



# Current Situation of State Management on Mineral Mining in The North Eastern Vietnam and Tasks Proposal for Audit Activities

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## Abstract

Vietnam is a country with abundant mineral resources, in recent years, the minerals mining (MM) has affirmed its very important position in contributing to the development of the national products, alleviate Vietnam's economy to a higher level at a rapid pace in recent years. However, the MM in recent years has caused many negative impacts on long-term economic and social development, posing unpredictable consequences on the environment... This leads to the need to strengthen the Government's management work. In the effort to manage mining extraction, this is considered a complex field that has not been uniformly understood, and there remains several inadequacies and insufficient support in the process of performing management procedure. Therefore, although the Government requires to tighten the management of mineral exploitation, the effectiveness and efficiency are not reached, and many mistakes occur in the process of the procedure. Given the mentioned challenges of the management of control and the audit results of the State Audit on internal audit in recent years, there are a number of important tasks that need to be focused on auditing, including (i) Audit of mining license; (ii) Audit of mined reserves and output; (iii) Audit of environmental safety protection and inspection of mining activities.

**Keywords:** minerals mining, audit, north-eastern Vietnam

## Introduction

The Northeast is one of the richest regions in terms of mineral resources in our country. Here there are important minerals such as coal, apatite, iron, copper, lead, zinc, tin... Minerals are distributed in the Northeast such as: Coal (Quang Ninh, Thai Nguyen); Copper, gold (Thai Nguyen), minerals for building materials such as stone, limestone, mineral water, clay (Hai Phong, Hai Duong, Quang Ninh). Mineral exploitation is considered the strength of this region. However, in recent years, this activity has caused many adverse impacts on the sustainable development of the economy and society as well as environmental consequences... This leads to the need to strengthen the state management of mineral exploitation.

State management of mineral resource exploitation and environment is a complex field, not uniformly understood, and at the same time facing many shortcomings and overlapping issues in the process of performing the functions of management. Despite tightened state management efforts, the effectiveness has been limited, resulting in numerous irregularities in mineral exploitation, leading to resource waste, loss of state budget revenues, uncontrolled mining activities, land expropriation from many households for mining purposes, negative public perception in society and alarming environmental consequences (Chinh et al, 2022).

With approaches from the perspective of management science, combined with relevant laws on mineral exploitation, the authors focus on the following main contents:

- Point out fundamental and important contents in the state management of mineral exploitation;
- Collect and analyze actual data to clarify inadequa-

cies in the state management of mineral exploitation in localities in the Northeast;

- Propose audit tasks that the State Audit Office of Vietnam (SAV) needs to focus on auditing mineral resources

## 1. Study area and data collection

Study area: The localities having data collected for research and evaluation include 5 provinces in the Northeast Vietnam: Quang Ninh, Thai Nguyen, Hai Duong, Hung Yen and Hai Phong. In recent years, in the Northeast, mining projects have been implemented in thousands of mines and mining sites, with a wide range of mineral types. Figures are shown in table 1.

Data collection: To analyze and evaluate the current situation of state management on mineral exploitation, the authors rely on the provisions of the Law on Minerals (National Assembly, 2010) to determine the content of the state management on mineral exploitation. Accordingly, the State management on mineral exploitation includes the following basic contents:

- Build and promulgate legal documents, create a legal framework for mineral exploitation activities;
- Build mineral exploitation strategy/planning;
- Promulgate and enforce policies on issuance of mining licenses; recognition and approval of mineral reserves according to its competence;
- Promulgate regulations on fulfillment of financial obligations, enforcement of measures to protect the environment, ensure security, social order and safety in the locality where the mineral exploitation project is located;

Tab. 1. Mining projects and mineral types of the Northeast in 2017–2021 period (Chinh et al, 2022)

No.	Provinces and cities	Mineral type	Mining projects	Typical mineral types
1	Quang Ninh	33 mineral types	243 mines and mine sites	- Coal - Stone for building material - Clay for roofing tiles - Construction sand, pyrophyllite - Cement limestone - Clay for cement production - Mineral water
2	Hai Phong	21 mineral types	201 mines and mine sites	- Cement stone - Stone for building material - Clay, kaolin - Sand
3	Hai Duong	24 mineral types	186 mines and mine sites	- Upper cement stone - Stone for building material - Clay, kaolin - Sand
4	Hung Yen	14 mineral types	126 mines and mine sites	- Clay, kaolin - Sand
5	Thai Nguyen	16 mineral types	342 mines and mine sites	- Coal, manganese - Clay, brick, tile - Sand and gravel, backfill soil; - Promising mineral resources primarily distributed in mountainous districts, such as copper, gold, lead-zinc.

- Propagate and disseminate laws on minerals and environment;
- Inspect, examine, supervise and handle violations of the law on mineral exploitation.

