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NEW OBJECTIVES IN ENVIRONMENT LAW GENERATED BY CLIMATE CHANGE

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NEW OBJECTIVES IN ENVIRONMENT LAW GENERATED BY CLIMATE CHANGE

Maria-Luiza HRESTIC[1]

Abstract

In Europe, the changes observed on the climate level already produce large-scale effects on the ecosystems, economic sectors, human health and welfare. The total economic losses reported, caused by extreme meteorological and climate phenomena in Europe during the period 1980-2016 rose to over 436 billion EUR, with a significant value peak in Western Europe. According to an optimistic scenario, the degree of annual deterioration of the critical infrastructure of Europe could grow ten times until the end of the 21st century only because of climate change, namely from 3.4 milliard EUR at present up to 34 milliard EUR. The greatest losses would be recorded in the industry, transports and energy sector and, generally, the climate change effects will have an unequal distribution in Europe, both concerning the moment and the place of occurrence. The Mediterranean area will be more affected by effects such as human deaths caused by heat, water restrictions, loss of habitats, increased demand of energy for cooling and forest fires. In a high emission scenario, namely a global temperature growth of 3.2 ºC–5.4 °C during the period 2081-2100, coast areas may suffer economic losses of about 39 milliard EUR a year until 2050 and up to 960 milliard EUR a year towards the end of the century. Preliminary evidence indicates a substantial contraction of the alpine tundra ecosystems in Europe, even if global warming remains within the limit of 2 °C, foreseen by the Paris Agreement, and this formation, beside the fact that it has an essential role in the water quantity regulation and sweet water provision for human consumption, supports tourism and the rural communities and, at the same time, hosts endemic species to be found uniquely in Europe.

Keywords:

Climate changes; ecosystems; environmental law; environmental degradation; right to a healthy environment; environmental protection.

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I. Climate changes

It is unanimously acknowledged that climate changes are today a serious threat to the environment. This issue was more thoroughly addressed as early as December 1997 when the third Conference of Parties to the United Nations Framework Convention on Climate Change took place in Kyoto, Japan.

It was shown then that the main climate indicators are strongly influenced by the changes in atmospheric concentrations of gases that retain infrared radiations at the Earth's surface, i.e. which produce the greenhouse effect.

Climate changes brought about by greenhouse gases already generate obvious consequences that can be seen almost everywhere, leading to:

- sea level rise and the flooding of low areas;
- glacier melt;
- modification of rainfall regime, with direct implications on the rise in flood and drought frequencies;
- changes in the incidence of climate extremes, especially of high temperature extremes.

All this has - and will continue to have - a direct impact on ecosystems, on the health of populations, including humans, on key economic sectors such as agriculture and last but not least on water resources.

I.1. Indicators of climate change impact

The global average temperature has increased by 0.85 degrees Celsius in the last 100 years and the global ocean level has risen by 25 centimetres, which seems to be little, but it is not. That is why the theme of the 2015 United Nations Climate Change Conference sparked widespread debates and entailed unexpected commitments from many countries. Things went similarly in 1997, the hottest year until then, when the mean temperature was 0.43 degrees higher than the average recorded in 1961-1990. This global trend was also confirmed in Europe, as the 90s were the warmest years. According to estimates, mean temperatures in 2020 will be two degrees Celsius higher than the 1990s. Also, in Europe, warming is expected to be higher in the northern altitudes than in the southern [1].

Global warming leads to the expansion of seas and oceans and accelerates glacier melting. All this has caused a rise by 10-25 cm in the *sea and ocean level* in the last 100 years. It is estimated that in 2020 sea level will be

50 cm above the level of the 1990s, with a variation between 15 and 95 cm, the degree of uncertainty being increased by not knowing to what extent polar ice will contribute.

