

Estonia

UN CSD18: National Reporting on Mining

Policy and regulations

According to the Estonian Earth's Crust Act, which entered into force on April 1, 2005, mineral resources are clay, crystalline building stone, dolostone, gravel, lacustrine lime, lake and sea muds, limestone, oil shale, peat, phosphate rock (phosphorite), and sand. Earth's crust means the upper layer of the ground accessible for human activity on land, in transboundary water bodies, on the territorial sea, in inland maritime waters and in the exclusive economic zone. The bedding conditions and characteristics of a body for registration as mineral reserve in a mineral deposit have been established by the Minister of the Environment. The Estonian Commission on Mineral Resources developed for Estonia the Mineral Resource Classification System which is based on internationally accepted principles.

The Estonian Commission on Mineral Resources was established in 1995. Its statute was certified by the Government and members by Minister of the Environment. Members of the Commission represent different roof-organisations like Ministry of the Environment, Land Board, Technical Surveillance Authority and also the Association of Municipalities and professional geological and mining unions. Main functions of the Commission are as follows:

- 1) to counsel the Ministry of the Environment, the Government offices and municipalities in the questions geological investigations of earth's crust and exploration of minerals and also in the usage and protection of the earth's crust;
- 2) to propose to Ministry of the Environment the changes of legal acts or create the new legal acts;
- 3) to control the projects prepared for reclamation of the areas disturbed by the extraction of the minerals and propose to Ministry of the Environment to accept or not accept these projects.

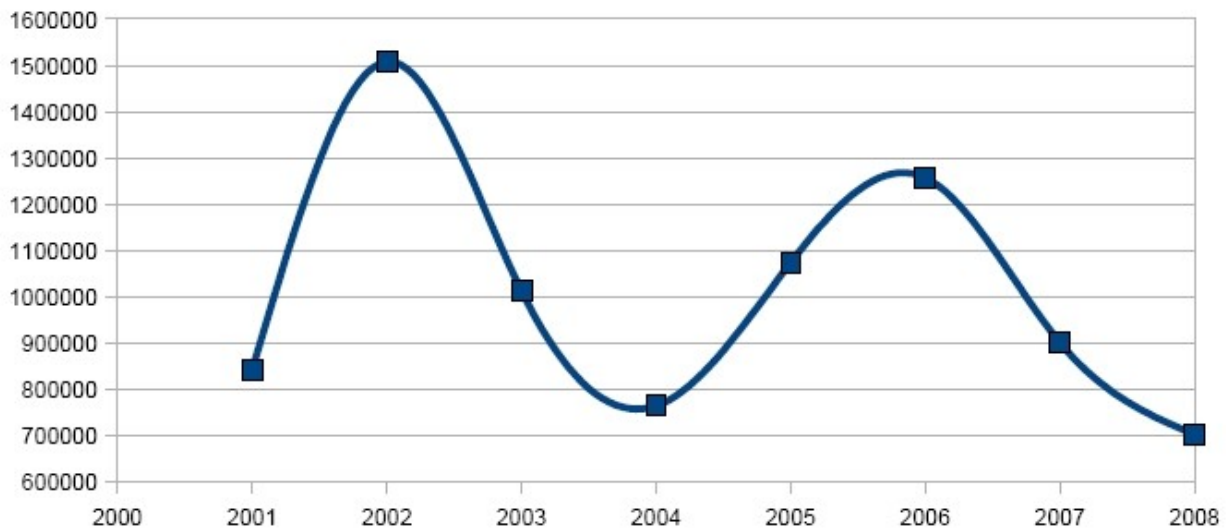
Exploration and extraction of minerals

Estonia is not very rich in minerals, but we have some georesources remarkable in the European context:

- 1) Oil shale. The Estonia deposit is the largest commercially exploited and best-studied oil shale deposit in the world.
- 2) Phosphorite. Well studied but not exploited Rakvere deposit is the largest phosphorite deposit in Europe.
- 3) Peat. Estonia is considered as a country richest peatlands in North Europe. The total area occupied by 9836 mires, covers one million hectares (about 22% of Estonian territory). Among these mires are more than 300 peat deposits.

2001	843000
2002	1508000
2003	1012000
2004	764000
2005	1074000
2006	1256800
2007	900800
2008	702300
Total	8060900

Peat mining in Estonia 2001-2008, metr.t



The Earth's Crust Act provides the rules and the principles of exploration, protection and use of the earth's crust, with the purpose of ensuring economically efficient and environmentally sound use of the earth's crust. The Act regulates: 1) geological investigation, 2) geological explorations, 3) extraction of mineral resources, except in the part regulated by the Mining Act, 4) rights of the owner of an immovable upon use of mineral resources within the boundaries of the owner's immovable and 5) restoration of the land disturbed by geological investigation, geological explorations or mining. Geological exploration is permitted on the basis of a geological exploration permit for mineral resources (exploration permit). Geological exploration may be carried out by a registered person pursuant to the procedure provided for in the Mining Act. A permit for geological exploration could be issued for up to five years and the format of permit for geological exploration is established by the Minister of the Environment.