With data collected from the scientific research project of the authors, thematic reports of the State Audit Office of Vietnam for each locality on state management on mineral exploitation in the period of 2017–2021, combined with the collection of practical information from the reports of the Government Inspectorate, the indictment of the Supreme People's Procuracy on the wrongdoings of mining enterprises discovered and made public in 2022 and 2023, the article does not present each content of state management on mineral exploitation, but focuses on pointing out the shortcomings and typical existing problems in the promulgation and enforcement of the law on mineral exploitation management, thereby highlighting the research results.

## 2. Results and discussions

### 2.1. Inadequacies in the state management on mineral exploitation in localities in the Northeastern Vietnam

#### a. Shortcomings in the promulgation and enforcement of the law on the issuance of mineral exploitation licenses

The Law on Minerals (National Assembly, 2010) stipulates the auction of mineral exploitation rights, which is established to help enterprises and individuals participate in the exploitation of mineral resources, create jobs, contribute to budget revenues, etc. Accordingly, in order to ensure publicity, transparency and increase revenue for the State budget, the issuance of mineral exploitation licenses, enterprises are required to auction mineral exploitation rights. However, according to Article 78 of this Law, "Auction of mineral exploitation rights shall be carried out in areas of mineral activities, except for areas designated by competent state agencies as areas where mineral exploitation rights are not auctioned" (National Assembly, 2010). This provision is understood to mean that the auction of mineral exploitation rights is carried out only in areas where mineral activities are located, for areas where there are no mineral activities (even if minerals are determined), they are entitled not to auction mineral exploitation rights. The provisions of the Law did not specify the

criteria for delineating auction areas and non-auction areas, but assigned the Government to detail them." This has led to a situation where the criteria for delineating non-auction zones are too broad and the fact that the vast majority of mineral deposits are classified as non-auctions.

To date, the Law on Minerals has come to life for almost 13 years. The law stipulates that only certain special cases are not subject to auction. This is a content that was considered a breakthrough when it was first introduced into the Law on Minerals. However, according to a report summarizing 10 years of law enforcement, the Ministry of Natural Resources and Environment (Ministry of Natural Resources and Environment, 2022) gave disappointing figures:

- Accordingly, until June 2021, the Ministry of Natural Resources and Environment successfully auctioned 6 mineral areas, accounting for 1.4% of total 421 issued licenses. Thus, at the Central level, more than 98% of licenses are issued in a begging-giving fashion.
- The situation at the local level is not much different. Just over 9% of the nearly 4,280 licenses were issued by auction. Thus, 91% of licenses are also issued in a begging-giving fashion. For provinces in the Northeast, the proportion of licenses issued by auction in the period of 2017–2021 was higher, but still low, only 18.5%, as shown in Table 2.

Many enterprises do not have expertise in mineral exploitation, or are incompetent but still issued mining licenses, so when issued, (i) either do not carry out the mining; or (ii) resell to another investor; or (iii) waste resources due to inefficient business. (Chinh et al, 2022).

In many localities, as soon as mineral deposits are discovered, the managing authorities issue licenses to individuals and businesses to exploit the resources without considering future needs (SAV region 6 pointed out that in Quang Ninh, out of 11 additional mineral exploration sites, 10 new mining licenses were issued.

#### b. Shortcomings in reserve management

The current recognition and approval of mineral reserves also face significant contradictions due to the inaccurate methods of determining reserves (According to the provi-

Tab. 2. Situation of issuance of mineral exploitation licenses in localities in Northeastern Vietnam. Source: Thematic Audit Report on Mineral Resources of SAV Specialty 2, SAV Region 6) [4],[7]

No.	Provinces and cities	Number of licenses issued through auction of mineral exploitation rights	Number of licenses issued without auction	Total number of issued mineral exploitation licenses	Percentage of licenses issued through auction
1	Quang Ninh	5	19	24	20.8%
2	Hai Phong	0	6	6	0
3	Hai Duong	0	11	11	0
4	Hung Yen	0	16	16	0
5	Thai Nguyen	16	40	56	28.6%
	<b>Amount</b>	21	92	113	18.5%

Tab. 3. Increased state budget revenue from resource taxes through auditing and tax reconciliation activities in Quang Ninh and Hai Phong by SAV Region 6. Unit: million VND. Source: Chinh et al, 2022 [1]

No.	Provinces and cities	2017	2018	2019	2020	2021
1	Quang Ninh		875		1,589	3,983
2	Hai Phong	635	35	3.7	118	83,883

sions of Circular No. 60/2017/TT-BTNMT, the highest level of geological certainty for mineral reserves, level 111, can still have a geological error of up to 20%). In practice, the following issues have arisen:

- The approved reserves are much larger than the actual exploitable output;
- Approved reserves are much smaller than the exploitable output.

