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The analysis of China's forest ecological compensation policy and legislation

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ABSTRACT

Forest ecological service function are more concerned throughout the world due to the environmental degradation and economic development imbalances. As a developing country, Chinese forest ecological compensation policies and laws have been constantly adjusted and perfected in recent years. This paper analyzes the status quo of China's forest ecological compensation policies and laws. Based on these policy and law systems analysis, the main problems are discussed in detail. The big problems conclude the unclear definition of ecological compensation, the low standard of the compensation, the too narrow coverage of the compensation and lack of diversity channels and market mechanism.

KEYWORDS

Forest ecological compensation; Policies and legislation; Problems analysis; China.



INTRODUCTION

With the environmental degradation and economic development imbalances have become more severe with the rapid growth of China's economy, the Chinese government and the public are focusing a great deal of attention on this problem. National policymakers designed eco-compensation—a new economic policy instrument—to address issues of environmental degradation and development imbalances. As an important class of natural ecosystems, forests not only help to protect environment, but also help to conserve water, regulate climate, conserve water and soil, check the wind and fix the shifting sand, and improve soil^[1-3]. Eco-compensation for forest ecosystem services has been used in China to protect natural forests, reconvert farmland into forest or pasture, and protect the noncommercial forest^[4]. Forestry Ecological Benefits Compensation is an integrated measure used to regulate the mutual relationship between people who utilize (make profits from) forestry ecological benefits and people who conserve (provide) such benefits.

The development of forest ecological compensation mechanism in China is a gradual process^[5], from the adjustment of some policies at the initial stage to the general adjustment of national legislation, and from the pilot projects in some regions to the implementation of six forestry projects. The improvement of forest ecological compensation mechanism not only needs the forestry system to issue policies and laws, and the central government to issue relevant documents, but also needs to rely on the cooperation of the local government and the improvement of supporting measures made by forest-related departments.

Major policies at the central level

The issuance of policies and laws of forest ecological benefit compensation in China has gone through a tortuouse stage. Back to 1978, CPC Central Committee and the State Council have already made an important decision: to implement a large-scale shelterbelts construction project in Three-North Region in China. And now, the large-scale construction of six forestry projects is ongoing. TABLE 2.1 shows policies and relevant laws of compensation issued by the forestry system in China over the years. From the table, it is obvious that the evolution of forest ecological benefit compensation policies and laws in China has undergone many stages, from early practice, groping and policy preparation, pilot projects to expanding implementation. These policies and laws are developing along with the sustainable development theory, scientific outlooks on forests and scientific forest management system.

RESULT AND DISSCUSS

So far, China's forestry projects have generated good ecological, economic, and social benefits. However, existing legislations and policies relating to forest ecology projects, including key public welfare forestry project and the Forestry Ecological Benefits Compensation Fund, are faced with several major problems.

First, The definition of connotation and denotation of ecological compensation is unclear

The connotation of ecological compensation is not clearly defined in current legislation. "The Ecological Compensation Ordinance" (draft) regulates that: "ecological compensation refers to the compensation made by the nation, the people's governments at all levels and other ecological beneficiaries to ecological protection builders for their inputs and loss of potential development opportunities because of their participation in ecological protection. Ecological compensation is divided into two types: one is that caused by ecological damage which results from development and utilization of the natural resources, such as the regulated water resource fee, mineral resource compensation fee and forest eco-efficiency compensation fund; the other is that caused by the ecological construction and the original ecology preservation, which has no relevant regulations in China. From the perspective of system construction, ecological compensation is the system arrangement of adjusting the interest relationships among relevant stakeholders mainly through economic means, for the purpose of protection and sustainable use of ecosystem services. The ecological compensation abroad is mainly making payments to the environment protectors and ecological constructors according to their contributed value in ecological service functioning, so as to motivate their initiatives in environment protection and ecological construction^[6]. The unclear definition of connotation and denotation of ecological compensation will cause uncertainty of the nature, purpose and scope of ecological compensation. Since compensation should be made to offset losses, it can be seen from the laws in our country, the forest ecological compensation fund should not only be used to compensate for losses, but also to cover spending in forest culture and management, tending, protection and fire prevention and so on. The causes for the current situation are that, for a long time, we did not have enough understanding of forest ecological value, that we did not repay those ecological environment protection behavior with reasonable economic returns, and that the beneficiaries of ecological environment protection did not pay a reasonable fee.

