

ORIGINAL RESEARCH ARTICLE

Research on the effect of natural resources audit on high-quality economic development

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ABSTRACT

As an important part of national audit, natural resources audit can play its unique role in environmental protection. By combing the coupling thread between economic development and natural resources audit, the difficulties in the development of natural resources audit and analyzing the key points of audit work, this paper analyzes the role of natural resources audit in high-quality economic development. The results show that natural resources audit, as an independent monitoring tool, effectively plays the role of immune system; through advance notice, warning, suggestion and repair, the difficult problem of ecological environment protection has been effectively grasped, and the contradiction between ecological protection and economic and social science development can be alleviated to a certain extent.

Keywords: Natural Resources Audit; High-Quality Economic Development; Promotion of Ecological Progress

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1. Introduction

In recent years, China's economy has developed rapidly. With the accelerating urbanization process, environmental pollution is becoming more and more serious. The environmental carrying capacity can't meet the current social development needs, and the contradiction between economic sustainable development and environmental carrying capacity is becoming more and more intensified. Since the 18th National Congress of the Communist Party of China, the state has vigorously promoted the construction of ecological civilization and incorporated it into the "five in one" master plan of the cause of socialism with Chinese characteristics. Extensive economic development^[1] has led to serious damage to China's ecological environment, such as deforestation, random dumping of pollutants, frequent haze and other phenomena. Generally speaking, there is still a certain degree of contradiction between ecological environment protection and economic development, and many ecological problems have accumulated over a long period of time. Therefore, the increasingly deteriorating ecological environment has become the shortcoming and bottleneck of high-quality economic development.

In the new era, building a well-off society in an all-round way has entered the decisive stage. The great changes in the world are accelerating due to the outbreak of the COVID-19 epidemic. Against the background of the continuous impact of epidemic situation, China's economy has maintained a stable and long-term positive trend in the turbulent situation. In the fourth quarter of 2020, the GDP growth rate was 6.5% year-on-year and 6.2% quarter-on-quarter. With the rapid economic de

velopment, the long-standing phenomenon of environmental pollution has been neglected. For example, in 2017, Shanghai Yunying Composite Materials Co., Ltd. illegally discharged the steel plate cleaning solution with strong pollution generated in the production process into nearby rivers and sewers without the approval of relevant professional departments, resulting in serious pollution of the water quality of Lanling River; in 2018, Anhui Wuhu Baoxun Precision Screw Co., Ltd. directly dumped 62.88 tons of waste acid, sludge and other hazardous wastes generated in the production process into the Yangtze River, and the company that handles these polluted wastes is not qualified for hazardous waste disposal, and the company has not issued the hazardous waste transfer certificate before this, causing serious pollution in the Yangtze River Basin. From this point of view, with the economic development, the neglected environmental problems emerge one after another, which has brought great negative impact on the high-quality economic development.

In the economic responsibility audit, the role of promoting economic development can be achieved by supervising the performance of the auditees' entrusted economic responsibilities. When implementing the construction of national ecological civilization and maintaining the healthy development of ecological environment, natural resources audit mainly supervises the management of natural resources during the tenure of leading cadres. The economic development needs a good ecological environment. On the road of environmental protection, natural resources audit plays the role of supervisor, and it is necessary to establish ecological environment red line to uphold and maintain high-quality economic development.

2. Literature review

In 2021, the growth target of China's gross national product is set at more than 6%, which represents the stability and self-confidence of China's economic development. Lin^[2] analyzed the new development model of China's economy, and he thinks that China's economy will continue to maintain steady development in the upheaval. Wang *et*

al.^[3] think that China's current economic development is at a new starting point. If we want to achieve sound economic development, we must focus on environmental issues, and economic construction can't take destroying the environment as the premise. China's economic development can't be separated from the development of environmental resources.

Zhang^[4] pointed out that the environmental protection actions of local governments play an important role in improving the ecological environment, and the effects and efficiencies of different environmental protection actions are different, so attention should be paid to whether the policies are implemented and whether they are effectively implemented^[4]. Xin^[5] thinks that we should strengthen supervision and audit natural resources assets from the aspects of system construction, policy implementation and capital use. In the performance evaluation of local government leading cadres, adding the parts of environmental protection and ecological sustainable development will greatly promote the sustainable development of China's economy^[6]. Cao *et al.*^[7] think that natural resources assets are social public goods, and corporate social responsibility will be improved and strengthened to a certain extent through natural resources audit. However, due to inadequate supervision and other reasons, or the lack of relevant supporting measures, enterprises are not so active in treating environmental protection^[7]. Therefore, when the higher-level government audits the natural resources assets in the lower-level areas, the lower-level local leading cadres should set corresponding local supporting measures according to the specific situation of the local environmental protection areas, cooperate with the introduction of regional environmental protection regulations, and standardize, legalize and rationalize the natural resources management system.

