

DE GRUYTER  
OPEN

GOSPODARKA SUROWCAMI MINERALNYMI – MINERAL RESOURCES MANAGEMENT

2016

Volume 32

Issue 4

Pages 59–72

DOI 10.1515/gospo-2016-0032



BARBARA RADWANEK-BĄK\*, MARI KIVINEN\*\*

## Legal and formal factors related to the mineral raw material deposits accessibility in Europe

### Introduction

Mineral deposits are a kind of anomaly in the earth's crust, physically and geographically fixed and, in the majority, not renewable. Furthermore, mineral deposits have a finite size. In the case of some minerals, and in particular metal ores, the size of the exploitable deposit is often determined by economic factors such as metal prices and the cost of production. Deposits which are not economic to work under current circumstances may become economic in the future. The EU is currently strongly dependent on the import of several important raw materials, due to their shortage. Active mineral exploration, mine development and the implementation of new, innovative technologies in the recovery of useful elements give the industry an opportunity to reduce this dependence. Maintaining access to the deposit area is necessary condition. Access to mineral deposits should, therefore, be protected, or not at least be accidentally blocked, to ensure the possibility for extraction when the need arises. These are actions necessary to ensure the further development of the mining industry (Hebersreit 2009; Implementation... 2003; Improving... 2010; Nieć and Radwanek-Bąk 2010; Nieć et. al. 2014; Recommendations... 2014; Stefanowicz 2007; Szamałek 2011; Tiess 2010, 2011a, b; Wagner and Tiess 2008).

\* Ph.D. Eng., Associate Professor of PGI-NRI, Polish Geological Institute-National Research Institute;  
e-mail: barbara.radwanek-bak@pgi.gov.pl

\*\* M.Sc., Geological Survey of Finland (GTK); e-mail: mari.kivinen@gtk.fi

Mining as an economic activity, often with a large industrial scale, requires legal and financial regulations. Such regulations also require the determination of the relationship of ownership of mineral deposits in relation to the ownership of land where mineral deposits occur. In addition, the correlation of mining activities with other forms of land use planning, in particular with the progressive housing and environmental protection requirements is needed and requires the achievement of a difficult compromise (Ellison et al 2001; Reznicek 1987; Shields and Solar 2004; Weber 2007, 2012; Wrighton et al. 2014; Nieć and Radwanek-Bąk 2012, 2014; Radwanek-Bąk 2007, 2008, 2012; Radwanek-Bąk and Nieć 2015).

Other formal important factors that may limit the mine development is the need to maintain standards of cleanliness of the environment and also in the post-mining land use. The opportunity to meet them is already determined at the stage of the permit process by developing an Environmental Impact Assessment (EIA), then controlling the entire period of mining activity and continuing until the end of the post-mining reclamation.

## 1. Methods

The study was based on the author's experiences and knowledge related to the multianual research in the field of accessibility issues, protection of mineral deposits and their valorization in Poland. It also analyzes several scientific and non-scientific articles and reports related to the mineral deposits accessibility focusing on Europe.

In addition, a survey among the project partners was conducted focusing on mining law and land-use planning in EU member states and also some non-EU countries: Albania, Norway, Switzerland and Ukraine, invited to the project). The survey was based on a specially prepared questionnaire which allowed for the gathering of orderly comprehensive information. A concept of the questionnaire and questions included in it were prepared by the authors (Radwanek-Bąk 2016).

A simple form of the questionnaire was designed to be easily completed by national Geological Surveys, and the mining authorities. Information obtained from the Minerals4EU project participants, based on the questionnaire, allows for the description and comparison of legal regulations in relation to mining activities as well as the current state of the access to mineral deposits in member states. The data also allowed for an analysis over the most effective solutions to improve access to mineral raw material (MRM) deposits. It also announces the challenges creating obstacles in the sustainable development of mining in some countries that endangers the safety of the raw material supply from the domestic sources both for the individual countries and the EU.

Selected case studies (Finland, Sweden, Poland), elaborated in the frame of the project, were a third element useful for a comprehensive approach presented subject. They presented some country specific aspects of legislative and governmental/executive constraints on a national or regional level in detail and allow to formulate general observations made according to the literature and the questionnaire.