Second, the compensation standard is low

From the legislation and practice of China's forest ecological compensation, it can be seen that ecological compensation fund is handed out in accordance with the area of public welfare forest. Such a unified standard does not take into account the differences in environmental conditions and local finances, and the local ecological public welfare forest

compensation standards are generally lower than the national standard. According to a survey, the construction fee of ecological public welfare forest is 2100 yuan/hm², and the management and tending fee is at least 150 yuan/hm². In addition, after a ban on logging is imposed to key shelter forests and forests with special uses, the farmers need a compensation of about 300 yuan/hm² to maintain their life and to switch to other production. Even assessed with Beijing's compensation standard which is currently the highest among all, the compensation standard for national key ecological public welfare forest, which is the national compensation of 75 yuan/hm² plus the local financial compensation of 245 yuan/hm², cannot afford to cover either the construction cost or the management and tending cost, not to mention offsetting the economic losses caused by bans on logging. If the compensation price made by the central government is too low, then the foresters and the forestry production operating units will choose without hesitation the economic benefits and ignore the social benefits. Fortunately, such a situation can be changed through local adjustment.

Third, the compensation coverage is too narrow

As far as the compensation area is concerned, we can find legal basis in the "Measures for the Management of the Compensation Fund for Forest Eco-efficiency Set by Central Government", in which the 2nd article regulates "The forestry eco-efficiency compensation fund is dedicated to the construction, cultivation, protection and management of the public welfare forest. And the central finance compensation fund is an important source of the forestry eco-efficiency compensation fund and is dedicated to the construction, cultivation, protection and management of the key public welfare forest." Currently, there are 105 million hm² key public-welfare forest accredited by the nation, among which, however, only 45 million hm² get compensation from the central government. Such situation of narrow compensation coverage can be changed in a short period by the local adjustment. Besides, in the aspect of compensation of the key and ordinary public-welfare forest, there are other problems. First, the compensation amount of the key public-welfare forest is too small to achieve an ideal effect of ecological compensation. Second, there is basically no compensation for the ordinary public-welfare forest, of which the amount is high. This makes the ordinary public-welfare forest disadvantaged in competition with the commercial forest operation. Finally, though it is necessary to separately operate the public-welfare forest and commercial forest, the technical specifications to distinguish and clarify these two types of forest are not clear yet^[7].

TABLE 1 : Policies of compensation in the forestry system

Name of policies or laws	Contents
Notification of Launching Pilot Projects of the Grain for Green Project in the Upper Reaches of the Yangtze River and Upper and Middle Reaches of the Yellow River in 2000	Pilot projects of the Grain for Green Project will be launched in 174 counties (regiments, farms) of 13 provinces (autonomous regions and municipalities): Yunnan Province, Sichuan Province, Guizhou Province, Chongqing Municipality, Hubei Province in the upper reaches of the Yangtze River and Shanxi Province, Gansu Province, Qinghai Province, Ningxia Autonomous Region, Neimenggu Autonomous Region, Shanxi Province, Henan Province, Xinjiang Autonomous Region (including Production and Construction Corps) in upper and middle reaches of the Yellow River (taking Xiaolangdi Reservoir as the bound). The standards of food (unprocessed) compensation for farmlands that are returned to forest per <i>mu</i> per year are 150kg for upper reaches of the Yangtze River and 100kg for upper and middle reaches of the Yellow River. 1kg is 0.7 yuan, borne by the central and billed in the unit of province. The cost of food transportation is borne by local governments and cannot be passed on to farmers.
Implementation Plan of Natural Forests Resources Protection in the Upper Reaches of the Yangtze River and Upper and Middle Reaches of the Yellow River (2000)	The pilot projects of Natural Forest Protection Project started in 1998, and comprehensively launched in 2000. From 2000 to 2010, the total investment of the project has reached 96.2 billion <i>yuan</i> , among which, central compensation taking up 80%, mainly used in public welfare forests construction, forest management and protection, policy expenditure subsidies, the basic pension insurance subsidies, the basic livelihood guarantee fees for laid-off workers and the laid-off workers off settlement subsidies in the Upper Reaches of the Yangtze River and Upper and Middle Reaches of the Yellow River.
Implementation Plan of Natural Forest Resources Protection Project in Key State-owned Forest Regions Like Northeast China and Inner Mongolia (2000)	Stipulating the shunting placement of surplus personnels and social coordination of corporation pension and insurance. The main investment and compensation of the central budget include forest management and protection fees, policy expenditure subsidies, the basic pension insurance subsidies, the basic livelihood guarantee fees for laid-off workers and the laid-off workers off settlement subsidies, etc.