The global climate change has made the living environment of human beings worse gradually. Facing the survival challenge, "low-carbon economy" has been pushed to the historical stage to coordinate the contradiction between economic development and environmental protection. Zhang *et al.*^[8] put forward that natural resources audit is a new standard of so-

cialized information evaluation in the new era. We should supervise, evaluate and examine the government's environmental governance, the use of special funds for environmental protection and the environmental protection benefits, and introduce natural resources audit into low-carbon economy in order to achieve a win-win situation in which the purpose of low-carbon economy and natural resources audit is consistent. Find out and raise problems through audit, and give feasible suggestions for the development of environmental protection, thus realize energy saving, emission reduction, resource saving, environment improvement and ecological carrying capacity improvement, and make economic activities related to environment meet the requirements of high-quality economic development.

To sum up, most scholars have put forward that natural resources audit plays a positive role in improving the environment, raising public attention and implementing China's ecological civilization construction. This paper analyzes the effect of natural resources audit on high-quality economic development from the coupling context of natural resources audit and high-quality economic development, the existing problems of ecological environment detection and the key contents that should be paid attention to in the practice of natural resources audit.

3. The coupling context of natural resource audit and high quality economic development

3.1 The core element of economic and social development is natural resources

The report of the 19th National Congress of the Communist Party of China pointed out that the future development mode of China's economy will shift from high-speed growth to high-quality growth. Natural resources provide spatial support and material foundation guarantee for economic development, and the carrier and core element of social energy is natural resources. However, under the long-term uncontrolled development of human production and life, the current ecological environment is gradually deteriorating, the biodiversity is

constantly decreasing, and the ecological carrying capacity is already overwhelmed. Therefore, the occupation of ecology and the loss of resources have far exceeded its regenerative capacity. Natural resources provide human beings with necessary living materials, labor materials and labor objects. With the rapid development of science and technology, people use science and technology to continuously exploit natural resources in depth, and the utilization of natural resources assets is also constantly expanding in depth. The basic materials provided by natural resources are not enough to meet people's needs, so through labor production, the materials needed by human society are reprocessed. Therefore, social production and reproduction are based on the utilization of natural resources assets, and natural resources are also the basis of labor relations and the value of goods. Therefore, from this perspective, the core element of economic and social development is natural resources.

3.2 The impact of natural resources audit on high-quality economic development

3.2.1 Standardize government behavior

On the one hand, the government's financial revenue and expenditure and the allocation and use of special funds for environmental protection should be standardized. Local governments are gradually strengthening environmental protection, which requires the investment of environmental protection funds to be constantly increased. The audit of natural resources and environment mainly pays attention to the running track of special funds for environmental protection, and includes the budget, allocation and use of funds into the scope of review. During the cycle of environmental protection special funds (from approval to use), the key content is to reveal whether the budget arrangement of environmental protection funds is reasonable, whether the allocation is in accordance with relevant regulations, whether there are unauthorized misappropriation and waste^[9]. In addition, the use effect and efficiency of environmental protection funds will be included in the key projects of natural resources audit. By standardizing the government's fiscal revenue and expenditure and the

use of special environmental protection funds, the government's role will be continuously evaluated and reviewed in the battle of environmental protection, so as to gradually realize a green economy and promote sustainable development.

On the other hand, the supervision of natural resources audit is the supervision of various environmental governance policies promulgated by the state. For the problems found in the audit process, it puts forward rectification opinions according to local conditions and re-examines the rectification situation of the audited institutes.

In the follow-up audit results of the implementation of major national measures released by the National Audit Office, the practices of ecological restoration projects in key areas are summarized, and the rectification progress of pollution prevention and other issues is put forward, which is helpful to implement relevant environmental protection policies, improve the efficiency of environmental protection measures, and ultimately play a role in improving ecological carrying capacity and ecological self-repair ability, and promote high-quality economic and social development.