## 2. Influencing Factors

The accessibility of mineral deposits and the development of mining activities in Europe are governed by relevant legislation at the national level. These legislations differ from each other, but sometimes show high similarity. The review over national legislations, based on the questionnaire and literature, allows for an indication of some of the main determinants of access to mineral resources and the best legal solutions. They are recommended to be used on the basis on determining the best practices.

### 2.1. Ownership of mineral deposits

One limiting factor in the accessibility of mineral deposits is the determination of their ownership. This should be considered in two aspects: in relation to land ownership, and as a subject of a permit and a variety of accompanying fees. Mineral deposits in most European countries are fully (EU countries: Croatia, Cyprus, Czech Republic, Denmark, France, Greece, Hungary, Ireland, Italy, Portugal, Romania, Slovenia, Spain, Switzerland; not EU countries: Albania, Ukraine) or partially state owned. In some countries the ownership of mineral deposits depends on the type of minerals (in Norway, Poland, United Kingdom, Slovakia), and sometimes on their position in relation to the earth's surface. In such cases, the division of surface (open-pit) or underground exploitable deposits is used. Near surface deposits belong to the landowner in: Austria, Netherlands, Poland (except the lignite deposits), United Kingdom (except the Crown Estate: gold, silver and offshore deposits), Slovakia (according a special prepared list). The deep located mineral deposits belong to the landowner only in United Kingdom (except the Crown Estate) and Slovakia (according a list). Mineral deposits in Austria, Germany and Finland may be the property the one who documented them. In Finland, both land-owner and founder of a deposit have ownership related rights and procedures do not differ in respect of the type of mining (open pit, underground).

### 2.2. Permission

Exploration and mining activity require permits in almost all European countries. Additionally, a separate mining license is also required. There are only few exceptions related to the scale of extraction and/or the type of mineral. For instance in Albania, small scale gem stone mining does not require a permit, in Poland the small scale (to 10 m<sup>3</sup>/y) natural aggregates and sands extraction for own purposes does not require a permit and in the United Kingdom, the exploration license regulation differs depending on the regions with special regard to the Crown Estate. In the UK, mining and mineral extraction activities require Planning Permission which is issued by the different level of the Planning Authorities.

There are various decision-making bodies related to licensing. In most countries they are the state level authorities and therefore national ministries or agencies such as: Ministry of the Environment, Economy, Industry or Science, Mining Authority, Council of Ministers or Crown Estate are present (Table 1).

Table 1. Exploration and mining licenses decisions-making bodies in Europe

Tabela 1. Organa decyzyjne w zakresie koncesjonowania rozpoznania i eksploatacji złóż kopalin w krajach Europy

Country	State/governmental level authorities	Regional authorities	Local authorities
Albania	x		
Austria	x	x	
Belgium	x	x	
Croatia	x		
Cyprus	x		
Czech Republic		x	
Denmark/Greenland	x		
Finland	x		
France	x		
Germany		x	
Greece	x		
Hungary		x	
Ireland	x		
Italy	x		
Netherland	x		
Norway	x		
Poland	x	x	x
Portugal	x		
Romania	x		
Slovakia	x	x	
Slovenia	x		
Spain	x		
Sweden	x		
Switzerland		x	
Ukraine	x		
United Kingdom	x	x	x

Source: own study.

Perhaps the most complicated situation exists in Poland, where there are three competence levels of licensing authorities. The scope of their responsibility is dependent on the ownership of minerals and the scale of the planned and operating system. The Ministry of the Environment grants licenses for exploration and mining of minerals owned by the State Treasury, and all minerals from offshore territory of Poland. Marshal of the voivodeship grants licenses for minerals owned by landowners, extracted from area of 2 and more hectares. The lowest instance of granting permission is the Starost (local authority), who grants licenses for minerals owned by landowners extracted from an area less than 2 ha, mining output not greater than 20,000 m<sup>3</sup>/y and without explosives. Generally, the permit is required for all types of mining activity.

### Fees and taxes

Formal solutions for the fees associated with the mining activity in the European countries are varied, but generally they are associated with two main domains: mineral deposits ownership and mining as commercial economic activity. A tenancy fee occurs in the case of mining operator leaseholds related to the use of land,.

So the popular solution used in most countries is the royalty (as a derivative of mineral deposits property) and an additional tax for industrial activity. Such regulations can be reported in: Denmark/Greenland, United Kingdom, Netherlands, Ireland, Spain, Greece (additionally mining usufruct) and Romania (sometime other payments). Several combinations of payment types are shown in the Table 2.

