Sustainability, as a Source of Environmental Law

**Maria – Luiza HRESTIC¹,
Constantin POPESCU²**

¹Assoc. Prof. Ph.D., “Valahia”
University of Târgoviște, Romania, e-
mail address:

marrylou1981@yahoo.com

²Prof. Ph.D., “Valahia” University of
Târgoviște, Romania, e-mail address:

constantinpop1967@yahoo.com

Abstract: The latest research has approached the ecosystem's carrying capacity, an issue that both the specialists in demography and the specialists in human ecology inquired about, to be able to estimate based on scientific grounds the limits of natural development and of demographic growth. The carrying capacity is a characteristic feature of every ecological system or category of ecosystems, depending on their development stages and the hierarchic stage they are part of. Consequently, the carrying capacity is the concrete expression of the stability domain expressing the ecosystem's ability to modify its structural and functional parameters under the influence of the command factors. The stability domain of an ecosystem designates the direction in which it is developing, with the mention that the process is taking place on very large time scales, of over 100 years and is reversible, each time a strong impact from external factors is exerted on the system. It results, in this context, that the notion of “carrying capacity” actually points to the capacity of functioning of large, complex and dynamic systems, as ecological systems are.

Keywords: *environmental law, sustainability, ecosystem, biodiversity, carrying capacity, socioeconomic system.*

How to cite: Hrestic, M.-L., & Popescu, C. (2020). Sustainability, as a Source of Environmental Law. *Logos Universality Mentality Education Novelty: Law*, 8(2), 44-55. doi:10.18662/lumenlaw/8.2/44

1. Short history of the relation of the economy with the environment

Under the civil society's pressure and following the visible degradation of many environmental components, during the recent years, new conceptual models have been promoted in the interpretation of the physical, chemical and biological environment, of the environment in general, seen as a hierarchy of ecological systems, natural, semi-natural and transformed or created by man. At the same time, the issue of the relation man-environment or man-development has become the issue of the spatial relations and mass and energy flows, between the components of the natural capital and those of the socio-economic system.

The existence, nature and intensity of the environmental conflicts cannot be separated from the perceptions of the public and of the scientific community on the environmental crisis we are going through, a crisis triggered by the fact that these conflicts were no longer possible to be ignored by the political decision factor, increasingly constrained by the scientific evolutions and the change of attitude of the civil society.

The civil society itself had a very important role in the identification and highlighting of the ecological problems. Ideas and movements for the conservation of nature emerged first among the artists, the romantic painters organized actions to save the Fontainebleau forest at mid-19th century and then groups with permanent activity, like *Nature Trust* of Great Britain or *Sierra Club* of the United States, emerged at the end of the 19th century, mainly with the following debates:

- promotion of the thesis according to which nature is not important only as a resource for mankind but especially due to its intrinsic values;
- their actions, such as acquisitions of lands with high ecological value, to be protected, inspired many other groups from the whole world;
- the educational publications and campaigns addressed to the public at large had an extraordinary effect in the formation of the ecological conscience;
- their debates lay at the basis of the emergence, during the second half of the 20th century, of certain very strong movements of consumer protection, starting with the USA in the years 1951-1952, Belgium, in 1957, France, in 1958.

The anti-nuclear movement then followed, on the historical scale, ushered in by the production of atomic bombs and their use at Hiroshima and Nagasaki, in 6 and 9 August 1945, and hydrogen bombs by USA and Russia, in November 1952 and August 1953.

These dramatic situations, generated by the use of bombs, demonstrated very significant thing, namely that the war that could destroy the planet can no longer be considered a continuation, with other means, of politics, and, in this case, has no reason at all anymore, with such destructive means.

In the '80s, a group of eminent doctors created an association for the prevention of nuclear experiences with members from over 100 countries, which has a categorical emblem, launched by Einstein himself, in his warnings to President Roosevelt, on the catastrophic consequences of the use of nuclear bombs: "If we want to continue to live on this planet, we need a change of attitude". (Popescu, 2004)

2. The concept of sustainability or sustainable development

The concept of sustainability or sustainable development has as a premise the observation that human civilization is a subsystem of the ecosphere, dependent on the matter and energy flows from inside the planetary ecosystem, on its stability, and on its potential to produce resources and services, in the conditions in which it maintains active its capacity of self-regulation. The public policies elaborated on these bases, like, for example, the national strategies for sustainable development, and the regulations on this matter, aim to re-establish and maintain a rational balance, in the long run, between the economic development and the integrity of the natural environment, in forms understood and accepted by the society.

