutting challenges. The Plan also addresses China's increased initiative in global environmental governance leadership.

14th FYP: Major Goals

- Trade expansion
- Investment in scientific and technological development
- Accelerated processes of urbanization
- Preservation of achievements (e.g., poverty eradication) among rural population
- Increased attention to the aging population
- Climate action and environmental protection
- International partnerships in the economic field [1]

The key goal of the 14th FYP is the transformation of China's economic model. It is focused on building a market-based, efficient and open business environment, the continued upgrading of its domestic innovation capabilities, the movement of industry to higher-value added products, the spreading of more equality, i.e., "common prosperity" among its citizens; and ensuring that growth does not come at the cost of environmental degradation. [2]

Environment and Climate in the 14th FYP Outline

Part 11: Promote green development and facilitate the harmonious coexistence of people and nature

Article XXXVII: Improve the quality and stability of ecosystems

Section 1. Improve the ecological safety barrier system

Section 2. Build a nature reserve system

Section 3. Improve compensation mechanisms for ecological protection

Article XXVIII: Continue to improve environmental quality

Section 1. Carry out in-depth pollution prevention and control initiatives

Section 2. Comprehensively improve the level of environmental infrastructure

Section 3. Strictly prevent and control environmental risks

Section 4. Actively respond to climate change

Section 5. Improve the modern environmental governance system

Article XXXIX: Accelerate the green transformation of the development mode

Section 1. Comprehensively increase resource use efficiency

Section 2. Build a resource recycling system

Section 3. Vigorously develop the green economy

Section 4. Build a green development policy system

[3]

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Importance & Context of the 14th FYP

China's FYPs are the nation's principal planning documents. The latest, the 14th FYP, was approved in March 2021, amid an ongoing pandemic which has caused marked economic pressures and an increasingly uncertain geopolitical landscape [4]. The Plan will guide China's social and economic development for the next five years.

The 14th FYP promotes national self-reliance, focusing on economic and industrial modernization as well as accelerated scientific and technological development, in order for China to become a 'modern socialist state' by 2049. Unlike in the past, qualitative rather than quantitative goals are focused on. For instance, there is no set numerical target for GDP growth. Qualitative improvements, including the climate and environmental goals of the 'ecological civilization', are emphasized instead.

One of the key problems to be addressed in the following years are gaps between stated intentions and implementation results in environment-related aspects [5]. The majority of international attention has so far been focused on the Plan's climate and clean energy goals, in light of President Xi's recent carbon neutrality by 2060 pledge, and as the green economy becomes more material to economic interests. This will be characterized by increasing cooperation as well as competition between countries [6].

Receiving less international attention but nonetheless significant in a domestic and planetary-sense has been the topic of ecosystem and biodiversity protection. Biodiversity, the variety of genes, species and ecosystems that constitute life on Earth, provides foundational conditions for human survival, critical resources for socio-economic development and secure livelihood [7][8]. China is one of the world's 17 mega-diverse countries [9].

The 14th FYP prioritizes ecosystem protection and restoration. For the first time, ecological security is emphasized as a key feature of *ecological civilization*, China's concept of sustainable development. The first Article (XXXVII) of Part 11 of the FYP, which encompasses environment and climate issues, addresses the quality and stability of ecosystems.

There are three sections of Article XXXVII:

Section 1. Improve the ecological safety barrier system

Section 2. Build a nature reserve system

Section 3. Improve compensation mechanisms for ecological protection

Each of these sections will be looked at in turn, with an analysis of the major gaps and challenges in policy design and implementation.

Section 1. Improve the Ecological Safety Barrier System

The *Ecological Safety Barrier System* refers to the Ecological Conservation Redline (ECR), one of the three 'bottom lines' for China's National Territory Spatial Planning (NTSP), which works toward the *ecological civilization* and achievement of high-quality socio-economic development [10]. ECRs physically delineate zones that are scientifically identified as having high levels of biodiversity, crucial ecological roles, or are highly ecologically sensitive [11]. Within these zones, human activities are constrained and development is off limits. China reported to have finished nationwide redlining in 2021, covering 25% of its national territory. Nonetheless, many issues persist with both delineation and implementation. The 14th FYP period (2021-2025) will unfold the "second stage" of China's NTSP system [12], aimed at improving the legal and policy foundations, as well as implementation mechanisms.