Table 2. Payments related to the mining activity in Europe

Tabela 2. Oplaty związane z działalnością wydobywczą w krajach Europy

Types of payment to governmental/ regional/local authorities	Country
Royalty and tax	Denmark/Greenland, United Kingdom, Netherlands, Ireland, Spain, Greece, Germany, Albania (additionally mining usufruct), Romania (sometime other payments).
Royalty only	Austria, Portugal, Hungary (sometime other)
Tax only	Croatia, Cyprus, , Slovenia, Norway
Mining usufruct	Switzerland
Royalty and mining usufruct	Czech Republic
Tax and mining usufruct	Finland, Poland, Slovakia(sometime other)
Other	Italy
Free (without payment)	France

Source: own study.

### 2.3. Right of access to the land where mineral deposits are located

Access to the land where mineral deposits are located is one of the most important factors controlling the mining activity and sometimes also mineral exploration. Access to land is required at the stage of the permission procedure in almost all European countries, regardless the ownership of the mineral deposits. Access to land is dominated by two forms of ownerships: ownership of the mining operator (existing or purchase of land) or leasehold of the mining operator. The first one (mining operator ownership) exists in: Greece, France, Norway and Albania (state land property). The second one (mining operator leasehold) exists in: Croatia, Denmark/Greenland, Italy, Netherlands, Portugal, Switzerland and Ukraine. In several countries both of them are common: Austria, Cyprus, Czech Republic, Finland, Germany, Ireland, Hungary, Poland, Romania, Slovakia, Spain and United Kingdom.

### 2.4. Nature protection requirements

Nature protection is one of the most important competitors with the mining activities in the terms of land-use. The importance of nature protection has increased rapidly in recent years due to the greater social awareness on environmental issues, the implementation of the principles of sustainability and the activity of environmental organizations.

The need to protect nature may restrict the scale and scope of mining in many cases, and often even preclude the operations. In addition to traditional forms of nature protection (e.g., national parks, natural monuments and nature reserves) new forms of protection have recently been created (e.g., Natura 2000 network). Dynamic growth of protected areas in almost all EU countries, and established environmental limits (Natura 2000 net) will maintain this trend. This significantly reduces the possibility of mining development in many regions and causes the accumulation of the land-use related conflicts.

Mining activity in the national parks and nature reserves is not allowed on in most European countries: Albania, Austria, Croatia, Cyprus, Czech Republic, Finland, Germany, Greece, Hungary, Italy, Ireland, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Ukraine. Exceptions are: Denmark/Greenland, France, United Kingdom, Netherlands and Portugal. The same restrictions (no mining activity) relate to the mineral deposits located inside the Natura 2000 network are in force in: Cyprus, Denmark/Greenland, Hungary, Italy, Germany, Romania, Slovenia, Slovakia, Switzerland, and Ukraine. Exploration permits with special restrictions can be granted for Natura 2000 in: Albania, Austria, Croatia, Czech Republic, Finland, France, United Kingdom, Greece, Netherlands, Ireland, Poland, Portugal, Spain. Mining activity in the Natura 2000 areas is formally possible in: Albania, Austria, Croatia, Czech Republic, France, Finland, United Kingdom, Greece, Netherlands, Ireland, Poland, Portugal, Spain but only in cases of no significant adverse environmental impact to the ecological values for the area which is protected

(according to the EIA procedure). The Environmental Impact Assessment is an important document in the permission granting procedures in many European countries and its results often determine the possibility of developing/executing mining operations. The scope of the environmental report is large and includes all the elements of the natural environment and all possible factors of anthropopression associated with mining. Often however, it is inadequate and too wide compared to the scale of the planned mining (e.g., in Poland – Radwanek-Bąk 2012).

In many countries, there are other known legal forms of nature protection such as landscape parks or similar ones. These also create limitations for mining depending on the scale of the impact of operations to the environment. Usually, they do not exclusively exclude the mining activities, however in Croatia, Cyprus, Hungary, Ireland, Italy, Romania, Slovenia, Switzerland and Ukraine mining in these areas is not allowed. A specific case seems to be Finland, where the legislation does not recognize landscape parks.

