

## A Brief Analysis on the Preparation of Natural Resources Balance Sheet

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**Abstract:** Based on the concept of natural resources balance sheet, this paper discusses the necessity of preparing the natural resources balance sheet in China, and analyzes the theoretical basis for the preparation work. It also sums up the problems in the process of preparation at present, and then puts forward some rationalization suggestions accordingly, in hope of providing some references for the future research.

### 1. Introduction

The Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform was reviewed and approved in the Third Plenary Session of 18th CPC Central Committee, which clearly identified a number of issues concerning the preparation of natural resources balance sheet, and stated: "China will explore the preparation of natural resources balance sheet, conduct off-office auditing of the natural resources assets of leading cadres, and establish a lifelong natural resources damage accountability system." This is the first programmatic document presenting the natural resources balance sheet. To strengthen the research on natural resources balance sheet and to understand the actual situation of natural resources in China is not only an important link in the process of speeding up the construction of ecological civilization, but also a guarantee for the smooth implementation of the monitoring of the economic and social development in China.

### 2. The Connotation of Natural Resources Balance Sheet

The natural resources balance sheet has two characteristics. In terms of statement body, it is similar to the national balance sheet, which, by taking the country or region as the main body, reflects the overall status of natural resources; In terms of structural system, it goes beyond the single structure of traditional natural resources accounting, and becomes a comprehensive reporting system through the accounting of natural resources liabilities and owners' equity.

The national balance sheet, by using the technology of enterprise balance sheet, takes the nation as a whole, and classifies and totals up the assets and liabilities of the government, enterprises, inhabitants, financial institutions and other economic sectors. Combined with the characteristics of the national balance sheet, natural resources balance sheet, taking the nation or region as a whole, reflects the national or regional natural resources status through the accounting of the natural resources assets, liabilities, and owners' equity.

Prepared by the government, the natural resources balance sheet, by taking a nation or region as the main body, reflects the status of natural resources. It's worth noting that, in the natural resources balance sheet, the Government, although plays an important role in the national economic activities, is not the object of the report. As the producer of the report, the government is similar to a financial department in a traditional national balance sheet; the nation or region, as the main body, is similar to an enterprise in a traditional national balance sheet; the status of natural resources, as the content of the report, is similar to the economic situation of enterprises in a traditional national balance sheet.

The term of natural resources balance sheet had rarely been mentioned before the proposal of "exploring the preparation of natural resources balance sheet" was put forward in the *Decision*, while what were commonly used are the terms of "natural resources accounting" and

“environmental resource accounting”. As a comprehensive statement, the natural resources balance sheet needs to count not only the quantity and value of natural resources assets, but also the liabilities and owners’ equity of natural resources. It is prepared according to the accounting equation of

$$\text{Assets} = \text{liabilities} + \text{owners' equity} \quad (1)$$

And then, a set of comprehensive statements are established.

From above, the connotation of natural resources balance sheet can be concluded as follows: The natural resources balance sheet is prepared by the government. Through the accounting of the total value of natural resources (assets), the cost of exploitation and utilization of natural resources (liabilities) and the ownership (owner’s equity) of natural resources in a nation or region, it is produced according to the identity “assets = liabilities + owner’s equity”, with the purpose of reflecting the “property” and structure of natural resources assets owned by a nation or region at a specific time.

### **3. The Necessity and Theoretical Basis**

#### **3.1 The Necessity of the Preparation of Natural Resources Balance Sheet.**

The preparation of natural resources balance sheet is the inevitable requirement of ecological civilization construction. In the socialist society, both government forces and market forces are required in the construction of ecological civilization. However, due to the unclear definition of the rights of government and market, little progress has been made in ecological civilization construction. The balance sheet, however, can help identify and specify the management scope of the government and market in a more clear and concrete way, and normalize and coordinate the utilization of resources in each region. In the process of constructing socialist ecological civilization, it is necessary to coordinate economic growth and ecological civilization. Because the natural resources balance sheet can scientifically and systematically reflect the trend change between environment and economic growth. The analysis of the natural resources balance sheet can provide guidance for the economic development. Additionally, it can help make a comparison between resource consumption and economic growth, scientifically and comprehensively measure the cost of economic growth, and the influence of economic growth on the environment.

The preparation of natural resources balance sheet can promote the transformation of the assessment methods of leading cadres. To improve the assessment methods is an important function of natural resources balance sheet. Leading cadres are required to get things done in their own places. The data of natural resources balance sheet is directly related to the effectiveness of the leadership work. On the one hand, it can provide specific basis for the principle of reward and punishment of leading cadres. On the other hand, it can combine the achievements of the government with the performance of individual cadre, thus motivating leading cadres to pay more attention to natural resources.

The preparation of natural resources balance sheet can promote the further transformation of economic development mode. Natural resources, as non-individual-owned resources, cannot be used and destroyed by enterprises or individuals. The rate of use and the quantity of natural resources within a specific period will be directly related to the cost of business economic growth. A balanced state is needed between the inputs and outputs of the natural resources balance sheet. Otherwise, it will directly affect the level of economic growth. This makes the natural resources balance sheet more scientifically oriented in the process of economic development. Through the preparation of the natural resources balance sheet, a comprehensive and specific analysis of the utilization of natural resources can be made, so as to effectively transform the economic development mode.