Actually, this concept of sustainable economic development or growth emerged as a consequence of the observation of the irreversible reduction of the potential of economic resources, of any kind, as a result of human activity. Academic studies and more applied analyses have demonstrated the fact that, almost always, the economic optimization criteria are inconsistent compared to the natural dynamics of the basic resources. This fundamental observation was no longer possible to be ignored as soon as global issues emerged, more precisely, issues related to the globalization of the economic activities, which led to the need to a long or very long, even perpetual term approach, of the way, degree, rhythm and structure in which economic resources of all kind are created, consumed and recycled.

Under these conditions, it is as clear as possible that it is impossible to endlessly go over the limits of the ecosystems' carrying capacity, characteristic feature of each ecological system or category of ecosystems, depending on their development stages and the hierarchic level they are part of. Consequently, the carrying capacity is the concrete expression of the stability domain which expresses the ability of the ecosystem of modifying

its structural and functional parameters at the influence of the command factors.

The stability domain of an ecosystem designates, therefore, the direction it is developing towards, with the mention that the process takes place on very large-scale times, of over 100 years and that it is reversible, each time a strong impact is exerted on the system, from external factors.

It results, in this context, that the notion of “carrying capacity” actually concerns the functioning capacity of big, complex and dynamic systems, as the ecological systems and as any aggression affecting its functioning, destabilizing it, namely taking it out of its stability domain.

One might say that all these quantitative and qualitative features were included in the concept of sustainable growth or development, a concept containing at least the following semantic “ingredients”, related both to the nature of the denotations, namely to the significations of the proper, usual meaning of the word, and to the nature of the connotations, namely the extension or reduction of the meaning of the word, depending on the context:

- it is a global, comprehensive concept, accrediting even the idea that sustainable development only makes sense for the ensemble of the economic system, namely not even the national economic system can be a boundary for this concept, as, in the context of the increased opening of the national economies and especially, in the conditions of the regional economic integrations and of globalization, the national economic system becomes a simple element in the world network of activities;
- although not referring explicitly to the stationarity of process or of the economic system in case, it subordinates, nevertheless, any criterion of economic optimization to the criterion of assurance of the continuity and permanence of the processes or activities of the economic system under analysis;
- the continuity and permanence of the economic process generally have inter-generational and trans-generational connotations;
- anyway, the sustainable development or growth has in view a long and, more often than not, a very long term. In fact, if we analyse this concept down to its last logical consequences, we would need to accept a perpetual, indefinite time horizon, for the “optimization” of sustainable development;
- the concepts of sustainable development or growth send, inevitably, to ethical connotations regarding the economic process. The intergenerational preservation of the economic potential of the

planet is, concomitantly, the result of a reflection of economic nature and of one of ethical nature. In context, this concept permits even that the finality of the economic activity transcends the economic rationality and enter an ethical-economic rationality;

- in fact, the concept of sustainable development or growth does not introduce a new criterion of functional optimization, but a new philosophy of evaluation of the significance of man's economic activity.

Based on the above, one can formulate even an operational definition of the concept of sustainable development or growth, namely that, by sustainable development or growth we understand that ethic-economic rationality assuring the preservation of the existential conditions of the human society, on an indefinite time horizon, on the level of the entire natural and social space accessible or possible to be accessed in the future.

One can observe that the bases of the rationality of the sustainable development or growth do not consist only in the economic aspect but extend to the moral, ethical aspect, which means that the sustainable development or growth represents a concept that transcends the narrow positivism, calling for metaphysical considerations. In this case, the sustainable development or growth is and will be a cultural result, rather than a purely technical one or one of operational optimization. (Popescu, 2008, p. 228)

3. The distinction durable-sustainable

Seeing all these “merits” of this new syntagm, in the context in which it was discussed on its capacity to be source of environmental law, it was considered that it is necessary to analyse first to what extent one can accept the conceptual replacement between “durable” and “sustainable”, sure, based on considerations and arguments brought in favour or against the acceptance of several distinctions that can prove important, both methodologically but also pragmatically.

Firstly, one can make a distinction from the perspective of the presence or not of the dissipative systems in the process, phenomenon or system analysed, and, in this sense, it is considered that we have sustainability, as a dynamic feature of the processes, phenomena or systems, exclusively in the natural environment where there are no dissipative systems. In any part of the natural environment in which there are dissipative systems, either of human type, and then we are dealing with the social environment, namely with parts of the socioeconomic system, or of

non-human type, one can no longer speak about durability but only of sustainability.