Several Opinions on Further Improving Policies and Measures of the Grain for Green Project (2002)	The state provides farmers who have handed over their farmlands for the Grain for Green Project with free food and cash compensation. The standards of compensation are: the annual subsidy of unprocessed grains per <i>mu</i> farmlands that are returned to forests in Yangtze River basin and the southern region is 150kg; in Yellow River basin and the northern region that is 100kg. The annual subsidy of cash per <i>mu</i> farmlands that are returned to forests is 20 <i>yuan</i> . The fixed number of years of food and cash compensation for Grain for Grasslands is 2, that for Grain for Economic Forests is 5 and Grain for Ecological Forests is 8 for now. The price of food (unprocessed) compensation is borne by the central budget.
Provisions of the Grain for Green Project (2003)	The state provides the land contractor and operators with free food, seed and seedling subsidies and living allowance according to the verified areas of farmlands that are returned to forests.
Decision on Facilitating Forestry Development (2003)	Article 17: "..... the public welfare forests should be managed as the cause of the public good, and mainly relied on government investment for all forest resources that are included in public welfare forests management, the government will provide investors with reasonable compensation in various ways..... the public welfare forests construction investment and forest ecological benefit compensation fund could be divided according to powers or authority of office, and be borne by the central government and local governments accordingly.
Measures for Administration of Forest Ecological Benefit Compensation Fund of the Central Budget (Ministry of Finance and Ministry of Agriculture (2004)	The average standard of compensation fund of the central budget is 5 <i>yuan/mu</i> .year, among which 4.75 <i>yuan</i> is used in management and protection expenses made by state-owned forestry units, collectives and individuals; and the remaining 0.25 <i>yuan</i> is borne by departments of finance at provincial level (including bureau of finance of Xinjiang Production and Construction Corps, hereinafter the same) and used in expenses of forest fire prevention and forest roads maintenance like inspection and acceptance of management and protection of key public welfare forests and setting fire barriers in key public welfare forest areas, organized and launched by the competent departments of forestry at provincial level (including bureau of finance of Xinjiang Production and Construction Corps, hereinafter the same).
Measures for Defining Key Public Welfare Forest Regions by SFA and Ministry of Finance (2004)	SFA organized and launched the definition of key public welfare forest regions nationwide, designating from near 4 billion <i>mu</i> forestry lands 1.562 billion <i>mu</i> key public welfare forests, among which 830 million <i>mu</i> is non-Natural Forest Protection Project regions and 732 million <i>mu</i> is Natural Forest Protection Project regions.
Measures for Administration of Central Forest Ecological Benefit Compensation Fund (2007)	Article 4: "The average standard of compensation fund of the central budget is 5 <i>yuan/mu</i> .year, among which 4.75 <i>yuan</i> is used in management and protection expenses made by state-owned forestry units, collectives and individuals; and the remaining 0.25 <i>yuan</i> is borne by departments of finance at provincial level (including bureau of finance of Xinjiang Production and Construction Corps, hereinafter the same) and used in expenses of forest fire prevention and forest roads maintenance like inspection and acceptance of management and protection of key public welfare forests and setting fire barriers in key public welfare forest areas, organized and launched by the competent departments of forestry at provincial level (including bureau of finance of Xinjiang Production and Construction Corps, hereinafter the same)."

Finally, the compensation channels lack diversity and market mechanism

The way in which the nation compensates for the forest ecological benefit relies on the fund construction. Therefore, the financial transfer payment is the major approach to ecological compensation in China. Although "Forest Law" provides a legal framework for establishing forest eco-efficiency compensation, but it still has certain difficulty in actual operation. The "Environmental Protection Law" clearly pointed out that the responsibility of environmental protection rests mainly on the local. The compensation is mainly used as subsidies for the natural forests protection, returning farmland to forest, and the ecological forest construction while economic losses the local farmers have suffered are not fully compensated and the

principle that the ecological beneficiaries should make some compensation are not fully reflected. For example, in the natural forest protection project, it is explicitly stipulated that the central finance investment should account for 80% and the local finance should support the rest 20%. However, in actual implementation, only 30% has been achieved and in many areas there is no local supporting fund at all^[8].