General requirements for geological explorations are as following:

- 1) Geological exploration shall be carried out such that damage to the environment and persons is minimal;
- 2) The holder of a permit for geological investigation or a geological exploration permit has the right, in the course of operations, to take from the earth's crust and use for the operations rock, sediments, liquid or gas indicated in the permit in an amount which is necessary to determine their characteristics whether they can be enriched and their usability.

The procedure for geological exploration is established by the Minister of the Environment. The following is established by the procedure for geological exploration: 1) the division of mineral resources according the areas of use and the requirements for determination of the areas of use of

mineral resources; 2) the requirements for the preparation and carrying out of geological exploration, topographic work and the calculation of mineral reserves; 3) the requirements for the preparation of a mineral deposit for use and for geological exploration reports; 4) the special requirements for the geological exploration of each mineral resource.

In the course of geological exploration: 1) the bedding conditions, composition and technological characteristics of natural bodies or mineral resources shall be established to the accuracy which enables mining and the possible areas of use of the explored natural bodies or mineral resources shall be determined; 2) the hydrological and hydrogeological conditions of the area of geological exploration and its vicinity and the possible changes thereto in the course of mining shall be assessed and the extent of the circle of influence of mining shall be determined; 3) measures to prevent and reduce the possible changes in the earth's crust shall be planned; 4) a geological map of the area of geological exploration and its vicinity shall be prepared; 5) a new proposal for determination of the categories of mineral reserves shall be made; 6) all mineral resources and natural bodies found in the area of geological exploration shall be explored to the accuracy which corresponds to prospecting if preservation of the mineral resources and natural bodies usable is impossible in mining engineering in the course of the later extraction of the explored mineral resources, rock, sediments, liquid or gas.

Bedrock minerals, mineral resources in mineral deposits of national importance and lake mud as well as sea mud (medicinal mud) belong to the state and the immovable property ownership of other persons does not extend to these. Mineral resources located in internal water bodies in state ownership belong to the state. The natural body of bedrock, sediments, liquid or gas not registered in the environmental register belongs to the state and the immovable property ownership of other persons does not extend to these, unless the purpose of use of the immovable requires this. Mineral resources in state ownership are not in commerce in their natural form.

Records of mineral resources shall be kept in the environmental register in the form of mineral reserves by each mineral deposit separately pursuant to the procedure provided for in the Environmental Register Act. The environmental register is a general national register and the function of the register is to retain and process data regarding natural resources, natural heritage, the state of the environment and environmental factors and to provide information for different fields and purposes.

Entry of the natural body of rock, sediments, liquid or gas explored and delimited by a geological exploration in the environmental register as a mineral deposit shall be decided by the Minister of the Environment on the basis of the results of the geological investigation or geological exploration, taking account of the opinion of the Commission on Estonian Mineral Resources.

Mineral deposits are of national importance or of local importance.

The list of mineral deposits of national importance is established by the Government of the Republic. Mineral deposits not entered in the list of mineral deposits of national importance are of local importance.

A mineral deposit of national importance are as follows: 1) located in a transboundary water body, on the territorial sea or in inland maritime waters, in the exclusive economic zone; 2) which quality or quantity of mineral resources of which are of significant importance in view of the economic development of the state; 3) which are used for the manufacture of products with export potential; 4) where the significant environmental impact of the extraction of mineral resources extends to several counties or crosses the state border.

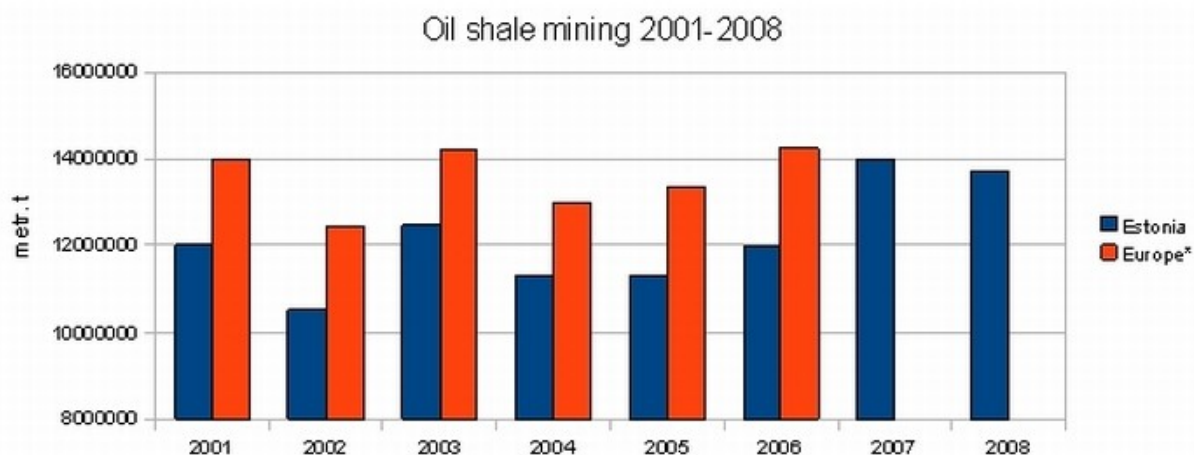
The mining right arises on the basis of an extraction permit for mineral resources (hereinafter extraction permit), unless otherwise provided for in the Earth's Crust Act. An extraction permit

could be issued for up to thirty years for the extraction of mineral resources in a dolostone, phosphate rock, crystalline building stone, limestone, oil shale, clay or peat deposit and a sand deposit of national importance and for up to fifteen years in a lacustrine lime, lake mud, gravel or sea mud deposit and a sand deposit of local importance.

