Legislation Framework

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ABSTRACT: The mentioned legal regulations determine the basic terms and determine the fundamental principles of protection of the environment and the duties of natural persons and legal entities in the protection and improvement of the condition of the environment and in the use of natural resources; nevertheless, it is absed on the principle of sustainable development. The right conception of the legislative framework, which deals with the protection of the environment in a complex way, could contribute considerably to the improvement of the conditions of the environment.

KEY WORDS: legislation, regulation, law.

1 THE EUROPEAN UNION LEGISLATION TOOLS FOR THE PROTECTION OF THE ENVIRONMENT AGAINST TRAFFIC IMPACTS

Legal protection of the environment has undergone dynamic development since the beginning of European integration. Environmental protection is, within the EU, regulated by mandatory and non-mandatory mechanisms. The basis of the mandatory regulation is a Treaty of the European Community (TEC, The Treaty of Rome), which has been amended four times - by The Single European Act, The Treaty on the European Union (Maastricht Treaty), The Amsterdam Treaty, and The Treaty of Nice. The law of the European Community (EC) is a special type of law, and its operation is defined according to Article 3b of The Treaty of Rome "through limits of entrusted competences and goals, which were determined by it". The environmental protection is included. Its Article 6the requires that the environmental protection be integrated in all EC policies with an emphasis on sustainable development. The majority of the specific standards adopted for the environmental protection are based on Article 95 harmonizing the regulations to create an inner market and Articles 174 – 176, which are the crucial legal basis for the environmental measures. The provisions of the Treaty of Rome cannot be applied directly. It is necessary to specify them in so-called secondary sources of the environmental law. The majority of provisions of the environmental Community law are included in regulations, directives, and decisions of the European Parliament, Council, and Commission. The legal regulation, which would be focused on a solution of the environmental issue in the EC in a complex way, has not been drafted so far (Kružíková et al., 2003).

The fundamental principles of the environmental law of the EC (Ball et al., 1998) are:

Principle of prevention: generally the most important, as far as environmental protection is concerned. The environmental policy of all countries is based on it. It has a crucial role in legal regulations. Prevention is less expensive and more efficient than consequent remedy actions.

Principle of subsidiarity: concerns the division of the relationship between competences and the individual management levels. Subsidiarity means that competence should be placed on the lowest possible level of the decision-making process, which is closest to the specific problem and the citizens. The principle of subsidiarity is common for all the coordinated policies of the EC. According to the subsidiarity principle, the EC should only become active when the member states may not interfere on their own in the same effective way. In the environmental policy the use of this principle is limited, because a range of environmental issues do not respect state boundaries (typically air pollution). Therefore, mostly the regulation at the level of the EC is more effective.

Principle of a high level of protection: adopting the European legal standards should be based on the traditions of "the stricter" member states and the latest technologies and methods of protection. The EC standard could be "softer" than it is in the strictest state of the EU. The individual states may maintain their higher standards. This principle is also used to "export" national environmental legislation from more demanding states of the EU to other member states, and it restricts the "unfair competition" of states with softer demands on the environmental protection.

Principle of "polluter pays": the economic expenditures on the removal of pollution in the environment should not be paid by the whole society, but by the specific polluters. It deals with an effort to internalize the externalities. This principle requires that the polluter takes responsibility for the external expenditures which are produced as a consequence of their pollution activities.

Principle of protection as close to the pollution source as possible: the environmental damage should be prevented as close to the place of origin as possible, and not at other stages of the pollution chain. An example is the effort to deal with dangerous waste as close to its producer as possible, and not at distant processing facilities (the number of risks connected with the handling and transport decreases).

Principle of sustainable development: was defined as "development which meets the present needs without compromising the ability of future generations to meet their own needs" as far as economic, social, and environmental needs are concerned. It has become a general principle of the environmental protection in the member states on the basis of the Maastricht Treaty.

Principle of integrated protection: all possible effects on the environment have to be taken into consideration. It is not possible to follow only one aspect of protection and omit the others. In a broader sense this means that the impacts on the environment have to be taken into account also when proposing and executing other EC policies (such as industrial policy,

the consumer protection policy, transport policy, trans-European networks). The principle of integrated protection is considered to be the most important principle of the environmental protection in EC.

The EU's non-mandatory activities particularly include documents of these types:

- Action plans for the environmental protection (the 6th Action Plan for 2001 2010 is now in progress and links the key principles of sustainable development from the 5th Action Plan).
- Recommendations, specific measures, and standpoints (e.g. the "Green Paper Towards fairer and more effective prices in transport", or the "White Paper - European transport policy for 2010: time to decide").
- financing the individual programmes from the EC funds (Cohesion fund and funds specializing in the environment example.g. LIVE, SAVE, ALTERNER).