As far as the forest eco-efficiency compensation mechanism is concerned, from the perspective of operation subject, it can be defined as government-dominant and market-dominant operation modes of ecological compensation^[9]. There is a key issue with the government-dominant compensation that need to be finalized-- the baseline of compensation. Once the baseline is definite, problems such as “who should pay?”, “how much should be paid?” and “who should pay more and who should pay less” can be addressed. In brief, the role which the government plays in the forest eco-efficiency compensation should be to flexibly manage the extents of competition and control, so as to give full play to the function of the market under the premise of taking price control, rationalizing the allocation of resources and guaranteeing the social interests^[10]. The concept of market compensation is relative to that of government compensation. In compensation activities, various market transaction subjects function not completely as the free markets, but undertake market trading activities within the contexts of the relevant standards, policies and laws and regulations laid down by the government. The market compensation plays a significant role in the activities of serving the forest eco-efficiency compensation and improving the ecological environment. On the one hand, market trading means manage to overcome a number of disadvantages of the government compensation, such as the monopoly caused by the low efficiency, etc., and therefore can promote competition among the main bodies of market trading and improve the efficiency of the ecological benefit compensation work; on the other hand, as an effective auxiliary measure of the government compensation, the market trading activities enhance the social benefits and social welfares^[11]. This, to certain extent, also facilitates higher economic efficiency and the best configuration of public goods.

It should be pointed out that, although market trading activities are voluntary exchanges of both parties based on private contracts of their property rights, but the market method can only solve part of the externalities under the system of property rights. Therefore, market method cannot completely eliminate the externalities, either. In light of this, it is a compromise approach to adopt the compensation mode of forest ecological benefits combining both the government and the market. Specifically speaking, the approach is that part of the public goods can be provided by the market instead of the government and accordingly the market can be involved in the supply of the public goods. The feasible schemes are as shown in the following table.

TABLE 2 : Schemes for the compensation mode combining both the government and the market mechanisms

Main mechanism		
Auxiliary mechanism	The government coordination mechanism	The market trading mechanism
The government coordination mechanism	Government mechanism with coercive power	Free market mechanism supervised by the government
The market trading mechanism	Market trading incentive mechanism predominated by the government	Market trading price mechanism

What are shown in the above table are new mechanisms made out of different combinations of the characteristics of the government coordination mechanism and the market trading mechanism, which can be understood as several institutional arrangements to coordinate the activities of the forest eco-efficiency compensation. For instance, though the market mechanism is introduced into the compensation mode of the forest ecological benefits, it by no means indicates that the trading price of public goods can totally equate to the free market price. A reasonable approach is that first let the government set a standard for the item pricing and resource allocation, etc., and then let the market play its role within the scope of the standard.

In particular, as regards to China—a country whose regional economic development levels are greatly different, it is a ubiquitous fact that the compensation job cannot be fulfilled solely by either the government or the market. What the author studies mainly focus on the forest eco-efficiency compensation issue, which belongs to the category of quasi-public goods researches. Thus the thesis will illustrate its point based on the supply proportion of quasi-public goods in different parts of China.

Besides, the author of this thesis believes that non-governmental and non-profit institutions like social groups and environmental protection organizations cannot be the main body of the forest eco-efficiency compensation work but an effective auxiliary part of the work. For example, this type of organizations or institutions can play an important role in the propaganda and mobilization work. They can also go deep into the grass roots and disseminate the concept of the forest eco-efficiency compensation through the most practical and concrete means, which can remote certain unnecessary troubles and increase the efficiency for the compensation work of the government and the market. China has every reason to take advantage of the form of the international trade of public goods (such as the carbon trade) to push its own progress of the forest eco-efficiency compensation work. For example, over the past few decades, China has always been conducting cooperation with relevant countries in Kyoto Protocol in the field of forest carbon trade, which not only to a certain degree makes up the capital shortfalls of China’s forest construction, but also to a certain degree improves China’s ecological situations^[12].

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