3.2.2 Promote officials to perform their duties

At present, audit institutions at all levels include compliance with laws and regulations, decision-making on ecological environment protection and achievement of environmental protection targets according to the relevant requirements of the state, and set up state-owned natural resource asset management and natural ecological supervision institutions according to the requirements of the report of the 19th National Congress of the Communist Party of China. Make further demands on audit institutions, adhere to the independence of audit, perform supervisory duties according to law, and ensure that all assets must be audited and all assets must be audited strictly.

Through the performance appraisal and accountability supervision mechanism of leading cadres, the audit work of leading cadres' performance is carried out. In the management of natural resources assets and the protection of ecological environment, if there are any outstanding problems in

the performance of leading cadres' duties, it is necessary to reveal and reflect them, urge leading cadres to strengthen their sense of responsibility and power supervision, break the long-standing inertia thinking of leading cadres to pursue economic growth by relying on resources, and supervise the protection, pollution control and resource conservation and utilization of ecological environment such as water, atmosphere and soil during their term of office. If the decision-making or behavior of environmental damage occurs, it will affect the personal achievements of leading cadres, thus prompting them to put more energy into resource conservation and pollution prevention in environmental protection, so as to provide guarantee for exerting ecological benefits, planning high-quality development, promoting a clean and beautiful world and realizing green economy.

3.2.3 Promote green innovation of enterprises

With the strengthening of environmental protection awareness in all walks of life, enterprises, as the main participants of social economy, should also bear due social responsibilities while maximizing their own interests. In the national audit system, natural resources audit is one of the most important components, which plays an important role in supervising enterprises in various regions to realize green production and energy-saving cycle. On the one hand, the society and the government pay more attention to the pollution discharge of enterprises and strengthen supervision. Therefore, compared with environmental protection enterprises, heavy industries and heavily polluting enterprises are subject to more restrictions, which further affects the business performance of enterprises. Then, enterprises are forced to increase environmental protection investment, carry out green innovation, use energy-saving and environment-friendly and efficient raw materials to produce products, and realize green innovation, green drive and comprehensive upgrading and transformation of enterprises. On the other hand, the implementation of the audit of natural resources makes the leading cadres increase the punishment for those who destroy environmental resources. Therefore, the heavily polluting enter-

prises will face higher punishment risks, and their environmental pollution costs will further increase. Therefore, from this point of view, in order to achieve its profitability, enterprises have to carry out green innovation to reduce the impact of environmental protection costs on business performance to an acceptable level. Through the audit of natural resources, we will promote enterprises to carry out green innovation, green production and green upgrading, further realize low-carbon economy in an all-round way, better implement ecological civilization construction and promote high-quality economic development.

4. Analysis of difficulties in natural resources audit

4.1 Environmental monitoring difficulties

The premise of audit work is to obtain accurate data of natural resources. However, due to the abundant natural resources, complex terrain, different characteristics of natural resources in different regions and lack of professional talents in China, there are big problems or lags in obtaining data of natural resources^[10]. The scattered, incomplete and inaccurate information in the database makes it difficult for all regions and departments to grasp the data information of local natural resources, which is a common problem in current audit work.

At present, China has not carried out systematic and comprehensive monitoring of natural resources nationwide, and the connotation and classification of natural resources have not been unified^[11], resulting in different classification systems, technical standards, investigation methods and so on adopted by the seven social administrative departments of soil mineral resources, forest resources, grassland resources, land resources, marine resources, meteorological resources and water resources. There are some problems, such as inconsistent or even contradictory natural resources databases among departments, especially in the data of cultivated land, forest, grassland and tidal flat, with serious duplication and overlap, which increases the difficulty of data acquisition in natural resources audit.

4.2 The consciousness of leading cadres needs to be changed

Since China's tax-sharing reform in 1994, the administrative and financial rights of central and local governments have been established, and the main behavior of local governments has been strengthened. In the performance appraisal of local governments, GDP growth is the main indicator. However, while local governments are pursuing the growth of extensive economic, people's sense of happiness has not been improved correspondingly, and environmental deterioration has also brought huge negative social impacts. In order to pursue economic development, officials often think that to achieve considerable economic growth, it is inevitable to sacrifice the environment, and relax the protection of the environment for temporary economic growth. The large amount of pollutants discharged by "three high" enterprises in daily life makes it intolerable and unnecessary for economically developed areas. However, underdeveloped areas need "three high" enterprises with high profits and high returns to drive local economic development, so there is a misunderstanding that economic development and environmental protection become opposites. Once there is a contradiction between economic development and environmental protection, local governments would rather sacrifice the environment and protect the economy. Therefore, in recent years, ecological problems such as serious urban smog, serious river pollution, decreased biodiversity and decreased environmental carrying capacity have become worse.