As a result, some entities suffer losses due to the issuance of mining rights, while others benefit greatly, causing unfairness. Moreover, this situation leads to resource wastage and loss of state budget revenue.

Typically, Vinh Tien Coal Mine (Thai Nguyen), with approved coal reserves of 200,000 tons, but only from March 2019 to August 2021, Dong Bac Hai Duong Company illegally exploited over 3.1 million tons of coal and accompanying minerals, 23.4 times higher than total licensed output of 18-year term; with a capacity 115 times higher than the approved level (Do Tan, 2023)

Or at the limestone mine of Thuy Nguyen District (Hai Phong), SAV Zone VI used drone technology to restore the mining terrain, determined that the mining output of this mine exceeded many times the approved reserves (Chinh et al, 2022).

#### c. Shortcomings in management of mining output

Since 2011, the scope of entities engaged in mineral exploitation has expanded to include many private individuals and businesses. These entities go to great lengths to obtain mining licenses and, once they have them, they often operate at alarming levels of production. The current situation of exceeding mining licenses, exceeding usage needs, or mining after the expiration of licenses is common (The audit report on mineral resources by the State Audit Office during the period 2017–2021 [6] pointed out the following: In Trang Kenh quarry (Hai Phong), Vicem Hai Phong Cement Company Limited has exceeded the licensed capacity of 84,572 tons for cement and clinker production in 2021; At Vicem Hai Phong, the licensed output and capacity exceeded the demand. Currently, this company has been granted two limestone mining licenses for cement production with a capacity of 2.8 million tons of limestone per year. According to their report, the maximum usage demand for limestone (4,000 tons of clinker per day) is

equivalent to 1.8 million tons of limestone/ year. Therefore, the company's limestone demand is lower than the granted mining capacity by about 1 million tons/ year.

In Quang Ninh: Excessive mining operations were observed at Hon Gai Coal Company – TKV, Mong Duong Coal Joint Stock Company – Vinacomin, Quang Hanh Coal Company – TKV, Cao Son Coal Joint Stock Company – TKV. Furthermore, there were instances of mining activities that continue after the mining licenses expires, have not been renewed at Uong Bi Coal Company – TKV. Additionally, Quang Hanh Coal Joint Stock Company – TKV exceeded the permitted exploration capacity. (Thematic report on the audit of mineral resources at TKV Group of SAV Specialty 6, [5]).

Currently, natural resources tax is collected based on the output of mined resources (self-declared by enterprises), which causes great inadequacies, because the nature of natural resources tax must be collected based on resource reserves. As a result, in practice certain phenomena occur (Chinh et al, 2022):

- Enterprises only choose places with favorable conditions for mining, which causes loss and waste of resources;
- Due to the fact that the declared mining output much smaller than the actual mining output, resources are lost, the budget is reduced.

During the years of auditing, it has been observed that the number of cases where resource tax revenue increases due to underreporting the output by enterprises tends to increase. In 2021, when strengthening the audit work for the field of mineral resources, SAV Region 6 changed the method of determining the output of mined resources, found a very large volume of mined resources but did not declare and pay taxes, therefore the increase in resource tax revenues increased very high in this year.

Unfortunately, in the audits of Mineral Resource by SAV, the scope of audits is often limited, and the determination of reserves for already exploited mines is not thoroughly audited, which results in the accurate determination of the mining output.

#### d. Environmental protection

There are still some investors (such as Cat Ne Coal Mine, Phu Tien iron-manganese mine, Phu Van commune sand-

stone quarry, Linh Nham iron mine in Thai Nguyen) who have not completed the environmental protection works and measures as committed, but started exploitation (Government Inspectorate, 2022), violating Articles 26 and 27 of the Law on Environmental Protection No. 55/2014/QH13 (National Assembly, 2014).

Many projects have expired their mining licenses, but local authorities have not been strict in demanding investors to carry out mine closure procedures. The exploitation of minerals in these projects not only posed safety risks but also caused losses, resource depletion, and failure to comply with regulations on environmental restoration after mineral exploitation (observed in all localities during inspections and audits). Although administrative fines had been imposed, they were not strong enough to deter investors, and some were willing to pay fines and continue illegal mining.

Local authorities still allowed situations where businesses owed environmental protection deposits and under-declared environmental protection fees (During the period 2017-2021, the Audit Delegation of SAV recommended Quang Ninh to collect a fee of VND 1.3 billion for environmental protection; in Hai Phong, when selecting the sample for inspection, out of 5 mining projects, 1 project still owed the deposit, and 4 projects were delayed in paying the environmental protection deposit in all years) (State Audit Office of Vietnam Region 6, 2022).

Some enterprises have not conducted environmental monitoring and sampling on time as required (State Audit Office, specialized in Region 6, 2022), and the local authorities had not yet come up with effective solutions to manage this activity properly.

