# MAIN TOPICS

## RENEWABLE AND NON-RENEWABLE NATURAL RESOURCES AND THEIR LEGAL REGULATION

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### 1. Introduction

In my brief contribution, I would like to discuss the concept of natural resources, their categorization, and the legal regulation of their use, using the Czech legal system as an example. I would also like to point out some legal issues from the perspective of *de lege ferenda*.

The Czech Act on the Environment defines natural resources as those parts of living or nonliving nature that humans use or can use to satisfy their needs.[1] These include both things in the material sense (minerals, wood, food obtained from plants and animals, etc.) and energy (electricity, gas, hot water, etc.).

Natural resources and their extraction and use are the only means by which humans satisfy their material needs. This has been the case throughout human history on planet Earth, and will continue to be so.[2] We take all material resources and goods for our biological, social, and economic life from nature. We have nothing else available to us as humanity. There is only one planet Earth, and the use of raw materials from other planets or other space objects is and will probably remain fiction and a wish for the future rather than reality for a long time to come.[3]

Natural resources can be classified into two categories: A) non-renewable and B) renewable. From a human (especially economic) perspective, both categories have their advantages and disadvantages in terms of their use.

According to the Czech Act on the Environment, renewable natural resources have the ability to partially or completely renew themselves, either naturally or with human assistance, as they are gradually consumed, while non-renewable natural resources are depleted through consumption.[4]

[1] Section 7(1) of Act No. 17/1992 Coll., on the environment.

[2] FLEISCHNER, THOMAS L. Natural History and the Deep Roots of Resource Management. *Natural resources journal*. 2005, Vol. 45, No. 1, pp. 1–13.

[3] NADDEO, Vincenzo. One planet, one health, one future: The environmental perspective. *Water environment research*. 2021, Vol. 93, No. 9, pp. 1472–1475. DOI: https://doi.org/10.1002/wer.1624.

[4] Section 7(2) of Act No. 17/1992 Coll., on the environment.

The advantage of non-renewable resources is that they are relatively easy to store and transport. They are also usually available when needed. However, they are distributed rather unevenly across Europe and the entire planet (oil, gas, coal, etc.), which can greatly advantage or disadvantage individual countries. On the other hand, there are negative aspects, as these are mostly fossil fuels that contain carbon (C), which contributes to climate change and global warming when burned or otherwise released into the environment. Of course, they also contribute to general air, water, and soil pollution.[5]

Nuclear energy also belongs to the group of non-renewable resources. However, the problem here is not the emission of greenhouse gases (if we disregard the water vapor produced during the cooling of the power plant), but the safety of operation and the safety of the subsequent permanent storage of spent nuclear fuel (nuclear waste).[6]

By contrast, renewable alternative energy sources are climate-neutral and climate-friendly. However, the production of equipment that converts solar, hydro, biomass, or wind energy into electrical energy also comes at a cost and imposes an environmental burden. Another disadvantage is that such sources are available only at certain times, i.e. only when the sun is shining, the wind is blowing, or there is sufficient water. This raises questions about storage and about overcoming the time gap between production and consumption. These problems can be addressed through technical systems such as batteries or pumped-storage power plants, etc.

Renewable (alternative) energy sources include wind, water, solar, geothermal, and biomass energy.[7] This also includes flora and fauna, from which we obtain food, textiles, and energy (oil, wood, etc.). However, these have their limits of renewability given by growth (the difference between birth and death rates). Even renewable natural resources have their limits of renewability. If, in the long term, the mortality of animal or plant populations exceeds their birth rate, the population gradually weakens and dies out. Renewable resources can thus relatively easily become non-renewable. On the contrary, so-called alternative resources (solar radiation, water, or wind) are, by their physical nature, essentially inexhaustible.

The human population is, of course, also a renewable resource, both in the biological sense (demographic trends) and in the social sense – the inventiveness of the human spirit and the labour force.

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[5] SCHOU, Poul. Polluting Non-Renewable Resources and Growth. *Environmental & resource economics*. 2000, Vol. 16, No. 2, pp. 211–227. DOI: https://doi.org/10.1023/A:1008359225189.