4.3 Pollution prevention and control in some areas is not in place

Take the ecological and environmental problems in Bohai Sea as an example. Announcement No.9 of 2019, Audit Results of Ecological and Environmental Protection in Bohai Sea Region¹, issued by the National Audit Office pointed out that, first of all, the prevention and control of agricultural

¹ National Audit Office of the People's Republic of China. Interpretation of the announcement of the audit results of ecological environment protection in the Bohai Rim region. <http://www.audit.gov.cn/n4/n19/c134060/content.html>.

non-point source pollution is not in place, and only the planting industry needs to reduce the amount of pesticides and fertilizers used, neglecting agriculture and wood industry, which leads to the increasing use of pesticides and fertilizers instead. Secondly, there are weak links in the prevention and control of industrial point source pollution in important fields. According to the report, in more than 100 industrial zones, there are a series of problems, such as failing to build a pollutant treatment station according to the regulations, low detection rate, insufficient use of pollution treatment facilities and coping with inspections, etc. Thirdly, some important eco-environmental policies have not been effectively implemented. The pilot cities in five provinces and cities have not yet issued relevant policies or actually implemented them. It is found that more than 100 pollution outlets have not been approved, and more than 80 enterprises failed to install testing equipment as required. Finally, resource development and ecological environment restoration and management are not coordinated well enough. The development rate of water resources in five provinces and cities has reached 99%, which is five times more than that of the whole country. However, there are a lot of problems in water pollution prevention and control, which leads to the slow progress of ecological restoration projects.

4.4 Coordination and cooperation involving many functional departments

Governments from the central to the local level manage and lead national affairs (politics, economy, culture, ecological civilization, social affairs, etc.) with extremely wide business scope and strong policy, which is closely related to the practical interests of the people, so it has a very important influence. The leading group for auditing natural resources assets is composed of various organizational departments, administrative departments such as the Commission for Discipline Inspection and Supervision, auditing, environmental protection, forestry, water affairs and other departments responsible for managing natural resources assets and protecting ecological environment. Form a work force among departments, strengthen communication, coordina-

tion and support, and jointly promote the implementation of natural resources asset management and ecological environment protection responsibilities of party and government leading cadres.

When conducting the audit of natural resources for leading cadres, every link, from policy formulation and implementation to policy implementation effect and efficiency, needs the cooperation and coordination of various functional departments. For the problems found in the audit that involve multiple functional departments, such as the non-compliance of sewage discharge in various regions, whether there is a problem in supervision or in the local implementation of the policy, auditors should find out the facts from the source. Since the problems found are concrete problems existing in some specific places, it will increase the unpredictable difficulty for the development of audit business without the coordination of various functional departments in various places. In practical work, an audit business involves various specific audit tasks such as capital investment, management and protection status of natural resources assets, residual value of assets, compliance with relevant laws and regulations, etc. The communication and cooperation between auditors and various departments will inevitably lead to problems in the development of audit business due to errors in procedures or time.

5. The key point analysis in promoting high-quality economic development of natural resources audit

5.1 Pay attention to the implementation of the national resource strategy

The audit of natural resources involves many strategic key ecological fields, including land resources, water resources, forest resources, atmosphere and so on. These fields are closely related to people's survival and life. In the construction of ecological civilization, the effect and efficiency of leading cadres' policy implementation are included in the scope and evaluation of audit. It is analyzed whether local governments neglect the environmental construction while vigorously developing local economy, pay close attention to the pollution

discharge situation of polluting and resource-based enterprises in the region, evaluate whether local governments have fully considered the ecological recoverability and environmental carrying capacity, set up ecological red lines, etc. when formulating development strategies. Inspect the implementation of regional governments' responsibility for ecological civilization construction on the spot, and pay attention to the environmental pollution behaviors that violate regulations and check if the penalties are in place. It should be checked that whether there are specific documents related to environmental repair, maintenance, use and development in the later period. For example, in the audit of water resources assets, attention should be paid to the supply side and demand side of water resources^[12], and the government should build and manage water conservancy infrastructure, so that the quality and quantity of water resources can meet the needs of all levels of society and water resources can be recycled. Manage the amount of water resources used in all fields of social production and life, and make the maximum use of water resources on the premise of ensuring sustainable development.