If, upon processing an application for an extraction permit, it becomes evident that the mineral reserves in a mineral deposit cannot be exhausted within a period established by the extraction permit and use of the remaining reserves on the basis of another extraction permit is economically unjustified, the issuer of permits has the right to issue the permit for a period which is longer by up to five years.

The most important useful mineral is oil shale (*kukersite*). Estonian oil shale has the best quality among the oil shales of the world. The Estonian oil shale obtained by retorting is of unique composition. The mining conditions of Estonia deposit are relatively simple - small depth, laterally continuous thickness of productive seam, horizontal bedding. Oil shale is a resource of strategic importance to Estonia, it will ensure our energy security and sustainable development and the state's primary interest is uninterrupted supply of electricity and heating energy to all consumers. Resources of the oil shale will be used efficiently and in an environmentally friendly way so the best possible technologies will be applied in the mining and processing of the oil shale.

Country	Oil shale mining in Europe 2001-2006, metr. t					
	2001	2002	2003	2004	2005	2006
Austria	408	336	432	248	0	287
Estonia	12000000	10513000	12459000	11328000	11310000	11977100
France	15 000	14 000	13 000	12 500	12 200	12300
Germany	340 000	366 841	295 853	282 408	292 385	320207
Italy	23 800	23 500	23 200	23 000	24 000	27000
Russia (Europe)	1 600 000	1 500 000	1 400 000	1 300 000	1 700 000	1900000
TOTAL	13979208	12417677	14191485	12946156	13338585	14236894



* Russia, Germany, Italy, France, Austria

According to the Earth's Crust Act the owners of permits for geological investigation, geological exploration or extraction of minerals are obliged to reclaimate the area disturbed in reason of their activities. The rules, dates and other details of the reclamation procedure are adopted by the order of Minister of the Environment.

Disturbed by geological activities or extraction of minerals must be reclaimed during the validity of permits. Areas disturbed by extraction of minerals (by quarries) are reclaimed depend of local conditions (landscape characteristics, groundwater level etc) mainly to forests, artificial lakes, grasslands). Some disturbed areas situated near to cities are reclaimed to recreation areas

Relevant links for additional information:

Legislation

Environmental Impact Assessment and Environmental Management System Act: entered into force in 2005.

Environmental Impact Assessment (EIA) as well as monitoring procedures are usual components of all phases of all mining operations. In Estonia EIA procedures are regulated by the Environmental Impact Assessment and Environmental Management System Act:

<http://www.legaltext.ee/text/en/X90010K1.htm>

Public and stakeholder consultations and participation in decision-making related to different mining issues are also supported and ensured through procedures of the EIA processes.

The Mining Act: entered into force in 2003.

The aim of the Act is ensuring the safety of persons, property and the environment, and of ensuring the economical use of deposits. Mining Act provides requirements for mining and the secondary utilisation of underground workings; plans for mining and the secondary utilisation of underground workings; undertakings engaged in mining, the secondary utilisation of underground workings or preparation of plans for such work; specialists in charge and authorities assessing and attesting the conformity thereof; liability and state supervision.

<http://www.legaltext.ee/text/en/X70027K1.htm>

Environmental Register Act: entered into force in 2003.

This Act provides the bases for the entry of data regarding natural resources, natural heritage, the state of the environment and environmental factors in the environmental register, for the retention of data in the register and for the processing and release of the data.

<http://www.legaltext.ee/text/en/X60041.htm>

Future priorities

The Estonian Government has decided to find a complex solution to different problems related to mining and utilization of georesources. In 2008 The Strategy for Oil Shale Utilization (available only in Estonian) was accepted by Parliament (Riigikogu). In the near future the special strategies will be built up and established for use other georesources (for natural building resources in 2009 and later for peat).

Statistics:

Estonian Land Board was established in 1990 for the implementation of the land policy of the Government of Estonia. The Estonian Land Board (ELB) is responsible to the Minister of Environment for the maintenance of the Land Cadastre, co-ordination and execution of land reform in the conformity with valid laws, supervision, organisation and co-ordination of the activities in the field of land consolidation, land assessment, geodesy, cartography, geographical information. The Land Board also manages contracts for cadastral and geodetic surveys, and for topographic mapping. Geology section:

http://www.maaamet.ee/index.php?lang_id=2&page_id=284&menu_id=78

Statistics Estonia. Use of Mineral Resources:

http://pub.stat.ee/px-web.2001/I_Databas/Environment/04Natural_resources_and_their_use/08Use_of_mineral_resources/08Use_of_mineral_resources.asp