### 2.5. Spatial planning

Spatial planning requirements form a typical barrier for the development of mining activity, in particular – open-pit mines. The core of the challenge is the need to ensure long-term access to the mineral deposits areas and prospective areas, which interferes with other forms of spatial development. These conflicts manifest themselves most strongly near the cities, with a high demand for land for housing and construction, as well as in areas of large investments, for example, highways. The nature of these conflicts seems to be similar in almost all countries, but the scale and the underlying reasons of the land-use conflicts may differ. To a large extent the conflicts depend on the legal and formal solutions applied, as well as the method and procedures for resolving such contentious issues. These challenges, however, are not fully resolved in most countries.

The best solution seems to be to include some forms of legal protection over mineral deposits areas by the relevant provisions in the legislation on spatial planning. This solution of guaranteeing priority of a mining nature in land use is, however, used in only several EU countries: Albania, Czech Republic, Greece, Hungary and Romania.

In most European countries, submitting an outline of deposits on the maps is required, but this does not mean the automatic reservation of the land for mining development. It is only an indication of the presence of the mineral deposits as one of the important elements in planning: the potential use which should be taken into account when determining the use of land. The boundaries of mineral deposits are shown in the land-use planning maps of a different scale (mainly on a basic and regional scale) in: Albania, Cyprus, Czech Republic, Finland (only deposits with active mining or mine planning), Greece, Hungary, Poland, Portugal, Slovakia, Slovenia, Switzerland and Ukraine. Additionally they are shown in other land-use documents in the UK, Germany, Austria, Denmark/Greenland and Ireland and protected.

The formal solutions related to the mineral deposits accessibility in the land use planning procedures are different in different countries. These include: preparation of detailed maps of the distribution of mineral deposits or management plans on a scale of municipalities, and inclusion as attachments to other planning documents. Decisions on the method, type and sequence of land-use are taken during the discussion of the administrative bodies with or without expert's participation and are formally recorded. Good practices in this area are applied in the United Kingdom, Austria and Germany.

The authorities granting permits are in government or regional/ local administrative bodies in most of the European countries. In some cases (UK and Ireland) they are land-use planning offices. Sometimes (in unresolved cases) the court decides: as in Finland, UK, Netherland and Ireland. Additionally, decisions are made by the different instances in quite a number of conflict cases related to land-use: mainly by administrative bodies or court, sometimes with the help of expert and/or social dialogue. This is the case, for example, in Albania, Austria, Denmark/Greenland, Cyprus, Finland, UK, Greece, Netherland, Hungary, Italy, Slovakia and Switzerland).

### 3. Regional variation

There are no clear regional and political variations of legal and governmental issues concerning the regulation of access to mineral deposits and prospective areas. However, it can be noted that in the countries of the former central economy system, the role of the state and government bodies is larger, despite adapting various regulations of EU legislation. The most important issue, protection of the accessibility of mineral deposits, is guaranteed by law in: Albania, Czech Republic, Slovakia and Hungary, and directly through appropriate provisions on land-use planning or by the ownership of mineral deposits in Albania and Romania. In contrast to these countries, there are no good solutions in this area in Poland mainly due to inconsistencies in the legal regulations. Access to the mineral deposits and the prospective areas are also guaranteed in Germany and the UK, but using slightly different regulations. In addition, several similar solutions are used in Scandinavian countries. In Finland, the general rule is that land-use plans should be made on the municipality level before a mining permit can be issued. This requires cooperation between the mining operator and various authorities to determine the impact of mining activity on the land use. Requirements for the land-use plan may be set aside only in the case of small scale planned mining activity. The decision on the mining permit ensures access to the deposit and is shown in the Finnish Land Information System. These solutions do not guarantee free access to the mineral deposits, but minimize the scale of potential conflicts.

There are two main reasons for the limitation of the access to deposits:

- ◆ growth of the legal nature protected areas and
- ◆ dynamically growing infrastructure development.



The first one is driven by the EU directive related to the Natura 2000 areas and the required share of such areas in the total area of each country (Guidance... 2011). In many countries it has introduced the prohibition of mineral exploration and mining companies to in the area and in many others increased the bureaucracy in obtaining the permits. Legislative requirements related to the land use and spatial planning are known for many years and seem to increase over time due to the growing deficit of the available land.

#### 4. Review

The challenge for the sustainable management of mineral deposits related to the aspect of their accessibility, is to find a balance between securing minerals supply, and protecting the environment and various forms of land-use. The point of balance depends very much on the range of policies adopted by governments. In the core seems to be development of a long term and stable resource or minerals planning policy in each country.

