



LATVIJAS  
VIDES, ĢEOLOĢIJAS UN  
METEOROLOĢIJAS AĢENTŪRA

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# LATVIA

## MINERALS DATA MANAGEMENT

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# Tasks in Mineral Deposit Data Management

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- Provide evaluation of the Latvian mineral resources and resource exploration, as well as create pre-conditions for rational long-term use of natural resources.
- Issue permits (licences) for the extraction of minerals in compliance with laws and regulations regarding environmental protection.
- Approve mineral reserves for the explored deposits.



# Tasks in Mineral Deposit Data Management

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- Preparation of passports of mineral deposits for their users and determine the extraction quotas.
- Generalisation of information regarding the yearly mineral extraction in the country and preparation of the balance of mineral reserves.



# Maintenance of Mineral Deposit Register

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The Latvian mineral deposit register summarises all data on mineral deposit volumes and quality. The register consists of three parts:

- Deposits of raw construction materials (limestone, gypsum, dolomite, clay, quartz sand, sand, gravel, freshwater limestone).
- Peat deposits.
- Well fields (water extraction sites).



# The Register Includes :

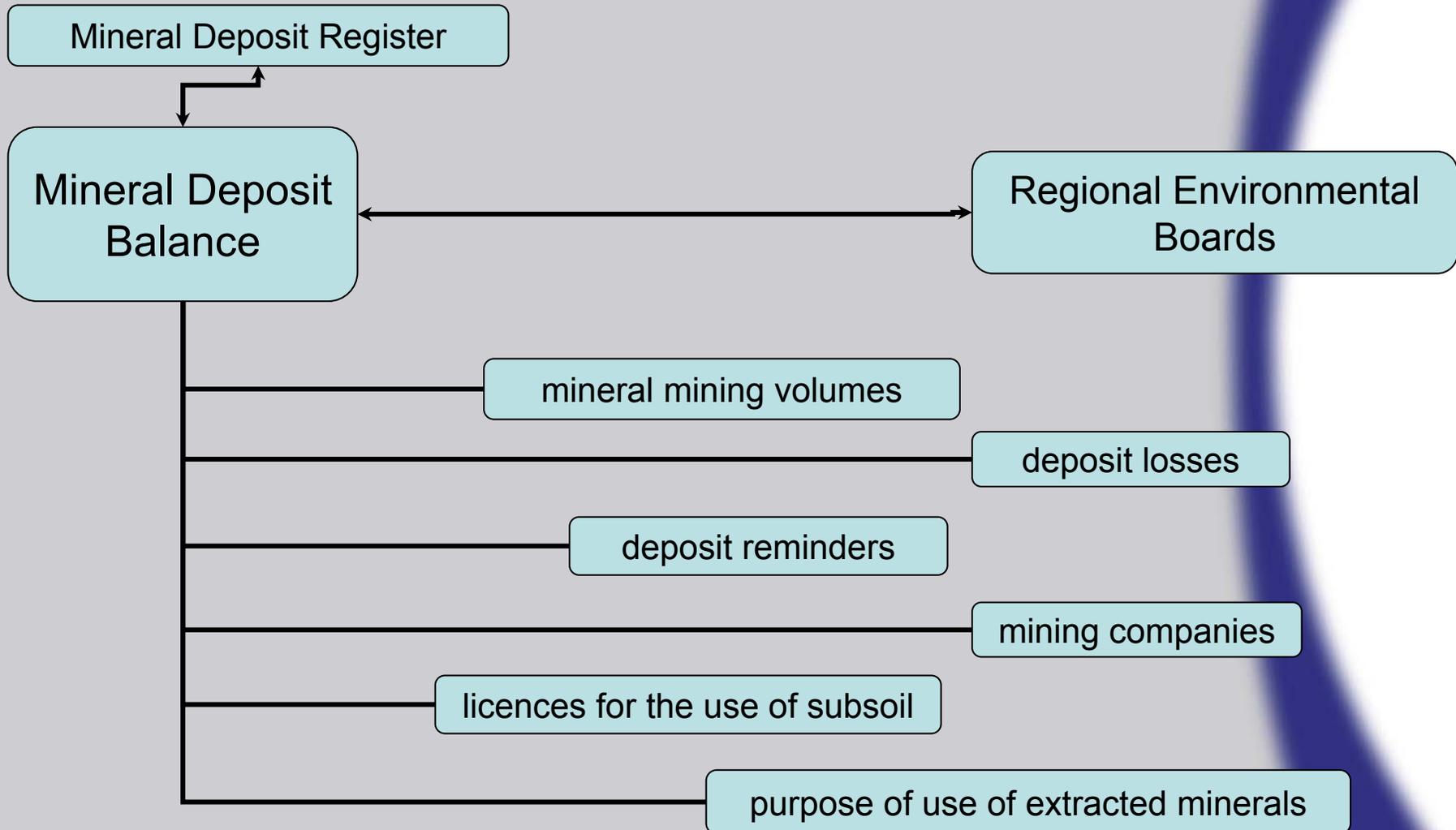
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- Data on administrative and geographic location of deposits.
- Deposit exploration stages or categories:
  - explored (A category) deposit volumes;
  - evaluated (N category) deposit volumes.
- Most important quality parameters for each mineral type.