Secondly, the concept of durable sends to the significance of the persistence in time, by itself, of a structure or entity founded, one way or another, in the natural or economic-social environment, while the concept of sustainable sends, rather, to the significance of the possibility of maintaining, actively, that entity or structure, in time, evidently with energetic subsidies coming from other systems. For example, a stone is durable, in the hypothesis in which it is not the object of an intervention from an actional agent, and here we can ignore the action of the rains, freezing-unfreezing phenomena, wind etc., while a public institution can only be sustainable, namely kept in operation with expenses of energy and raw materials.

There appears, therefore, the possibility of carrying out a semantic distinction between the two concepts, under the aspect of their relation with the actional agent and, in this case, following the example above, one can affirm that the expressions “sustainable development” or “durable growth” are incorrect expressions, because both development and growth are processes associated, necessarily, to the social institutions, in their most general sense, therefore bear the impact generated by a non-natural actional agent. In this context, it results that development or growth cannot be, rigorously speaking, anything else but sustainable yet not durable.

Thirdly, one can even affirm that sustainability of a non-natural process, phenomenon or system is nothing but an “assisted durability”, because the principles and the energy, in the generic sense of the term of a dissipative system or a system in the area of impact of the dissipative system, necessary to maintain its stationary state over time, should be procured or imported from other systems, naturally at the expense of accelerating the rate of increase of universal entropy.

Fourthly, while durability is only about stationarity, i.e. maintaining a status quo, sustainability has the ability to bring up the issues of increase and decrease. In other words, one may speak about “sustainable development” or “non-sustainable development”, or “sustainable growth” or “non-sustainable growth”, just as one may refer to “sustainable decline” or “non-sustainable decline”.

The immediate conclusion is that the phrases “sustainable development” or “durable growth” represent, in terms of logical analysis, mere contradiction in terms.

Based on the abovementioned, one can refer to “durable development” or “durable growth” only metaphorically or by abuse of

language, because, in reality, in keeping with the logic above, it is correct for one to speak only about “sustainable development” or “sustainable growth”.

Therefore, durability as well as sustainability are not just words, but, as it has been often emphasized in this study, philosophies. Since many books, articles, commentaries have been written, numerous colloquiums have been organised, people so strongly believe in the need for change, and because these debates are held in many fields, including law, with representatives capable of having an intelligent discourse in essence and on the issues of the individual, it is indubitable that durability or, more accurately, after the above demonstration, sustainability is one of the greatest and most widely accepted instruments of intervention in reconciling the socio-economic system and the natural capital.

In order for this reconciliation to be accurately defined and particularly regulated, it needs the distinction which has just been formulated by means of philosophical and logical arguments, a distinction that is to be difficult to impose in environmental law regulations and, in this respect, one may presume that there may not be a majority supporting sustainability instead of durability. (Hrestic, 2018)

A prevailing majority seems very hard to shape, but there are numerous researchers who claim that there is rather a need for a minority that should be inspired and perseverant, capable of instilling new, substantiated and doctrinally stable solutions into people’s minds, instead of those based on aggression and over-exploitation or simply without any grounds.

Such simple solutions, supported by small non-profit organizations that are numerous and persistent in their mission, based on the simple laws of nature, with inspired examples and springing from actions and attitudes such as moderation, justice and natural integration are the best suited for promoting the new concept. The mission of such organizations is to exemplify and promote the benefits of small communities in order to create a world with low energy consumption, with a sustainable life, which seeks to rise above the struggle for priority to extracted and sometimes stolen resources that should sustain economic growth at all costs, obviously based on the depletion of fossil fuels, direct contributors to climate changes and especially to inequity and injustice.

Because justice has its own root proper and is not predestined, it is truly sustainable and, although it is not unique and universal, it eventually achieves its goal and purpose, often despite the individual’s free will, which, in some cases, does not want it or wants to choose it freely, with a single facet that it sees and that of course suits the individual.

The desire for justice is particularly intense when it is chosen as it appears, by rational-logical deduction, and does not become happiness for some and punishment for others, or, as people say, one man's meat is another man's poison. Contradictions among individuals and dissatisfactions emerge because justice is something that can be obtained only by the strong and the good and thus the sense of equality before moral laws disappears, that is to say, justice is above all when it comes to those who deliver it, hence the phrase "the lion's share".