#### *e. Inspection and Audit of Mineral Exploitation Activities*

Inspection and audit activities are carried out annually at both central and local levels, based on specific topics related to each type of mineral, mining operation, or management area, depending on the practical situation or in response to complaints, accusations, or recommendations from organizations, citizens, or authorized agencies;

Despite the inspection and audit results, many localities continue to face numerous violations in state management of mineral exploitation, especially in the procedures for granting mining licenses, illegal mining activities, non-compliance with payment obligations to the state, and violations related to environmental issues. However, the measures to handle these violations have not been thorough and decisive enough, leading to the prevalence of violations of mineral exploitation laws (State Audit Office of Vietnam specialty 2, specialty 6, region 6, 2022).

## **2.2. Proposed tasks for the audit of mineral resources**

### *a. For audit of mining licensing*

In order to ensure openness, transparency, create fairness among investors, and increase revenue for the state budget, the proposed tasks for the state audit are:

- Create motivation to promote the number of projects licensed to exploit minerals through auction: Strengthen the audit of openness and transparency at the Ministry of Natural Resources and Environment as well as localities on (i) Mineral planning, (ii) The process of issuing, extending and revoking licenses for mineral activities, (ii) The process of appraisal and

- approval of mineral reserves and closure of mineral reserves, (iii) The process of auctioning mineral rights and delineating prohibited zones and areas temporarily prohibited from mineral activities, (iv) Administrative procedures on minerals and comments on the implementation of administrative procedures; (v) The process by which the State identifies areas not subject to mineral auctions, (vi) Information about enterprises licensed for mineral activities and the process of mineral exploitation.

- Focus on auditing at mineral exploitation projects licensed without auction:

- + Audit the capacity and expertise of investors, compare to conclude on deep expertise, experience, technique and financial capacity;

- + Audit the compliance of the Ministry of Natural Resources and Environment as well as the People's Committee of the provinces with the order and regulations in issuing mineral exploitation licenses;

- + Promptly detect acts of corruption, waste and violations in the management and licensing of mineral exploitation.

### *b. Audit and approval of reserves and management of mining output*

- Expand the scope of audits, if in the past, audits were limited to exclude the management of reserves and mining output. However, it is now necessary to include these two areas in the audit scope and make them a focal point of audit activities;

- Use advanced audit methods such as remote sensing method, expert method, select the most accurate reserve calculation method, thereby redefining mineral reserves, as a basis for increasing state budget revenue, while avoiding loss and waste of resources;

- Inspect, compare and conduct audits at mining sites, measure to determine the actual exploited mineral output, compare with the declared output of enterprises, thereby having information and sanction forms on the level of violations of mineral exploitation projects;

In fact, when applying the Remote sensing method, using unmanned aerial vehicles (UAVs) at Trai Son limestone quarry, Tan Xuan mine (Hai Phong), SAV Region 6 Team found that the difference in mining output was over 10 million m<sup>3</sup> of limestone, it is proposed to increase revenue for the state budget over VND 1000 billion.

### *c. Audit on environmental protection, inspection and examination in mineral exploitation:*

- It is necessary to organize independent audits on environmental protection in mineral exploitation, (currently environmental audits are integrated in financial audits); Where:

- + Audit the implementation of reasonable and effective procedures and measures to remediate the environment with mining projects;

- + Inspect the observance of regulations on deposit and use of environmental rehabilitation funds under approved schemes;

- + Inspect and compare the actual environmental protection activities during and after the exploitation process at mineral reserves.

- Focus on building and strengthening the capacity of environmental audit auditors in both quantity and quality, ensuring that the requirements of the audit are met.

- Add qualified auditors with deep expertise in minerals to inspection teams and inspect mineral exploitation activities in localities.

### 3. Conclusions

The research results show that the state management of mineral exploitation activities in Vietnam in general and in the Northeast in particular in recent years has revealed many shortcomings and limitations.

The article outlines the most typical shortcomings that have been pointed out in the report of the State Audit Office of Vietnam and the Government Inspectorate. Shortcomings in the management of issuance of mining licenses, calculation of reserves and management of mining output as well

as environmental management, carrying out inspections on mineral exploitation activities in localities may entail severe consequences, leading to revenue loss for the state budget, depletion and wastage of mineral resources and significant environmental degradation in mining areas.

With many limitations pointed out in the state management of mineral exploitation, the State Audit Office of Vietnam, when conducting the audit, needs to detect limitations and irrationalities of mechanisms, policies and acts and violations of corruption at state agencies and enterprises; clearly define the responsibilities of collectives and individuals, propose to handle violations in accordance with law; propose remedies and handle violations; Provide reliable information and data to the National Assembly and the Government in order to enhance the efficiency and effectiveness of state management in mineral exploitation management.

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