Environmental law is divided into two main categories:

- a) horizontal (cross-sectional) regulations which determine the institutions, instruments, and principles common for the whole area of the environment
 - integrated prevention and limiting the environmental pollution
 - assessing the influence on the environment (EIA)
 - free access to information on the environment
 - system of environmental management and audit (EMAS)
- b) regulations for the protection of environmental components or sources of pollution
 - air, water, nature
 - noise caused by motor vehicles, machines, and devices
 - waste

The legal standards adjusting the sanctions are still not a part of the system of the Community environmental law so far. Considering the fact that member states are obliged to assure the effective application of regulations in their own legislation, they have to set the sanctions for violating their provisions, which have become a part of their legislation. It is up to each state which sanctions are used. However, they have to be appropriate and correspond with the sanctions imposed in similar cases of violations of national standards.

Currently, 350 - 500 legal standards concerning the environment are effective in the EU. The European Union issues all agenda in the Official Journal of EU documents (similar to our Collection of Laws) and on CD-ROM. The LEGISLATION database is analytically structured in 20 sections (the most important sections for transport departments are: Section 7 Transport policy and 15 The environment, consumers and health protection). The adoption of directives, regulations, and decisions are mandatory for the EU member states and they are subsequently adopted by regulations at national levels.

The Convention on Long-range Trans-boundary Air Pollution and related protocols have the widest effect of the mandatory regulations of the European states connected with the influences of transport on the environment. The fundamental principles of The Convention include the fact that the signatory powers will protect mankind

and their environment, and they will try to restrict, gradually reduce, and prevent air pollution. The Convention has become a basis for issuing other protocols on the restriction of emissions of individual pollutants. The most advanced instrument of The Convention - Protocol AcETO is focused specifically on the reduction of the effects of air pollution in Europe, and it is a fundamental document of the cross-sectional category of the EU. Its goal is emission control and the reduction of sulphur, nitrogen oxides, ammonia, and liquid organic components produced by human activity and unfavourably affecting health, natural ecosystems, materials, and agricultural plants as a consequence of acidification, eutrophication, and ground-level ozone. The specific individual national emission limits, which should be reached by 2010, are the main tools to meet the AcETO protocol targets. the EU, under its former name of the European Community (EC), has committed to meeting The Convention and a range of other subsequent protocols with its signature and ratification as one of the member parties. On the basis of this act the EU then gradually takes over the individual protocols of the European economic commission of the UN and issues them as individual mandatory directives, which are further elaborated in a range of relevant regulations and recommendations in greater detail.

The legislative environmental measures for transport contain regulations dealing with the protection of environmental components or the sources of pollution. The regulations for air protection which determine the maximum acceptable contents of particular pollutants in exhaust gases and the values for the quality of fuel are used. The legislative measures which regulate noise and waste from transport are equally important.

The first regulation for pollutants in exhaust gases in Europe was the directive of the United Nations Economic Commission for Europe No. 15 (hereinafter ECE 15) which was introduced for passenger cars in 1971. In the late 1980s it was replaced with the regulation ECE 83 which is a basis for valid regulations nowadays. So far it has been amended several times as a consequence of the increasing requirements on the reduction of exhaust gases; and the same applies for the regulation ECE 49 for heavy vehicles with weight over 3.5 tones. The EU issues the equivalent regulations, marked as EURO, to join the regulations ECE 49 and 83.

Although exhaust gases represent a mixture consisting of more than 100 pollutants, the regulations for exhaust emissions only limit carbon monoxide (CO), nitrogen oxides (NO_x), the sum of hydrocarbons (HC), and particulate matter - PM. PM are only limited at diesel engines because their quantity and size is much higher when compared to petrol engines. The emissions of hydrocarbons and nitrogen oxides were expressed as a sum of HC and NO_x in some older legislative regulations.

The production, or the import of vehicles which do not meet the stricter demands, have to finish at the beginning of the validity of a new regulation. In the case of selling new vehicles, the selling of vehicles has to be terminated within one year from the commencement date of the regulation. Further stricter regulations of emission limits under the name EURO 5 came into force in 2008. Only the vehicles of a high technological standard equipped with electronic management of the combustion process and systems which adjust the composition of exhaust gases can satisfy the new stricter limits. The EC legislation deals with the approval of not only newly produced models of cars, but it also controls the vehicle parameters in common production.

The emission limits for heavy vehicles and buses are specified in g. kWh⁻¹. The emission values in kg.km⁻¹ (Adamec et al., 2003) can be obtained through a simple calculation with the known average engine performance [kW] under specific conditions and vehicle speed [km.h⁻¹]. The stricter emission limits will require a range of construction changes and adjustments on heavy vehicles and buses in the future, as well as in the case of passenger and light commercial vehicles. The emissions of particulate matter are most important

for the cars with diesel engines because they represent a high carcinogenic risk for the health of the population.