Here one should take into account that, returning to sustainability, one should not promote only this optimistic theory about sustainable development which, of course, is not the entire story of the new concept. Incursions and illegal intrusions upon the natural ecosystems continue in many places on earth and, more often than not, drug crops, poaching and/or illegal logging occur and are more likely to persist, given that even national governments frequently encourage them, at least by tolerating such unfair practices. (Hrestic, 2018)

4. Regulations in defence of the environment have been hard to enforce

Removing settlers and their illegal practices has been a slow process and, in many places, it has not been completed, particularly if colonists still have strong political connections or no legal grounds have been found to do away with them. Meanwhile, the local people, the natives, those with real organic connections, with natural ecosystems, with forests and natural resources in general, have been caught in the act and severely punished, of course unjustly, for not complying with the new regulations which, obviously, have nothing to do with sustainability.

All over the world, the most notable victims have been members of the groups or tribes that had a deep respect for traditional laws, the so-called ecosystem-populations, the rights, legacies and practices of whom have been disregarded. The new law enforcement forces of the states or mainly of the companies that have won bids or have sometimes even been paid to deforest, set fire to or drain large natural ecosystems, admit that these communities have actually been the most caring people towards nature and their performance has been proven by the state of the ecosystems on the lands of which they have been so brutally deprived.

Often, even some officials have expressed their concern that the new "colonists", promoted by the very governmental agencies, who have come to gain a monopolistic control of the local natural resources, may eventually

turn out to be not only unskilled nature managers, but also traitors in contracts closed with political elites. Therefore, when governments promote such contracts, which are disadvantageous to nation-states, corruption and abuse on lands with complex natural ecosystems and rare and valuable natural resources might not disappear so easily and the new regulations may be impossible to enforce.

However, because there are still many optimists, mainly in the non-profit organizations, that are, on the one hand, the watchdogs of politicians who are way off beam and, on the other, the promoters of recovery actions, they promote actions of ecological renaturation and reconstruction, with beneficial effect not only on the environment, but also on the morale of people, who begin to hope and live again, even though they have remained deprived of their resources and with devastated environments. (Grober, 2004, pp. 26-27, p. 30)

The great evil for these populations comes from acknowledging that the betrayal of their own politicians could not have been possible without the “participation” of some of “their people”, who either sold their rights for nothing or supported the new projects, which were implemented only after they had renounced their lands.

Unfortunately, there are people who, despite the fact that they come from opposite parts of the world, have shared the same colonial practices which enabled the newcomers to prevent the indigenous communities from supporting their ancient ways of resource use and generally of land management. This was largely due to the fact that in European moderate, more emancipated countries, colonists quickly departed and their practices of burning natural ecosystems were often seen as an evil that had to be avoided and suppressed at all costs. They rapidly reoriented and seized other virgin territories, considered to be wild areas, where native populations were living in harmony with nature, without having received any property right or act of inheritance or custody of land from their ancestors. (Rifkin, 2004).

5. The return to traditional practices as a regulation method

Many tribes or native communities in the Australian savannah or the lush ecosystems of Africa or America were set on fire along with the lands they inhabited, for unknown reasons and, afterwards, once the newcomers had arrived, or before their arrival, official prohibitive laws and regulations were imposed on them and burning was preferred, for several reasons, on both continents.

In fact, the fire was not set only in order to observe the ceremonial practices, but also to make sure that these landscapes, which were so vulnerable to fire and had been capable of sustaining the plants and animals invoked by the locals as their own, would disappear. Traditional knowledge had often taught the caring natives that burning at the beginning of the growing season prevented the accumulation of dry, remnant vegetation, which fueled late spring or autumn fires, which were so destructive and difficult to control and which also devastated biodiversity.

It is encouraging that now new innovative methods of land management have developed and spread from northern Australia, combining traditional aboriginal know-how and new techniques of landscape management, such as those included in emission reduction funds which, among other things, promote older practices and revive the traditional management knowledge. Had the current owners, as the traditional ones, wandered through their land, on foot or on horseback, now there would have been no need for helicopters to land or take off only from specially designed places, thus contributing to a systematic decline of fire frequency caused by the igniters of the internal combustion engines of helicopters.