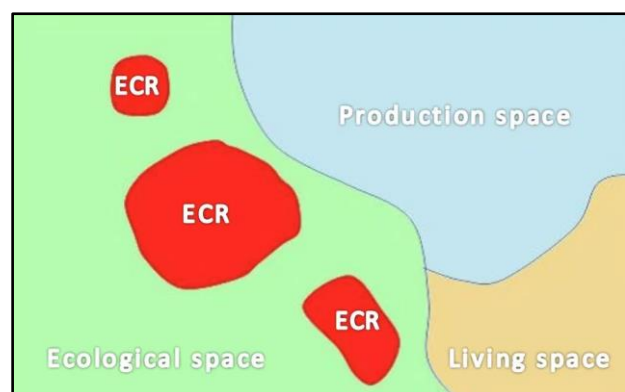


Figure 1: A visualization of China's comprehensive nationwide spatial planning [13]

Some remaining gaps and challenges between ECR policy design and implementation are as follows:

ECR delineation

- Contested scientific credibility of the accuracy, reliability, and integrity of the data bases of ongoing delineation. For example, the city of Ningbo included its artificial coastline into its marine ECR to fulfill its provincial target of 35% natural coastline retention rate [14].
- Conflict with other control lines. Delineation carried out by multiple departments individually with different data bases and technical guidance has resulted in spatial mismatch and land use conflict among the three control lines [15].

ECR implementation

- Conflict with other development plans, including transportation, energy, tourism, and hydraulic engineering [16]. Lack of political instruction, for example, has led some provinces to remove wind turbines and solar PV panels within ECR areas, while others have kept them.
- Conflict between central and local governments regarding the management of ECRs. The cadre target responsibility system places conflicting objectives on local governments in terms of economic growth and environmental protection [17].

Section 2. Build a Nature Reserve System

The 14th FYP moves forward with the establishment of national parks (NPs) in a revamped nationwide protected area system. The first group of national parks was officially announced by President Xi in October 2021 and the *Five Standards for the National Park System* was published to guide development. Experience with pilot NPs over the past five years, however, have exposed remaining challenges with the delineation of core zones, relationships with local communities, the privatization of NP management and the efficiency of the new NP bureaucratic arrangement.

Under the previous protected area system, numerous problems spanning boundary delineation, management effectiveness, institutional structure and policy

instruments have plagued China’s protected areas and hampered their effectiveness. Issues have included criticism for missing high-value biodiversity areas, the lack of dedicated law, insufficient central government funding, and unclear land property rights [18][19][20]. Moreover, multiple types of protected areas with varied ministerial oversight, along with China’s multilayer management hierarchy, has led to replicated and fragmented conservation and unclear responsibilities [21][22].

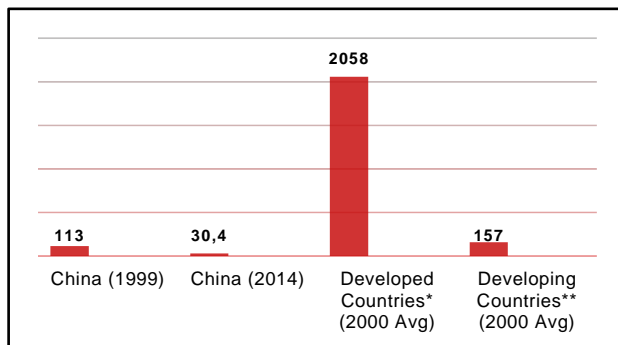


Figure 2: Financial investment (USD) per unit area of national nature reserve [23].

*Incl. 31 countries of N. America, Europe, E. Asia, & Australia/New Zealand. **Incl. 50+ countries in Central/S. America, ME, Africa, SE Asia, S. Asia, & Pacific

In response to these problems, the central government initiated a reform in 2003 to revamp its protected areas by launching *national parks* as the core mechanism [24]. After an eight-year period of policy exploration and five years of pilots, the first group of five national parks was officially established by President Xi at the Biodiversity Convention COP15 held in Kunming in October 2021. Together, these five NPs cover 230,000 km² and nearly 30% of the key terrestrial wildlife species found in China [25].

First Official Chinese NPs

- Sanjiangyuan NP (Qinghai)
- Giant Panda NP (Sichuan, Shaanxi & Gansu)
- Northeast China Tiger & Leopard NP (Jilin & Heilongjiang)
- Hainan Tropical Forests NP (Hainan)
- Wuyi Mountain NP (Fujian)



Photo 1: View of the fault zone in Wuyi Mountain National Park, Fujian Province [Source: China Daily, 2021]

Experience gained from the NP pilots exposed several ongoing institutional and implementation problems:

- Decentralized and localized regulation system: The **lack of a national law** on NPs, although currently under development, has led to a variety of different regulations [26][27].
- Delineation of NPs into **two-zones**, “general protected area” and “core protected area” with different degrees of conservation has led to the imposition of huge financial costs of converting areas designated as “core”. Roads, farmlands, etc. have therefore remained in “core” areas [28], and “core” areas with educational and cultural value have become totally prohibited to visitors.
- There is a large **financial gap** for the management of NPs, with insufficient central government transfers [29]. The bulk of the financial burden has fallen on local governments, which usually have limited resources given the remote and poorer locations of most NPs. The absence of a procedure for private and non-profit investment has also hindered financing [30].
- **Local populations** livelihoods that have traditionally depended on natural resources, farming, or breeding in NPs have been affected, sometimes without sufficient eco-compensation [31]. Other human activities which have helped balance ecologies, such as livestock movement or rice farming as a food source for birds, but have been banned, have had negative ecological impacts [32][33].
- **Administration coordination** between central and local governments, as well as management (MNR) and monitoring (MEE) has left room for improvement. Cross-jurisdictional coordination problems, including overlapping responsibilities

Section 3. Improve Compensation Mechanisms for Ecological Protection

Eco-compensation is an imperative component of the implementation of spatial planning policies, including the ECR, which have significant economic and social distributional impacts. *Eco-product evaluation* is an important economic instrument that can provide values for eco-compensation.

In China, eco-compensation is conceptualized as a public mechanism to protect ecosystems and natural resources, to support the internalization of environmental externalities in public and private accounting, and to equalize economic and social development by benefit-based relationships between protectors, beneficiaries and polluters in environmental conservation and restoration [35][36]. It is recognized as an inherent regulatory requirement for spatial planning, biodiversity protection, and ecological poverty alleviation [37].

The eco-compensation mechanism has progressed from a focus on specified single ecological element, such as a water basin, forest, grassland, wetland, and farmland, to a comprehensive mechanism spanning entire ECR areas and Key Ecological Functional Areas.

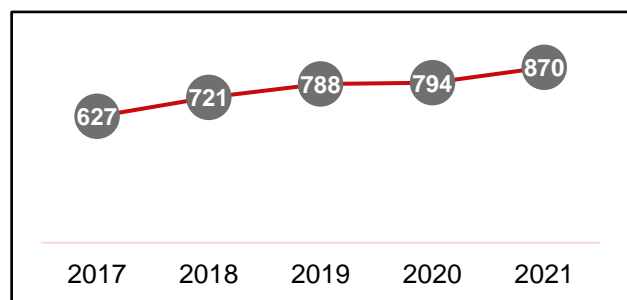


Figure 3: The central transfer payment for key ecological areas between 2017–2021 (in millions, RMB) [Source: Ministry of Finance, PRC].

Potential bottlenecks and challenges of eco-compensation in the 14th FYP period:

- **Insufficient funding** despite growth in amounts [38]. Subsidies have remained lower than required and the lack of private and non-profit investment compounds financing difficulties [39].
- **Lack of a complete monitoring and assessment mechanism** often result in incomplete information, slow delivery of compensation, corruption, and poor administration [40].
- An **incomplete legal and technical system** make the scope, object, rate, and calculation of eco-compensation unclear.

International Cooperation & Leadership in the 14th FYP

Within the 14th FYP, Part 12 on international cooperation touches upon environmental issues through mentions of the development of the Belt and Road Initiative, as well as China's commitment to the UN governance system and the implementation of the SDGs. The plan's focus on green development and supportive multi-layer policy frameworks will facilitate much-needed progress in environmental related-SDGs.

Already well-established internationally is that Beijing is expanding its participation in international climate governance, particularly in the area of sustainable finance. The EU-led International Platform on Sustainable Finance, a working group on setting global sustainable financial standards, is currently co-chaired by China.

Additionally, in the arena of ecosystems and biodiversity, China is stepping up its leadership globally. China's recent Kunming Declaration initiative and commitment to support the 1.5 billion RMB Kunming Biodiversity Fund is case-in-point. There is great potential for policy exchange in implementing innovative environmental governance, including green financing and soil pollution remediation and control, which remain complex issues. Domestic ecosystem and biodiversity protection, therefore, is an area that remains ripe for international learning and cooperation with less of the increasing economic competitiveness has begun to characterize climate and clean energy action.

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The Sino-German Environmental Partnership project has supported bilateral environmental policy dialogue through the exchange of experience and advice on various specialist topics since 2013. It is overseen by the Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) of the Federal Republic of Germany and the Ministry of Ecology and Environment (MEE) of the People's Republic of China. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is responsible for implementing the Sino-German Environmental Partnership project, which is funded through the International Climate Initiative (IKI) of the BMUV.

Responsible:

Dr. Christian Stärz (Director)

M: +86 136 6123 2183
E: christian.staerz@giz.de
I: environmental-partnership.org

Author

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