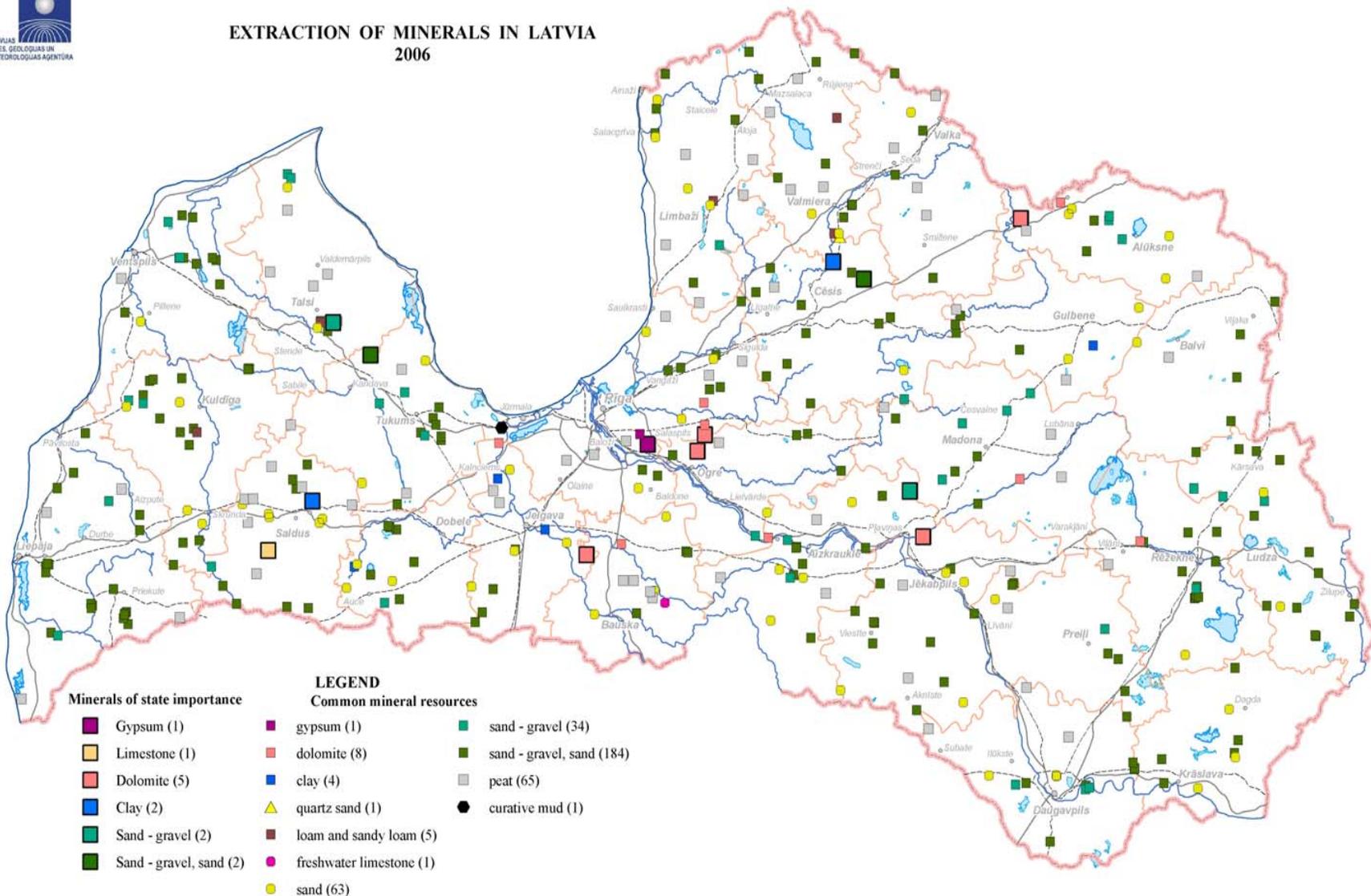
The register also includes data on forecast resource areas (fields), where deposits are defined as corresponding to the P category.