5.2 Pay attention to the use of policy funds

Through the supervision of the collection, distribution, management and use of water resources fees, vegetation protection fees, ecological maintenance funds, project protection funds, afforestation funds and other related funds in various regions, we will monitor whether there are unreasonable collection, inadequate management, incorrect use and irregular distribution, as well as whether there are long-term occupation of funds and unauthorized misappropriation of funds. During the tenure of leading cadres, the above funds will be comprehensively examined and supervised, and the implementation of laws and regulations on natural resource asset management and ecological environment protection will be further strengthened, so as to protect the ecological environment.

5.3 Pay attention to the collection of natural resource assets data

In the process of audit implementation, auditors should collect relevant data from the auditees and

their organizations according to the audit objects, audit contents and audit priorities, analyze and sort out the data, and form audit working draft.

The audit work is based on the collection of audit data, collecting data from natural resources and assets administration, water-control bureau, relevant environmental protection departments of environmental protection bureau, etc. The major functional sections are comprehensive geographic information data such as main functional zoning data, geographic national survey data, general land use planning data, urban spatial planning data, land and other thematic geographic information data, including data from various natural resources business systems and sharing and exchange platforms, water, forest, mineral resources and atmospheric data. At the same time, in order to enrich the audit content and improve the audit efficiency, the Internet can be used to obtain economic big data.

5.4 Pay attention to the organic combination of “point” and “surface”

We should grasp the key points of the audit area. For example, in Shaanxi's ecological environment protection, resource endowment and environmental conditions are the basis for determining the audit key points, and keeping close to ecological orientation and following important instructions are the key points for determining the audit key points. The responsibility of leading party and government cadres is to take charge of the overall work within their administrative areas, and the audit of natural resources assets leaving office is targeted at leading cadres. Therefore, the problems revealed by the audit more intuitively reflect the universality and tendency of the problems in the audited areas. In the process of problem checking, big data auditing and traditional auditing are integrated and innovated. Multi-perspective analysis, multi-field evidence collection, overall analysis on the surface and precise navigation on the point should be applied, so as to reveal the problems found by auditing from different dimensions. We should not only to find out the facts of the problems, but also to find out the root causes of the problems are and the consequences they may bring.

6. Conclusion

Under the mode of low-carbon economy, the overall goal of natural resources audit is to promote the rational and effective use of low-carbon policies, low-carbon economic levers and low-carbon technologies, ensuring the healthy development of low-carbon economy and slowing down climate change. Thus promote the sustainable development of human society and economic society through audit supervision. According to the relevant laws and regulations of the state, the water resources, forest resources and air resources of various regions are exploited. Financial allocations, financial information and performance of responsibilities are reviewed and supervised. Promote the implementation of low-carbon economic policies, rationally develop and utilize low-carbon technologies, balance the leverage of low-carbon economy, abandon the development model of blindly pursuing GDP, protect the ecological environment, and promote high-quality economic development.

Under the audit system of natural resources assets, government officials are facing greater pressure of environmental legitimacy and improving ecological environment. In order to meet the needs of political achievements, local governments shift the pressure to local enterprises, forcing enterprises to increase investment in environmental protection, carry out technological innovation, produce green, energy-saving and efficient products, better fulfill the responsibility of natural resources and environmental protection, and further promote market transformation and optimize market structure.

Strengthening the supervision of the audit of natural resources assets is the key and effective way to ensure China's sustainable development, giving full play to its supervisory and guiding role in maintaining the high-quality development of ecology and economy, and coordinating the economic and social development with the sustainable development of ecological environment. In the protection and management of natural resources, natural resources audit can prevent excessive consumption and unreasonable utilization of resources, and reveal natural environmental problems such as waste,

destruction and abuse of resources. The government and people can be more aware of the seriousness of ecological deterioration, comprehensively protect and improve the ecological environment, improve the ecological carrying capacity, further promote the construction of ecological civilization and promote the high-quality development of China's economy and society.

Conflict of interest

The authors declared no conflict of interest.

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