Sea level rise may have such consequences as:

- *flooding and displacement of marshy or low lands;*
- *increase in the salinity of estuaries;*
- *damage of drinking water sources.*

From this point of view, the riskiest areas are deltas, beaches, islands and estuaries. In Europe, they include the coastlines of Holland, Germany, the Baltic States, Ukraine, Russia and some Mediterranean deltas [1].

Coastal areas may also be affected in other ways than by sea level rise. For example, in Holland and America, a 10% increase in storm intensity, accompanied by wind changes, might bring about more damage than a 60-cm rise in the sea level [1].

Rainfall. In twentieth-century Europe, the rainfall regime changed continually. Thus, rainfall amounts generally increased in the northern half of Europe and decreased in the south.

While in Northern Scandinavia precipitations have increased by 5%, the southern areas of Italy and Greece have experienced a decline by about 5% since 1990.

All attempts to model climate changes predict an increase in the annual average rainfall, while global warming also influences soil humidity by intensifying water evaporation. The modelling of these processes suggests that soil humidity will decrease in Europe, which will directly affect the agricultural productions.

Hydrology and water resources. Since the mid-19th century, glaciers in the Alps have begun to "retreat" and 95% of them are expected to melt over the next 100 years due to global warming, which will influence the seasonal pattern of river courses. During the last decades, their volume has increased in Northern Europe, which is accordant with the rise of precipitations [2].

Climate change will probably intensify the "hydrological stress" in certain already sensitive areas of Europe: the Mediterranean area, the Alps, Northern Scandinavia, coastal areas and Central and Eastern Europe. The consequences of changes in the hydrological cycle are hard to estimate; they include a possible rise in the frequency and intensity of floods and a potential reduction of water quality caused by the saltwater intrusion into coastal aquifers.

I.2. Agricultural and forest ecosystems

The reaction of ecosystems to modifications in temperature, rainfall and soil humidity and of other factors that change with the climate is

difficult to predict.

The main impact on species will result in changing their geographical distribution. A one degree Celsius rise in the annual average temperature is equivalent to a 200-300 km displacement to the north or a 150-200 m elevation of habitats. A two-degree Celsius rise in the temperature in Europe over the next 50 years would lead to the movement of climate features to the north at a faster rate than the ability of many plant species to migrate. Furthermore, in mountainous areas, the location of plants will be forced up, but it is likely that there will be no room available for their movement. Migration possibilities in several parts of Europe are limited due to high land use and, under such circumstances, there is an imminent danger of extinction of species and, implicitly, of narrowing biodiversity, with all its consequences.

Climate change will also have various effects on agriculture and forestry, i.e. on the growth period of wild plants, crops and their productivity. The increase of climate variability may endanger certain crops due to late frosts. Some studies especially simulation and modelling show that climate changes may entail a growth of agricultural production on a large area of Europe [2].

I.3. Main greenhouse gases – sources of emissions, concentrations

Carbon dioxide. CO2 emissions depend on the degree of economic development of each country. Thus, the level of CO2 emissions per GDP unit in 1994 is, with the exception of certain parts of the former Yugoslavia and Albania, considerably higher in Central and Eastern Europe (3.3 tons/USD) and in the new independent states (2.4 tons/USD) than in Western Europe. Figures reflect the inefficient use of energy and the preponderance of heavy, energy-intensive industries in Eastern Europe [3].

Methane. Global methane anthropic emissions amount to 375 thousand tons/year, of which 27% result from the use of fossil fuels. European emissions account for around 11% of the total amount. The main sources are leaks from natural gas transport and distribution networks, coal extraction and agriculture – particularly ruminant livestock farming and rice crops. Natural sources (for example marshes) contribute roughly 20% to global methane emissions.

Nitrous oxide. Global anthropic N2O emissions range from 3 thousand to 8 thousand tons/year. The uncertainties in evaluating these emissions result from insufficiently understanding the processes involved and their global distribution. Worldwide, the highest emissions are generated by agricultural land fertilization.