# Mineral Deposit Balance

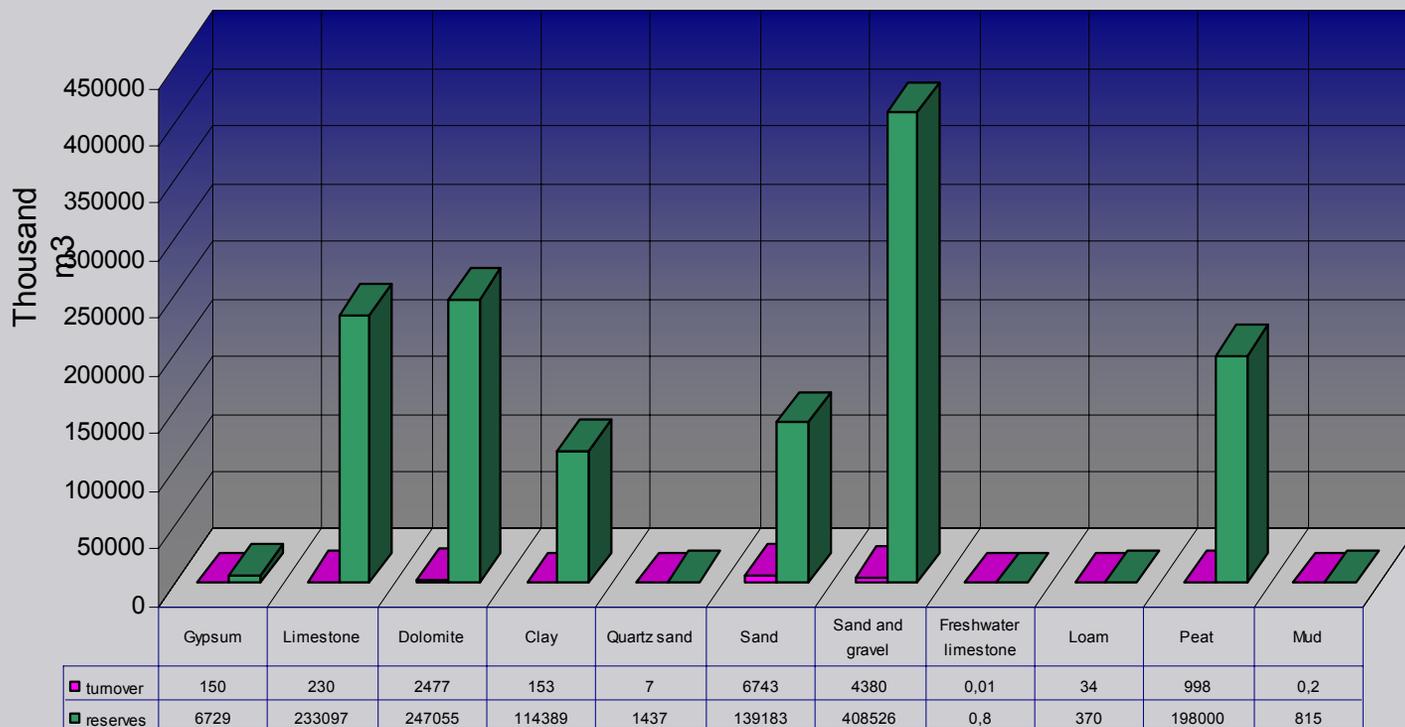


## EXTRACTION OF MINERALS IN LATVIA 2006





# Reserves/Extraction



## **Main factors and problems of sustainable development of the extractive industry in Latvian Republic**

The European Union has formulated a long-term strategy to dovetail the policies for economically, socially and environmentally sustainable development, its goal being sustainable improvement of the well-being and standard of living of current and future generations. More responsible management of natural resources is one of the objectives of sustainable development. We need to break the link between economic growth and use of resources and halt the loss of biodiversity.

The alignment of the legal and administrative acts is one of the sustainable development factors in the sphere of mineral deposits in the country. It should be mentioned that the work in that sphere has been carried out continuously, improving and developing the legal basis of the use of minerals.

In Latvia, the development of the mining industry and mining policies are regulated by the law "On the Subsoil" (came into force on June 4, 1996), the law "On the Natural Resources Tax" (came into force on 04.10.1995), the law "On the assessment about impact at environment" (came into force on 30.10.1998.) and the following regulations of the Cabinet of Ministers:

- Nr. 448 "Regulations on Mineral Deposits of State Importance and Procedures of their Use, Procedures of Use of Minerals of State Importance, As Well As Procedures of Issue of Permits or Licences for the Use of Subsoil Based on a Competition or Sale" (came into force on 30.05.2005);
- Nr. 280 "General Procedures of the Issue of Licences for the Use of Subsoil and Permits for Extraction of Common Minerals, As Well As for the Use of Geological Information" (came into force on 09.05.2007.);
- Nr.779 "Procedures of Extraction of Minerals" (came into force on 19.09.2006.).

The law "On the Subsoil" determines that subsoil and all minerals located there belong to the landowners. It contains an obligate precondition that a physical person or legal entity shall conclude an agreement with the landowner before obtaining a permit (licence) for the use of subsoil and start mineral extraction.