Based on the review of practices in different countries, the key elements of minerals planning policy appear to be a clearly defined and understood legal and administrative framework which regulates access to mineral deposits, defines mineral ownership rights, establishes durable and non-restrictive system of mining fees/taxes and provides conflict resolution mechanisms. A successful minerals planning policy should create the political, legal and administrative environment, which is necessary to ensure the supply of minerals to the society within the framework of sustainable development, in which all three components (environment, economy and society) are considered to be equally important. Minerals planning policies which create an environment of conflict, may in turn result in the unusability of mineral reserves, lead to an unsustainable minerals industry and result in a long-term shortage in minerals supply.

According presented analysis there are some suggestions and recommendations for the future legal and administrative activity related to improving the accessibility of mineral deposits.

1. Due to the deepening deficit of available land and increasing land-use conflicts, strengthening the efforts for the protection of economically valuable minerals in order to guarantee their use in the future is necessary. This applies, in particular, to the limitations of such forms of land use which prevent access to mineral resources. For this purpose, it seems necessary to better link the mining law with provisions on land-use planning.
2. To improve the situation in countries where existing legal solutions guaranteeing the accessibility of mineral resources in relation to the spatial planning are inadequate, the exchange of good practices and attempts to implement solutions used would be recommended, for example, in the United Kingdom, Austria and Germany.
3. Due to the economic importance of the accessibility many of mineral resources, the possibility of developing a specific EU directive containing guidelines in this regard should be considered.

4. To improve the attractiveness of the minerals sector in Europe to meet the growing domestic need for raw materials, active pro-investment policies in the mining sector should be implemented. The simplification of the licensing procedures and improving the stability of the charges related to mining activity could also improve the investment situation. Additional funds could be devoted to improving the technical solutions that minimize the effects of mining activities, contributing both to the improvement of the natural environment and a better image of the mining industry towards the society. Finland, the solutions of which may serve as a model of good practice may serve as an example of a country leading an exploration and mining friendly policy in Europe.

#### *Acknowledgments*

*I would like to thank Dominic Wittmer and Lars Sorensen for their insightful comments and suggestions that helped in the synthetic approach this complex issue.*

## REFERENCES

- Ellison et al. 2001 – Ellison, R.A., Arrick, A., Hennessey, C. and Booth, S.J. 2001. The use of earth information in support of planning in England and Wales [In:] *Integrating geology in urban planning*. UN ESCAP, N. York, pp. 1–17.
- European Commission, 2011. Guidance on undertaking non- energy extractive activities in accordance with Natura 2000 requirements. 2011. [Online] Available at: (<http://ec.europa.eu/environment/nature/natura2000/management/docs/nee-n2000-guidance.pdf>) [Accessed: 1.10.2016].
- Heberstreit, C. 2009. Access to resources – a change in Europe’s policy. *European Geologist* 28, pp. 11–13.
- Implementation of policy proposes packages to promote sustainable management of natural resources. UNEP, 2003.
- Improving Framework Conditions for Extracting Minerals for the EU. Exchanging best practice on land use planning, permitting and geological knowledge sharing. European Commission. Enterprise and Industry Directorate General, 2010, pp. 1–59
- Nieć, M. and Radwanek-Bąk, B. 2010. Recent and future utilization of mineral deposits in Poland and threats to security of mineral raw material supply. AIMS, RWTH, SIDMI. Bd. 9: *Mineral resources and mine development*. Aachen, pp. 137–147.
- Nieć, M. and Radwanek-Bąk, B. 2012. Ochrona złóż kopalni jako element planowania i zagospodarowania przestrzennego – problemy prawne i mentalne. *Przegląd Górniczy* No. 8, pp. 3–6 (in Polish).
- Nieć et al. 2014 – Nieć, M., Galos, K. and Szamałek, K. 2014. Main challenges of mineral resources policy of Poland. *Res. Policy* 42, pp. 93–103.
- Nieć, M. and Radwanek-Bąk, B. 2014. *Ochrona i racjonalne wykorzystanie zasobów kopalni*. Kraków: Ed. IGSMiE PAN. 177 pp. (in Polish).
- Radwanek-Bąk, B. 2007. The concept of multi-criteria mineral resources protection. *Environmental Geol.* 52, pp. 137–145.
- Radwanek-Bąk, B. 2008. Dostępność terenów złożowych jako priorytet ochrony zasobów złóż kopalni. *Górnictwo Odkrywkowe* r. 47, No. 2–3, pp. 19–24 (in Polish).
- Radwanek-Bąk, B. 2012. Konflikty środowiskowe zagospodarowania złóż kopalni eksploatowanych metodą odkrywkową zlokalizowanych na obszarach sieci NATURA 2000 – przykład województwa małopolskiego. *Biuletyn PIG* 448(2), pp. 269–281 (in Polish).