Halogenated gases. Halogenated gas emissions, such as CFCs, are rapidly decreasing following their elimination under the Montreal protocol. Therefore, the emissions of replacement gases, particularly HCHC and HFC, both greenhouse gases, are on the rise. The data on these emissions are too scarce to establish their evolution in time, but the long retention time in the atmosphere and the high global warming potential may increase their importance [4].

The contribution of greenhouse gases to global warming and hence their influence on the sea level, rainfall and ecosystems depend on the concentration and retention time in the atmosphere and their efficiency in retaining radiations. In order to be able to compare the impact of various gases, the indicator referred to as global warming potential relative to CO_2 is used, carbon dioxide being assigned the value one. The dimensions of this indicator depend on the time horizon considered [5].

These measurements should be profitably used as well by the environmental law experts, and atmospheric pollution, which has represented for a long while an environmental and health problem, should be considered noxious as well from the perspective of the human rights violation and incriminated as such. It is regrettable that, on the market, NOx emissions rights are still traded to this day, including mainly greenhouse effect gases, namely the right to pollute. The message transmitted by these so-called rights not only does not discourage NOx emissions but even encourages them, due to the defective legal communication. This is how a greater negative effect emerges when the deformed environment that the information goes through deforms the meaning or sense of the legal message [6].

II. From the History of Environmental Regulations

The European Convention on Human Rights adopted in Rome in 1950 does not include in its articles or in its Protocols the syntagm "environment" or "right to a healthy environment". Yet, looking back, to the moment of its adoption, it is clear that the environmental problems did not represent a significant preoccupation at that time, because industrial development had not yet generated serious problems concerning the environment. In fact the Convention of Rome was born following the atrocities committed during the Second World War, in the attempt to restore man's dignity and fundament a true Constitutional Charter of Europe, in its content regulating individual rights to protect the physical and moral integrity of man and his liberty [7].

The interest for environmental problems emerged much later, namely in the year 1972 in the framework of the first World Conference of the United Nations organized in Stockholm, the first world conference in the domain of environmental protection, the most important document adopted in the framework of the Conference being the "Declaration on the environment", in which have been established principles concerning the States' rights and obligations in this domain and the means to develop international cooperation. The importance of the document consists in the fact that is affirmed explicitly, for the first time, the relation between environmental protection and human rights. The document establishes a connection between human rights and environmental protection, the latter's quality being an essential factor for assuring satisfactory life conditions. Another element of novelty is that, by this document, the foundations of the development of the international environmental law have been laid down [8]. Two decennia after this first world Conference in the domain of environmental protection, the planet's environment has continued to deteriorate continually, and the obviousness of this phenomenon imposed the Second Conference of the United Nations for Environment and Development organized in Rio de Janeiro in the year 1992. Although by the Declaration of Rio no progress has been made concerning the recognition of the material right to a healthy environment, the document is important because in its dispositions it consecrates a series of rights which are considered procedural rights derived from the material right to environment, such as the right to have access to the information concerning the environment, participation of the public to the decisional process and access to justice in matters of environment [9]. The first international juridical instrument which consecrates explicitly the right to environment has been adopted in the framework of the Conference of the Organization of African Unity under the name of "African Charter on Human and Peoples' Rights, a regional document, which, in Art. 24, explicitly states that "all peoples shall have the right to a general satisfactory environment, favourable to their development" [10]. The document is all the more important as it comes from a cooperation structure belonging to the third world countries, which due to economic-social difficulties seemed not to give priority to ecological preoccupations. Continuing the regional line of the adoption of juridical tools that consecrate the right to environment we turn our attention to the "Additional Protocol" of the American Convention on Human Rights, adopted in San Salvador in 1998, concerning economic, social and cultural rights, which in Art. 11 Paragraph 1 recognizes the right to a healthy environment mentioning that "everyone has the right to live in a healthy environment and benefit of essential public services", but also the States'