#### **3.2 Theoretical Basis for the Preparation of Natural Resources Balance Sheet.**

The sustainable development theory. As the largest developing country in the world, China has a

vast territory and abundant natural resources. However, it is also the most populous country in the world. In spite of the abundant natural resources, the natural resource per capita allocation is far from the world average level. In China, with the economic development in recent decades, little attention has been paid to the protection of the environment, which leads to severe environmental pollution and resource shortages, thus strongly affecting the future sustainable development of China.

The public accountability theory. Public accountability means that the public entrusts the right to manage the public resource environment and the right to use the public resource environment to the government and other social institutions, and the entrusted government and related social institutions are obliged to explain to the public about all the activities they have undertaken. Public accountability is based on the principal-agent relationship between the government and citizens. And, the public accountability theory consists of two principal aspects: behavior and reporting.

Environmental and economic accounting system of ecological resources. The System of Environmental and Economic Accounting (SEEA) is a theoretical method for the accounting of the economic benefits of natural resources. The so-called natural resources economic accounting system is actually based on the general national economic accounting system. Natural resources and other factors are included into the accounting system, and the system accomplishes the accounting of the relationship between the national economy and nature and provides necessary basis for future analysis and evaluation of the relationship between the natural resources environment and the economy. Through the reinforcement of the management of natural resources and macroscopic analysis and observation, a coordinated development between economic, social and environmental benefits has been achieved. Therefore, both the important theoretical basis and the source of data information for the preparation of natural resources balance sheet rely on the resource environmental accounting system. From the perspective of function, SEEA shows the relationship between the national economy and the natural resources environment. It involves the changes of the indicators brought about by the increase or decrease of natural factors such as the environment and natural resources to the total economic volume. It is also an economic growth mode that takes into account the impact of environmental factors; the natural resources balance sheet reveals the level of ecological construction at a certain point of time, taking into account the current situation of natural resources. So it can be regarded that there is a complementary and interactive relationship between SEEA and natural resources balance sheet.

#### **4. Problems and Countermeasures in the Process of the Preparation of Natural resources Balance Sheet**

##### **4.1 Problems.**

The natural resources are composed of mineral resources such as water resources and land resources, biological resources such as plants and animals. and ecological and environmental resources like air, etc. The natural resources balance sheet includes natural resources and social economy, covers a wide range of disciplines, and involves the jurisdiction scope of Environmental Protection Department, Ministry of Land and Resources, and other sectors, thus increasing the complexity of the preparation of natural resources balance sheet. In the process of preparation, first of all, people are not fully aware of the strategic position of natural resources in economic development. In addition, there are few relevant accounting systems and statistical regulations and technical regulations for the preparation of the sheet. Secondly, the technical methods in the preparation process are not mature enough. A standard normative system has not yet been formed for asset accounting and evaluation technology. Furthermore, the technology still needs further improvement. Thirdly, the unsound statistical data system and the limited data coverage of natural resources make it difficult for the preparation work. It also reduces the data reliability of the balance sheet, which then further affects the overall assessment.

## **4.2 Countermeasures.**

In view of the above-mentioned problems in the preparation of natural resources balance sheets, and in order to better prepare natural resources balance sheets, it is necessary to focus on the following aspects:

### **4.2.1 To establish a unified cross-department and inter-disciplinary platform**

The establishment of a unified platform involves the participation of many organizations and institutions. It needs to be led by the Ministry of Finance and the Bureau of Statistics, and also needs the participation of the Ministry of Environmental Protection, Ministry of Land and Resources, Forestry Administration, the Ministry of Water Resources and other relevant departments. At the same time, different project preparation teams need to be organized at the grassroots level of the platform. The establishment of these teams is based on different resources and environment elements. Under the unified strategic deployment, multiple preparation groups will jointly work out the work plan and set work objectives, which is the fundamental guarantee for the successful preparation of natural resources balance sheet.

### **4.2.2 To determine the focus and scope of the first breakthrough**

In the process of preparing the natural resources balance sheet, the first thing to be done is to construct the theoretical framework of the balance sheet. With regard to the construction of the theoretical framework of natural resources balance sheet, first, it is possible to fully draw on international experience and establish an ideal internationally compatible framework for natural resources asset accounting system that can be implemented step by step. Second, it is necessary to propose the accounting scheme of the physical quantity of natural resources assets and the accounting scheme of the value of natural resources assets. The proposal of the natural resources value accounting scheme is fundamental and difficult for the natural resources asset accounting system, and it needs to identify different situations and to be effectively carried out and broken through step by step. Finally, it is necessary to determine the content and function of the natural resources balance sheet.

### **4.2.3 To build a scientific and complete statistical indicator system for natural resources**

The indicator system generally consists of statistical indicators reflecting environmental pollution, ecological environment and natural resources.

Taking the statistical indicators reflecting the ecological environment as an example, the ecological environment generally refers to what we usually call forest environment, water environment, soil environment, atmospheric environment, etc. The accounting of ecological environment, like it was introduced before, involves the benefits and degradation of the ecological environment. The ecological environment, as an objective existence, has actual benefits. For example, the forest ecological environment effectively prevents soil desertification and water and soil erosion. Now, the objective environmental benefits are converted into the value of the environment, that is, the benefits of ecological environment. The degradation of ecological environment refers to the value of the loss to the natural environment in the economic development or other damage.

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