- Radwanek-Bąk, B. 2016. Minerals4EU – Europejska sieć informacyjna zaopatrzenia w surowce mineralne – jeden z wiodących projektów komisji europejskiej ostatnich lat. *Przegląd Geologiczny* 7, pp. 458–464 (in Polish).
- Radwanek-Bąk, B. and Nieć, M. 2011. Ochrona zasobów kopalin – droga trudnego kompromisu. *Przegląd Górniczy* t. 66, No. 10 (1067), pp. 7–15 (in Polish).
- Radwanek-Bąk, B. and Nieć, M. 2014. Valorization of undeveloped industrial rock deposits in Poland. *Resources Policy* 45, pp. 290–298.
- Recommendations on the framework conditions for the extraction of non-energy raw materials in the European Union, Report of the Ad Hoc Working Group on Exchange of best practices on minerals policy and legal framework, information framework, land-use planning and permitting (AHWG), 2014.
- Reznicek, V. 1987. Metodika ochrany nerudnych surovin a nektere problemy s jejim uplatnovanim. *Forum pro nerudy* No. 33. Praha (in Czech).
- Shields, D.J. and Šolar, S.V. 2004. *Sustainable mineral resources management and indicators: case study Slovenia*. Geol. Surv. Slovenia, Ljubljana, 83 p.
- Stefanowicz, J. 2007. Regulacje prawa geologicznego i górnictwa a efektywność wykorzystania zasobów złóż kopalin. *Polityka Energetyczna – Energy Policy Journal* Vol. 10, No. 2, pp. 159–175 (in Polish).
- Szamałek, K. 2011. Rational mineral deposit management in the light of mineral resources theory. *Gospodarka Surowcami Mineralnymi – Mineral Resources Management* Vol. 27, No. 4, pp. 5–15.
- Tiess, G. 2010. Minerals Policy in Europe. Some recent developments. *Resources Policy* 35, pp. 10–198.
- Tiess, G. 2011a. *Legal basis of Minerals Policy in Europe. An overview of 40 countries*. Springer Verlag.
- Tiess, G. 2011b. *General and international mineral policy. Focus Europe*. Springer Verlag.
- Wagner, H. and Tiess, G. 2008. Minerals planning policies and supply practices in Europe [In:] *21st WMC & Expo*, Taylor&Francis Group, London, pp. 29–39.
- Weber, L. 2007. Der Österreichische Rohstoff Plan. *Jahrbuch der Geologischen Bundesanstalt* 147, 1, 2, pp. 223–229 (in German).
- Weber, L. Hrsg. 2012. *Der Österreichische Rohstoff Plan. Archiv für Lagerstättenforschung*. Band 26 (in German).
- Wrighton et al. 2014 – Wrighton, C.E., Been, E.J. and Mankelov, J.M. 2014. The development and implementation of mineral safeguarding policies at national and local levels in the United Kingdom. *Resources Policy* 41, pp. 160–170.

**PRAWNE I FORMALNE CZYNNIKI ZWIĄZANE  
Z DOSTĘPNOŚCIĄ ZŁOŻ KOPALIN W KRAJACH EUROPY**

Słowa kluczowe

dostępność złóż kopalin, regulacje prawne, ochrona przyrody,  
krajobrazu, konflikty planistyczne