obligation to "promote the protection, preservation and improvement of the environment" (Art. 11 Paragraph 2) [11]. Because after the first Conference of the United Nation, which took place in Stockholm in the year 1972, the procedural guarantee of the right to a healthy environment and its recognition as standalone right have penetrated in common constitutional traditions, since that moment all the European Constitutions which underwent revisions or were replaced inserting provisions regarding this right considered of new generation, we consider the Community-related provisions of the Treaty of Maastricht, of 1995 of maximal importance as well. These state that: "The Union shall respect fundamental rights, as guaranteed by the European Convention for the Protection of Human Rights and Fundamental Freedoms signed in Rome on 4 November 1950 and as they result from the constitutional traditions common to the Member States, as general principles of Community law", recognizing the fundamental right to environment in the framework of the human rights acknowledged and guaranteed on the level of the Community jurisdictional order [12].

III. Internal Preoccupations in Matters of Environmental Law

According to theorists [13], the process of consecrating and guaranteeing the right to environment knew in Romania a similar evolution to that from other European States, in the sense of progressive growth on the legislative level, empowered by the ratification of the international juridical tools in this matter and by the preparation of the adhesion to the European Union, and by its recognition in the jurisprudence of the European Court for Human Rights and its crowning by constitutional recognition. The first framework-law on environmental protection, Law no. 9/1973 did not comprise any disposition regarding any environmental right. Only after 1990, the recognition and guarantee of the right to a healthy environment took shape, and the first significant provisions can be found in the Constitution of 1991, although not even this one explicitly states a fundamental environmental right. In this sense, Art. 41 Paragraph 6 regarding the right to private property states that "the right to property obliges to respecting the environmental protection tasks...", and Art. 134 Paragraph 2 Letter e) under the title "Economy" declares that "the State must assure the recovery and protection of the environment, and the maintaining of the ecological balance" [14]. However, the respective constitutional provisions could not have been equated to a recognition of a fundamental right to a healthy environment, but only an obligation of the State to protect the environment has been declared. Yet, these provisions

have represented the departure point, of a special importance, for the elaboration and adoption of a new framework law in this matter, namely, Law no. 137/1995 on environmental protection. The importance of Law no. 137/1995 consists in the fact that it explicitly consecrated, as subjective right, the right to a healthy environment, and foresaw as procedural guarantees for it, the access to environmental information, the right to get associated in organizations for the defence of environmental quality, the right to consulting in order to make decisions for the development of the environmental legislative policies and norms, deliverance of environmental agreements and authorizations, right to address directly or by means of associations, the administrative or judicial authorities in order to prevent or if a direct or indirect prejudice has occurred, the right to compensation for the damage suffered. As we have noticed, one of the procedural guarantees consecrated by Law no. 137/1995 is also the right of access to environmental information [15].

Conclusions

A first conclusion is that although in the past the environmental quality was not a preoccupation for the State, or was little relevant and a matter giving rise to controversy, after the fall of the dictatorial regime this problem has become a very important aspect of the human rights and, at present, increasingly more, a fundamental right with its own and independent status.

Then, being a right of latest generation, the right to a healthy and ecologically balanced environment has proved to be the fastest in evolution from its generation, concerning its guaranteeing and effectiveness by way of justice. In this sense, one can also observe its constitutionalization on the level of the States in only a few decennia, favouring corresponding developments on a regional and international level. At the same time, the emergence of global ecological problems such as greenhouse effect, climate changes, diminution of the ozone layer etc., has contributed to the consolidation of its status of fundamental right and mankind's right survival [13].

Regarding its jurisprudential consecration, the right to a healthy environment has been affirmed by way of the interpretation of the Art. 8.1 in the European Convention on Human Rights, having no explicit consecration as a matter, as part and parcel of the right to private and family life, being offered protection "by ricochet". One can observe that regarding the right to environment, the jurisprudence of the ECHR highlighted mainly the procedural guarantees of this right, respectively the right to information

on the risks of pollution and environmental quality, the right to equitable trial, and, not least importantly, the States' obligation to adopt "positive measures" meant to assure the effectiveness of the right to a healthy environment [7].