[6] BOUSTANY, Katia. The development of nuclear law-making or the art of legal „evasion". Nuclear law bulletin. 1998, pp. 39–53.

[7] Section 2(1)(a) of Act No. 165/2012 Coll., on supported energy sources and on amendments to certain acts.

## 2. Concepts and Principles in the Use and Protection of Natural Resources

Although the role of international and EU law in the protection and use of natural resources is gradually growing, national legislation, i.e. that of individual states, continues to play a key role, particularly due to the connection between resources and the territory of the individual states where they are located.

Czech legislation governing the use of natural resources is fragmented and is primarily contained in laws dealing with energy, atomic matters, and mining, and secondarily also in environmental and agricultural legislation.

The State plays a significant (even key) role in the protection and sustainable use of natural resources. The principle of State responsibility in this area is enshrined in the Czech Constitution, which states that the State shall ensure the sustainable use of natural resources and the protection of natural wealth.[8]

Some obligations are also regulated by the Czech Act on the Environment, which stipulates that anyone who uses natural resources is obliged to monitor this activity at their own expense and to be aware of its possible consequences.[9] With regard to economic instruments, the same Act stipulates that natural persons or legal entities shall pay taxes, fees, levies, and other payments for the economic use of natural resources, if so provided by special regulations.[10] On the other hand, the Act provides that special regulations shall determine when legal or natural persons who protect the environment or use natural resources in accordance with the principle of sustainable development may be given preferential treatment in terms of taxes and levies or the provision of loans and subsidies.[11]

The Act on the Environment was probably one of the first pieces of legislation in Czechoslovak history to enshrine the principle of economic incentives (both negative and positive) in the area of the extraction and use of natural resources, albeit only in general terms, leaving the details to be specified in separate legislation.

As regards the legal sources of natural resources law, these are contained in mining, energy, nuclear, and environmental laws. However, these regulations date from different periods and are not closely interlinked, which reduces their effectiveness.

The triad of Czech mining and geological law consists of outdated (albeit repeatedly amended) laws from the end of the socialist period, namely:

- Act No. 44/1988 Coll., on the protection and use of mineral resources (Mining Act),
- Act No. 61/1988 Coll., on mining activities, explosives, and state mining administration,

[8] Article 7 of the Constitution.

[9] Section 18 of the Act on the Environment.

[10] Section 31 of the Act on the Environment.

[11] Section 32 of the Act on the Environment.

- Act No. 62/1988 Coll., on geological works.[12]

The second Czech triad for energy law is:

- Act No. 406/2000 Coll., on energy management,
- Act No. 165/2012 Coll., on support for electricity production from renewable energy sources and on amendments to certain acts (Act on Supported Energy Sources),
- Act No. 458/2000 Coll., on business conditions and state administration in the energy sectors and on amendments to certain acts (Energy Act).[13]

Other Czech legal sources regulating natural resources include the Atomic Energy Act, the Forest Act, the Water Act, the Agricultural Land Protection Act, the Hunting Act, the Fisheries Act, and certain other legal regulations. However, we must not forget the laws governing cross-cutting issues, such as the Building Act, the Environmental Impact Assessment Act, the Integrated Pollution Prevention and Control Act, and the Unified Integrated Opinion Act.

Given that natural resources may be owned by various entities, private law, represented in particular by the Civil Code, comes into play.

The law is undoubtedly one of the means to help achieve a certain balance or, better still, harmony between economic needs, social security, and environmental sustainability in the use of natural resources. However, rather than administrative and punitive instruments, which of course exist and operate here as a last resort, this must be achieved primarily through conceptual and economic instruments.

## 3. Results and Discussion

Science, research, technology, and digitization are bringing new perspectives and new possibilities for the use of natural resources. The following objective facts and legal principles are evident for the future:

1. The reserves (quantity) of non-renewable resources are finite.
2. Non-renewable resources can only be used within the limits of their renewability.
3. The population of the planet and their consumption requirements are constantly growing.
4. The gap between resources and consumption is widening, and the imaginary scissors are opening further.
5. The burden on the planet, both in terms of the depletion of natural resources and the destruction and pollution of nature, is constantly growing.