Streszczenie

Dostępność złóż kopalin jest jednym z ważnych czynników warunkujących możliwość ich gospodarczego wykorzystania. Od wielu lat obserwuje się narastające jej ograniczenia i przeszkody. Część spośród nich jak: koncesjonowanie, system opłat, własność złóż i terenów ich występowania, wymagania w zakresie ochrony przyrody oraz planowania przestrzennego są związane z krajowymi regulacjami prawnymi i są kontrolowane przez organa administracji państwowej lub samorządowej; inne, jak np. protesty społeczne lub efekt NIMBY, są domeną społeczeństwa. W niniejszej pracy przedstawiono pierwsze z nich tj. uwarunkowania prawne i formalne. Różne możliwości i zapisy dotyczące wykorzystania terenu np. ochrona przyrody, turystyka i rekreacja, zabudowa terenu mogą

utrudnić lub uniemożliwić dostęp do złóż kopalin ograniczając obszary dla prowadzenia poszukiwań lub ich wydobywania. Zjawisko konkurowania w zakresie różnych sposobów wykorzystania powierzchni terenu wydaje się być podobne w wielu krajach i regionach, sprzyjając powstawaniu konfliktów, jakkolwiek zarówno skala, jak i ich szczegółowe przyczyny mogą się różnić. Dotyczy to również podejmowanych prób ich rozwiązywania.

Celem pracy była identyfikacja i analiza źródeł oraz typów formalno-prawnych ograniczeń związanych z dostępnością złóż, co w konsekwencji może wpłynąć negatywnie na wielkość dostępnego do wykorzystania potencjału surowcowego. W konsekwencji może to niekorzystnie wpłynąć na konkurencyjność surowcową europejskiego przemysłu wydobywczego. Dlatego też aktywne przeciwdziałanie konfliktom oraz wprowadzenie dobrych rozwiązań prawnych w zakresie dostępu do złóż dla ich poszukiwań, rozpoznania i działalności górniczej jest jednym z kluczowych działań wpływających na zrównoważony rozwój tej branży.

Prezentowana publikacja jest syntezą badań prowadzonych w tym zakresie w ramach zakończonoego we wrześniu 2015 r. projektu Minerals4EU, który był jednym ze sztandarowych projektów surowcowych UE w ostatnich latach. Jednym z ważnych problemów analizowanych w jego ramach, w szczególności w opracowywanym foresighcie surowcowym dla Europy, były problemy dostępności złóż. PIG-PIB był liderem tego zadania problemowego, a partnerami byli przedstawiciele służb geologicznych z Finlandii, Danii/Grenlandii, Szwecji i Chorwacji. Projekt Minerals4EU był finansowany przez Komisję Europejską. W projekcie oprócz krajów UE uczestniczyły również: Norwegia, Szwajcaria (państwa stowarzyszone) oraz Albania i Ukraina.

#### LEGAL AND FORMAL FACTORS RELATED TO THE MINERAL RAW MATERIAL DEPOSITS ACCESSIBILITY IN EUROPE

##### Key words

mineral deposits accessibility, law regulations, nature protection and spatial planning conflicts,  
mineral sustainability of Europe

##### Abstract

Over the last decades, the access to mineral raw material deposits has been increasingly limited by diverse limitations and obstacles. Some of them including: permits, taxes and fees, the ownership of mineral deposits, environmental protection rules and land-use and spatial planning conflicts, are related to state (governmental) activities and others such as protests against the mining activity and NIM-BY effect, to societal issues. The legal authorities, governments and regulators are the stakeholders involved in the legislative issues of this process. A major potential matter of dispute lies in land-use issues. Diverse land-use types, for example, nature conservation, tourism and building development, can restrict the area available for exploration and/or mining, and thus access to mineral deposits. The nature of the land-use competition seems to be similar in different countries and regions, and so do the land-use conflicts. However, the scale and the underlying reasons of the land-use conflicts may differ. This also applies to the approaches to solve the problems.

The aim of the study is to identify and analyze the sources and types of legislative and governmental/executive constraints on mineral activities, which can limit the future potential for mineral raw materials and mineable mineral resources. Ultimately, restricted accessibility can reduce the competitiveness of the European minerals industry. For these reasons, the active resolution and prevention of conflicts and the implementation of well-defined legislation are crucial elements to support the sustainability of the European minerals industry. This publication is a summary of the analyses carried out in the framework of a recently completed project entitled Minerals4EU that was one of the flagship projects of the recent years. Mineral deposits accessibility issues in the EU was one of the topics of raw materials foresight. PGI-NRI was the topic leader and National Geological Surveys from Finland, Sweden and Croatia were the partners. The Minerals 4EU project was financed by the European Commission. In addition to the EU countries, the following countries also participated: Norway, Switzerland, (associated countries), Albania, Ukraine and also UK after Brexit.