The maximum permissible contents of carbon monoxide (CO) and the sum of hydrocarbons (HC) are determined in order to execute control measurements of the emissions of diesel engine vehicles. The content of CO is measured in volume %, the content of HC in mg.kg-1 (or ppm). Each vehicle in its regular inspection (Vehicle Testing Station - STK), which is executed at the measurement emission stations every two years, has to meet these limits.

Not only the type of the combustion engine and technical condition of the vehicle decide on the composition and quantity of exhaust emissions, but so do the type and quality of fuel. The development of fuel quality for combustion engines is influenced considerably by stricter air quality requirements. The most important European regulation concerning fuel quality is the Directive 98/70/EC which has determined the maximum permissible content of lead, sulphur, benzene, aromatics, olefins, and oxygen in petrol and diesel since the beginning of 2000, with further stricter regulation since 2005.

The other environmental instruments, whose international regulations are to be mentioned having a close relationship to traffic and determining the limits of noise levels, are shown in the following Table 1.

Number of regulation ECE	Name, content of regulation
9	External noise 3-wheel vehicles of the L category
41	External noise of motorcycles – vehicles of the L category
51	Noise levels of vehicles with a minimum of 4 wheels
63	External noise of mopeds – vehicles of the L category

Table 1: Noise regulations ECE.

The reduction of the unfavourable effect of environmental noise in the EU, as well as noise from traffic, is an objective of the 2002/49/EC directive on the evaluation and management of noise in the external environment. This directive is in the implementation process in a number of the EU states.

2 LEGISLATION REFLECTING THE TRAFFIC RELATION TO THE ENVIRONMENT IN THE CZECH REPUBLIC

The harmonization of legal regulations in the Czech Republic with the corresponding directives of the European Community was a fundamental requirement for the accression of the Czech Republic to the EU. For all the EU member states the directives, regulations, and decisions are mandatory and they have to be subsequently adopted by Acts and regulations at national levels. The harmonization demands were, in the area of transport, emphasized by the specific nature of transport processes in the Czech Republic, with its high share of international and transit transport. The partial solutions and adjustments of relations of transport to the environment are mentioned in a number of Acts, decrees, and standards in the Czech Republic. The appropriate legal tools of the Czech legislation for the individual transport domains are mentioned for illustration.

2.1 Exhaust emission limits

Act No. 56/2001, Sb., on road traffic rules. The Decree of the Ministry of Transport No. 302/2002, Sb., on regular technical examinations and emission measurements of vehicles, as amended by the decree MT No. 99/2003, Sb.,.

The Decree No. 341/2002, Sb., on the approval of technical capability and technical conditions of vehicle operation on road, which superseded the Decree of the Ministry of Transport No. 301/2002, Sb., on the approval of vehicle technical capability.

2.2 Fuel quality

The Decree MPO No. 227/2001, Sb., and the Decree MPO No. 229/2004, Sb., determine the maximum permissible contents of lead, sulphur, benzene, aromatics, olefins, and oxygen in petrol and diresel (transposing the Directive 98/70 EC into the Czech legislation).

2.3 The relation between emission limits from transport and the air protection legislation

Act No. 472/2005, Sb., which amends Act No. 86/2002, Sb., on air protection and amends other Acts as well.

Government Decree No. 597/2006, Sb., which determines the pollution limits and conditions and procedures of the monitoring, assessment, evaluation, and management of air quality.

Government Decree No. 351/2002, Sb., which determines the mandatory emission limits for certain atmospheric pollutants and the methods of preparation and implementation of the emission inspections and emission projects.

Ministry of Environment Decree No. 355/2002, Sb., which determines the emission limits and other conditions for stationary sources of air pollution which emit volatile organic substances from the processes of applying solvents and from petrol storage and distribution.

Ministry of Environment Decree No. 356/2002, Sb., which determines the list of pollutants, general emission limits, methods of submitting reports and information, detection of quantity of released pollutants, thickness of smoke, admissible level and intensity of irritating smell, conditions for the authorization of people, requirements for maintaining the operational registration of air pollution sources, and the conditions of their application.

Ministry Decree No. 357/2002, Sb., which determines the quality requirements for fuels in terms of air protection.

Ministry Decree No. 358/200, Sb., which determines the conditions for the protection of the ozone layer.

2.4 Noise pollution and vibrations

Act No. 258/2000, Sb., on public health and amendments of some related Acts, regulates the rights and obligations of natural persons and legal entities in the field of protection and support of the public health and public health authorities, their powers and authority, which imposes obligations on all operators and administrators of the noise source in order not to exceed the highest permissible levels of noise in the environment.