The observation that, without burning at the beginning of the colder season, when the vernal flora is non-existent and the fauna is sheltered, plants would not grow and would not be able to prevent the people and our animals from walking around the country in the transhumance process, was also supported by the idea that old, unburnt vegetation would fuel the wildfires, most often provoked by lighting. (Rifkin, 2004)

In fact, a research initiative funded by the Australian government and implemented at the United Nations level has led to the conclusion that in many countries or places on earth, such as the South African savannah, Latin America and Asia-Pacific, people act in the spirit of compliance with the traditional practices of using fire for pasture management. However, lately, these practices have often been lost, leading to an accumulation of old vegetation which makes the land inflammable and facilitates the systematic breaking out, in the late season, often very dry due to lack of rainfall, of devastating fires and, naturally, in the end, the emergence of higher global emissions, so harmful to the environment.

This environmental law initiative is designed to share Australia's experience of burning the vegetal remains in early spring, using native know-how and engaging large numbers of volunteers from both governmental officials and local communities, and is meant to disseminate this method in other countries as well and explore the viability to adjust to this experience

so that, in the end, similar models of emission reduction should be found, perhaps in other contexts as well. This is particularly necessary because there are clear benefits in the struggle against climate changes, starting from the practice of burning at the beginning of the season, to reduce the release of greenhouse gases, as a direct effect of major vegetation fires.

This is especially important seeing that, at present, fires, mainly in savannahs, are responsible for about 12% of the annual global methane emissions and 28% of the annual emissions of nitrogen protoxide (N₂O). Although in polluting gases analyses, both gases are less important than carbon dioxide, if one speaks about main emissions, one must consider that they are much stronger. So, methane produces approximately 21 times more global warming than carbon dioxide, while nitrogen protoxide is 300 times more effective in catching solar heat than carbon dioxide. (European Commission, 2018)

6. Conclusions

Speaking about the effectiveness of traditional practices, it is necessary to highlight that the studies in Australia prove, beyond doubt, that to manage grazing fields, and especially but not only the savannah, by burning the vegetal remains early is correct and environmentally friendly; moreover, this practice contributes to the reduction of the methane and nitrogen protoxide emissions by more than 30%. At the same time, the research is about to quantify the quantity of emissions reduction that could be determined by natural carbon capture, triggered by spurring the intensity of the biomass accumulation process, realized after the cleansing of the lands, generated by early controlled fires.

The first results of the research suggest that there might be more carbon sequestered than five to ten times the reduction of methane and nitrogen protoxide, achieved by avoiding the major fires.

It is suggested that this combined method, extended throughout the world, might significantly reduce global greenhouse gas emissions and might also largely contribute to the improvement of the environment by restoring several millions of hectares of degraded forests and also by the recent New York Declaration on Forests, which refers to halving the rate of annual loss of natural forests, so valuable to human well-being and the environment.

A major advantage of savannah fire management practices, which started in northern Australia, is the way in which they connect a number of various elements of human and environmental well-being. These controlled fires reduce emissions and improve the ecological health and biodiversity

and, at the same time, support the well-being of local communities by creating opportunities for employment and business development through more efficient and secure land management.

The research in Australia also shows that savannah fire management can also prevent access to rainforests and thus preserve the environmental functions of rainforests and savannah forests, which are almost systematically destroyed by seasonal fires.

That is how much one can achieve in terms of environmental protection through a mere regulation related to applying sustainability in the management of natural pastures and mainly those in savannahs, vast natural ecosystems, which keep degrading because of the lack of intervention of administrators in removing dry vegetal remains using this solution of controlled burns.

References

- European Commission. (2018). Planeta noastră, viitorul nostru. Să combatem împreună schimbările climatice [Our planet, our future. Let's fight climate change together]. https://ec.europa.eu/clima/sites/clima/files/youth/docs/youth_magazine_ro.pdf
- Grober, U. (2004). Das gute leben neu denken. Kulturelle ressourcen für ein solares [Rethink the good life. Cultural resources for a solar]. *Aus Politik und Zeitgeschichte*, 37, 26-30. <https://www.bpb.de/apuz/28132/das-gute-leben-neu-denken>
- Hrestic, M. L. (2018). *Dreptul mediului* [Environmental law]. Sitech.
- Popescu, C. (2004). *Economia protecției mediului* [The economy of environmental protection]. Bibliotheca.
- Popescu, C. (2008). *Stări conflictuale generate de exploatarea abuzivă a pădurilor lumii* [Conflict states generated by the abusive exploitation of the world's forests]. Bibliotheca.
- Rifkin, J. (2004). *Der Europäische traum. Die vision einer leisen supermacht* [The European dream. The vision of a quiet superpower]. Campus Verlag GmbH.