[12] VÍCHA, O. *Horní zákon. Zákon o hornické činnosti, výbušninách a státní báňské správě. Komentář.* Praha: Wolters Kluwer, 2017.

[13] EICHLEROVÁ, K. a kol. *Energetický zákon. Komentář.* Praha: Wolters Kluwer, 2016.

6. Science and technology have only limited and partial capabilities to solve these problems.
7. There is a threat of collapse and dysfunction of natural and social systems on Earth.

The solution therefore lies primarily in diversifying sources, promoting savings, reducing demand and consumption of resources, and finally, significantly decentralizing their use and extraction.

## 4. Conclusion

When it comes to energy sources, there is a clear need for both the Czech Republic and the EU to move towards a mix of sources and to transition to renewable sources as quickly as possible, to a certain extent also nuclear sources, and in particular to savings in materials and energy. The wider introduction of the circular economy has considerable potential for saving materials and energy in terms of waste management.

In its much-discussed and much-maligned European Green Deal, the European Commission has clearly set itself the goal of decarbonisation, i.e. the relatively rapid phasing-out of the extraction and combustion of all carbon-based fossil fuels. Failure to address the issues of climate-change mitigation and adaptation would clearly result in immense financial and other costs.

Humanity's approach to the extraction and use of natural resources must be guided in the future by the principles of conservation, economy, mutual substitutability, functional replacement, and overall balance. We have nothing else with which to satisfy our material needs, and 'our natural-resources-use party is over'.

## Literature

BOUSTANY, Katia. The development of nuclear law-making or the art of legal "evasion". Nuclear law bulletin. 1998, pp. 39–53.

DAMOHORSKÝ, M. et al. *Právo životního prostředí.* 3. vydání. Praha: C. H. Beck, 2010.

DAMOHORSKÝ, M. et al. *Zemědělské právo*. Beroun: Nakladatelství Eva Rozkotová, 2021.

EICHLEROVÁ, K. a kol. *Energetický zákon. Komentář.* Praha: Wolters Kluwer, 2016.

FLEISCHNER, THOMAS L. Natural History and the Deep Roots of Resource Management. *Natural resources journal*. 2005, Vol. 45, No. 1, pp. 1–13.

KOLB, Sebastian PLANKENBÜHLER, Thomas HOFMANN, Katharina BERGERSON, Joule KARL, Jürgen. Life cycle greenhouse gas emissions of renewable gas technologies: A comparative review. *Renewable & sustainable energy reviews*. 2021, Vol. 146, p. 111147. DOI: https://doi.org/10.1016/j.rser.2021.111147.

NADDEO, Vincenzo. One planet, one health, one future: The environmental perspective. *Water environment research*. 2021, Vol. 93, No. 9, pp. 1472–1475. DOI: https://doi.org/10.1002/wer.1624.

PARRA, David MAUGER, Romain. A new dawn for energy storage: An interdisciplinary legal and technoeconomic analysis of the new EU legal framework. *Energy policy*. 2022, Vol. 171, p. 113262. DOI: https://doi.org/10.1016/j.enpol.2022.113262.

SCHOU, Poul. Polluting Non-Renewable Resources and Growth. *Environmental & resource economics*. 2000, Vol. 16, No. 2, pp. 211–227. DOI: https://doi.org/10.1023/A:1008359225189.

VAVROUŠEK, J. et al. Lidské hodnoty a trvale udržitelný způsob života. Sborník přednášek. Olomouc: STUŽ a Přírodovědecká fakulta Univerzity Palackého, 1993.

VÍCHA, O. *Horní zákon. Zákon o hornické činnosti, výbušninách a státní báňské správě. Komentář.* Praha: Wolters Kluwer, 2017.

World Commission on Environment and Development. *Our common future*. Oxford: Oxford University Press, 2009.

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**Abstract**

The present contribution deals with the contemporary issue of the utilisation of both non-renewable and renewable natural resources. The focus is directed towards the role of the Czech natural resources law, in addition to the economic, environmental and social consequences thereof. The conclusions propose several ideas for the future of the law.

**Key words**

renewable and non-renewable natural resources, environmental law

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