The Government Enactment 148/2006, Sb., on health protection from unfavourable noise and vibration effects regulates the pollutant limits of noise and vibration.

The transposition of Directive 2002/49/EC on the evaluation and management of noise in the external environment has already been made in the Czech Republic as follows:

The directive in question was implemented in the Czech legislation in June 2006 in the form of an indirect amendment of the Act No. 258/2000, Sb., on the protection

of public health and a change of amendment of related Act as amended. The indirect amendment was realized by Act No. 222/2006, Sb., which changes Act No. 76/2002, Sb., on the integrated prevention and restriction of pollution, the integrated pollution register, and the amendment of some other Acts (Act on integrated prevention), as amended, and certain other Acts.

The obligations imposed by Directive 2002/49/EC are included in Act No. 258/2000, Sb. The Act itself is then implemented in the regulation from November 2006 which is the Decree of the Ministry of Health No. 523/2006, Sb.,, which will determine the limit values of noise indicators, their calculation, basic content requirements of strategic noise maps and action plans, and the participation conditions of the public in their preparation (Decree on noise mapping).

2.5 Waste from transport

Act No. 106/2005, Sb., which takes over the full version of Act No. 185/200, Sb., on waste, as amended, deals with the car wrecks issue and the obligation of the collection of oil, tyres, and batteries.

The Decree No. 41/2005, Sb., changes the Decree 383/2001, Sb., in details of waste hadnling, regulates the technological requirements for handling car wrecks.

The Decree No. 503/2004, Sb., amends the Ministry of Environment Decree No. 381/2001, Sb., determines the Waste Catalogue, the list of dangerous waste, and list of waste and states engaged in waste export, import and transit and the procedure of approving waste import, export and transit (Waste Catalogue).

The Decree No. 505/2004 from 10 September 2004, which amends the Ministry of Environment Decree No. 237/2002, Sb., on the method of collection of some products.

Transposition of Directive of European Parliament and Council 2000/53/EC on vehicles with expired life span.

2.6 Tax regulations in the field of transport and the environment

Act No. 353/2003, Sb., on excise duties determines the excise duty rates for hydrocarbon fuels and lubricants in accordance with the determination of the minimum rates mentioned in the Council Directive 2003/96/EC.

Road tax is dealt with by Act No. 246/2008, Sb., which amends the Act No. 16/1993, Sb., on road tax, as amended.

Act No. 13/1997, Sb., on roads, as amended, deals with the fees for the use of motorways and dual carriageways. The list of motorways and dual carriageways sections, whose use is subjected to charging, is mentioned in the Decree No. 367/2001, Sb. The amount of fees (vouchers) is given by Government Decree No. 287/2003, Sb., according to vehicle type.

Act No. 235/2004, Sb., on value added tax determines the value added tax and cancels not only the original Act on VAT and all its amendments, but it has changed a range of other Acts as well (e.g. Act on excise taxes, property evaluation, etc.).

2.7 Environmental education and awareness

Act No. 123/1998, Sb., on the right to obtain environmental information, as amended by Act No. 6/2005, Sb. The Government Decree of the Czech Republic No. 1048 from 2000, about the State Programme of Environmental Education and Awareness in the Czech Republic (SP EVVO ČR).

Transposition of Directive 90/313/EHS on the freedom of access to environmental information.

3 SUMMARY

The legal regulations mentioned in the chapter define the basic concepts and provide the fundamental principles of environmental protection and the obligations of the natural persons and legal entities in the protection and improvement of the environment, and in the use of natural resources, while resulting from the principle of sustainable development. The right conception for legislative framework which deals with environmental protection in a complex way could considerably contribute to the improvement of our environment.

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REFERENCES

- Adamec, V. et al., 2003. *Výzkum zátěže životního prostředí z dopravy. [Výroční zpráva projektu VaV CE 801/210/109 za rok 2002]* [on-line]. Brno: Centrum dopravního výzkumu, 200 p. [cit. 2006-07-11]. Retrieved from: http://www.cdv.cz/text/szp/13904/13904-2002.rtf (in Czech)
- Ball, S., Bell, S., Kružíková, E. et al., 1998. *Vybrané kapitoly práva životního prostředí a ekopolitiky*. Ostrava: VŠB-Technical University Ostrava, 133 p. ISBN 80-7078-581-0. (in Czech)
- Kružíková, E., Adamová, E., Komárek, J., 2003. *Právo životního prostředí Evropských společenství*. Praha: Ústav pro ekopolitiku, o.p.s., 416 p. ISBN 60-7201-7. (in Czech)