The Latvian Environment, Geology and Meteorology Agency (LEGMA) is responsible for the geological supervision of subsoil; its functions incorporate:

- approval of mineral reserves for the explored deposits;
- preparation of passports of mineral deposits for their users and determination of extraction quotas;

- issue of licences for the extraction of minerals (dolomite, limestone, gypsum, peat, sapropel; deposits of state importance; if the local authorities are the user of a deposit),
- generalisation and storage of information regarding the exploration for mineral resources of all kinds and geotechnical investigations in the Latvian territory;
- generalisation of information regarding the yearly mineral extraction in the country and preparation of the balance of mineral reserves.

The explored reserves of minerals in Latvia are divided into A and N category.

Category A reserves – are explored reserves of minerals. The degree of knowledge about the explored reserves of minerals (degree of reliability of the exploration of geological, hydrogeological and geotechnical situation) ensures the rational extraction of a mineral, as well as the maximum possible protection of the environment and subsoil against the negative impact of extraction operations.

Category N reserves – are evaluated reserves of minerals. The boundaries of deposits, their size and structures of the reserves of that category are determined using incomplete geological and geophysical data. The properties and quality of minerals, as well as the geotechnical and hydrogeological situation at the deposit might be characterised using analogies with the explored deposits in the vicinity.

In order to initiate the extraction of minerals, the following is necessary:

- the existence of a mineral deposit with the reserves of either A or N category;
- an agreement with the landowner,
- passport of the deposit (issued by LEGMA),
- extraction quota (determined by LEGMA),
- extraction permit for the common minerals (issued by the relevant local authorities), or licence (issued by LEGMA),
- technical requirements of extraction (issued by the Regional Environment Department (RED)),
- project of extraction (integrated with LEGMA or RED).