At the same time, the specific way in which the law related to the environment has been assimilated on the level of the Court jurisprudence, by turning to the content of other laws explicitly acknowledged and fully guaranteed, highlighted from the beginning its affinities with other fundamental human rights, the enrichment of the content and mutual influence in the realization of their meanings. Completed as well with the positive law regulations, these jurisprudential observations demonstrate that the right to a healthy environment, the right to health and the right to life and to life quality intersect, influence one another mutually, and the serious damage to the environment can affect a person's welfare, which also brings damage to his/her private life, including in this way the right to living in a healthy and ecologically balanced environment in the framework of the private and family life law and property law.

The right to a healthy environment certainly supposes as well the accomplishment of certain obligations with a view to protecting the environment. Because fundamental rights form the content of the relations between natural persons and State, this means that the obligations correlative to these rights go to the State, which acknowledges and guarantees them. In this sense, is foreseen the general obligation of the States to take legal, administrative and any other measures necessary for the implementation of the law for a healthy environment. The measures under discussion need to have as a purpose the prevention of environmental degradation, the determination of the necessary remedies and the regulation of the sustainable use of natural resources, with the mention that the prevention of the environmental components degradation must have priority. [16]

The most important step, towards the consecration of the law for a healthy environment, has been represented by the reviewing of the Constitution in the year 2003, which in the chapter Fundamental rights and freedoms formulates a new article, Art. 35, entitled "The right to a healthy environment". According to this article, (1) "The State recognizes the right of every person to a healthy and ecologically balanced environment", (2) "The State assures the legislative framework for exerting this right" and (3) "The natural and juridical persons have the duty to protect and improve the environment" [17: 73]. In this way, Art. 35 shows that the title-holders of this right are not just the Romanian citizens, but any other individual law subject. The document shows that beyond the legislative obligations

imposed on it by the constitutional text itself, the State must participate actively to the international cooperation in this domain, being known that the problem of environmental protection is increasingly more often the object not just of collaborations in the scientific domain, but especially of political negotiations and international documents with juridical character, although, many times, they do not necessarily take on the constraining form of obligations accompanied by sanctions in case of non-respect. Then, in the spirit of the constitutional regulations, was adopted the Emergency Ordinance of the Government no. 195/2005 on environmental protection, which in Art. 5 states that "the State acknowledges for all the persons the right to a healthy and ecologically balanced environment", and due to its complex normative content, being at the same time both a subjective right and an obligation for any individual subject of law, foresees in Art. 6 that: "environmental protection constitutes the obligation and responsibility of the authorities of the central and local public administration, and of all the natural and juridical persons". Concerning the exercise of the right to address the administrative and/or judicial authorities in case a certain environmental component is endangered or a patrimonial prejudice is caused as a consequence of a specific pollution, the Governmental Emergency Order O.U.G. no. 195/2005 on environmental protection recognizes the active processual quality to any natural person, as well as to the non-governmental organizations for environmental protection, with a view to preserving the environment, regardless of whether or not a prejudice has been produced [18].

As a last conclusion to what we have presented above, is validated the fact that the present legislative system in Romania, in matters of environment, characterized by constitutional consecration of the fundamental right to a healthy environment, by the ratification of certain international regulations important in this domain and by the development of internal regulations, so as to assure an effective and efficient guarantee of this law, appears as being a legislative system that assures an efficient protection of the right to a healthy environment. For this reason it is considered, that in the future regulations in this matter need to recognize the exercising of this right also by the People's Lawyer – specialized in environmental problems, such a regulation permitting to give consistence to the principle of participation of the public to environmental activities, contributing to the awareness of the preventive activities for environmental protection and to the increase of the State organs' responsibility in solving administrative and social matters that constitute reasons of environmental degradation.

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