As we already mentioned, separate Regulations of the Cabinet of Ministers regulate the extraction of minerals from deposits of state importance. The status of a deposit of state importance is conferred on mineral deposits with considerable mineral reserves, which have been explored in detail, with a wide spectrum of uses, and which are particularly important on the state scale. By Regulations of the Cabinet of Ministers No.448, the status of deposits of state importance was conferred

on 27 mineral deposits. The initiation of use of those deposits takes place based on a competition.

The main requirements of the legal and administrative acts as regards the protection of subsoil are as follows:

- complete and comprehensive exploration;
- rational extraction of minerals;
- prevention of negative impact on the subsoil, environment, unconfined groundwater etc. during the extraction of minerals.

The second important factor of the sustainable development in the sphere of mineral extraction is the provision of the state the adequate mineral resources. It must be mentioned that construction raw materials are of the greatest importance in Latvia, since our country is not rich either in ores or fuel minerals.

Latvia has rather sufficient resources of construction raw materials; still, it is necessary to plan the policies of their use in a prudent manner, taking into consideration the fact that those resources are not renewable.

The volume of extraction of main construction minerals during 2000 –2005 is shown in the diagrams. Although the extraction of all the minerals increased during that time period, it did not reach a noteworthy share of the Latvian explored reserves. The extraction volumes in 2005 in comparison with the explored reserves are shown in the table.

It should be mentioned that not enough has been done so far in order to improve the information of the society about sustainable development in the sphere of mineral extraction and ensure the feedback with the “human” or society awareness factor. In this connection, the main problems should be mentioned.

The main problems in the extraction of minerals and ensuring their sustainable development are as follows:

- often the landowners’ economic demands are so high that they prevent the extraction of minerals, since it becomes economically prohibitive;
- the lack of free investment in the economy, especially among the local producers, in order to start large-scale extraction of minerals; due to that there is insufficient competition in the extraction of some minerals, where a few big companies have the monopoly (e.g., in clay extraction)
- often the extraction operations take place in a fragmentary manner. For instance, at four adjacent plots of land, there is a quarry at each of them. That considerably impacts the environment as well;
- the exploration criteria are not clear to the landowners ordering exploration operations at their properties – often the only

requirement is the lowest cost. As a result, the quality of exploration operations is low quite often, and it is impossible to approve the explored reserves according to the A category; consequently the landowners take a risk starting the extraction of minerals, since a part of the reserves might be unsubstantiated or would not comply with the quality requirements;

- the control mechanism, which conducts the accounting of the extracted minerals, is often inefficient. Only the biggest subsoil users have specialists within their companies, which execute day-by-day control of the use of subsoil and accounting of the quantities of the extracted minerals, ensuring also systematic use of the quarries. Still, in many places, the accounting of the quantities of the extracted minerals is approximate, which consequently influences the accuracy of the state statistical accounting of the mineral extraction.

The activities of Joint Stock Co. "Lode" can be mentioned as a positive example of mineral extraction among the local producers, managing to resolve successfully the economic and investment problems; the company is engaged in clay extraction, using the extracted clay for the manufacture of structural clay products; the activities of "Pļaviņu DM" Ltd. in the extraction of dolomite and production of crushed stone should also be mentioned as a positive example.

The appearance of the big international companies in the Latvian market should be mentioned as a positive factor in the sphere of the use of mineral resources. For example, active policies in the sphere of mineral exploration and extraction are practised by such companies as "Knauf" – in the sphere of the use of gypsum for the manufacture of gypsum boards and plaster boards and "Cemex" – in using limestone and clay in the cement industry.

Summarising, it must be concluded that, in the future, the main measures to ensure sustainable development in the sphere of mineral extraction would be:

- continuation of the work aimed at the improvement of legislation;
- provision of high quality of exploration for minerals by the improvement of the legislation and control mechanism;
- improvement of control of mineral extraction volumes;
- better information of the society in the sphere of the rational use of mineral and its extraction.