MAKING DEVELOPMENT SUSTAINABLE THROUGH EFFICIENT NATURAL RESOURCES' CONSUMPTION

Elena Irina ELISIEVICI [1], Marcela MITRIŢĂ [2]
[1] PhD Candidate, Doctoral School Economics II, Bucharest University of Economic Studies email: elenairina2001@yahoo.com,
[2] PhD Candidate, Doctoral School Economics II, Bucharest University of Economic Studies, email: marcelamitrita@yahoo.com

Abstract
This paper represents the beginning of a research done on the entire idea of sustainable development and natural resources' management. During the paper there were some conceptual limits needed to be premastered especially when it comes to interpreting at today's standards the principles adopted in resolutions that were developed more than 30 years ago. Efficient consumption for natural resources represents one of the key findings when it comes to achieving sustainability on the long run for the concept of development and its vertical and horizontal integration in the globalization mechanism. The paper also reaches the chronological and logical path of developing institutional entities that it would help protect natural resources, but also it would emphasize the idea of empowering sustainable development as an evolutionary and functional concept.
Keywords:
Natural resources, sustainable development, consumption, synergy

Introduction

Natural resources include air, water in all its forms, sunlight, plant and animal biomass, soils, minerals in the soil and subsoil, natural rocks, fossil fuels, minerals and non-ferrous. The human – environment relationship is very complex, essentially manifests itself by exploiting and sometimes even overexploitation of natural resources. With the passage of time this relationship has evolved according to the needs of society. Of course this relationship has evolved depending on several factors including: traditions, education, culture, membership of a civilization, consumption patterns etc. It was found that a relationship exists between the needs of society and withdrawals made from natural resources.

Problems related to the assessment, management and conservation of natural resources is a common concern of many disciplines, from technology to biology, through economics and law.

Lately the term (natural resources) became associated with the natural wealth of raw material, that is the first way in which a natural resource constitutes a derivative form of operationalization of a productive activity (Angelescu, Stanescu, 2004). This can be further processed to obtain the finished product, or may be traded on the market.

In the Havana Charta that was proposed in 1948 the organization representing the world market for raw materials, the UN qualified natural resources as commodities of "all products of agriculture, forestry and fisheries and all the minerals, whether in the form natural or processed primary and subject to sale in significant quantities on the world market".

Sustainable development is a holistic concept that combines social, economic and natural, being involved in two big problems of humanity: its ability to create and destroy one (Antonescu et al, 2015, pp. 180-186).

The concept of sustainable development has emerged at a time when the environment is subject to the forefront of political debate. To maintain biodiversity and atmospheric stability, the natural system must maintain a stable resource base. Among other things, it should avoid intensive exploitation of resources, aiming to replace non-renewable resources with renewable substitutes.

1. The synergy between sustainable development and natural resources

The international community decided to address environmental issues through collective action at global level, which sought to define and implement them through an appropriate international framework. This framework of international action formed over time and is in a dynamic evolution, it comprising legal and binding entities in the form of treaties or conventions, or non-binding, in the form of declarations, resolutions or sets of guidelines and policy guidelines, institutional arrangements and financing mechanisms viable (Busan, 2007, pp. 539-542).

The international community met for the first time in 1972 at the Stockholm Conference on the Human Environment to discuss the problem of global environment and development of needs. After the conference resulted (Bejan, Rusu, 2007, pp. 20-24, EC, 2011):

• The Stockholm Declaration, which contains 26 principles;

• Action Plan for Human Environment, which has three components:

- Global environmental assessment program (Earthwatch);
- Environmental management activities;
- Support measures.

• United Nations Environment Programme (UNEP), whose Governing Council and Secretariat were established in December 1972 by the United Nations General Assembly;

• Voluntary Fund for the Environment, established in January 1973 in accordance with the financial procedures of the United Nations.

All of these are considered to be the cornerstone of the first international framework for treating environmental issues. The conference recognized that environmental problems of industrialized countries such as the degradation of habitat, toxicity and acid rain are not problems really important for all countries, for example: strategies do not meet the needs and priorities of developing countries and the poorest communities. But the conference was dominated mainly by environmental problems and lead to increasing public awareness in this area.

Since its establishment, based on the recommendations of the Stockholm Conference, the United Nations Environment Programme held a series of activities to manifest its role within the UN system as a catalyst and coordinator for the environment. Program activities can be classified into two main groups targeted as follows:

- Sectorial issues of environmental factors: pollution, air and soil (especially land degradation);
- On global problems: acid rain, ozone depletion, climate change, deforestation and desertification, biodiversity conservation, international traffic of toxic and dangerous products and waste, protect the environment in times of armed conflict.

Global environmental issues started to become prevalent and created the need to initiate additional actions to increase public awareness, defining the international community to take timely measures that are functional, both internationally and nationally. Assessment of the effects of these "new" environmental issues had and has led to the recognition of the fact that progress has been made too low in integrating environmental protection into development policies and activities.

2. The emergence of new solutions for introducing efficiency in consumption of natural resources

The need to reorient efforts to achieve the objective of integrating materialized after 11 years at the Stockholm Conference, respectively in 1983, when the United Nations established *the World Commission on Environment and Development* (WCED), known as Brundtland Commission. This committee has developed and published in 1987 the document "Our Common Future" (Brundtland Report – WCED, 1987), which was formulated under the 40 chapters of Agenda 21 and the 27 principles of the Rio Declaration and represented a synthetic definition of sustainable development as *"development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs"* (Bejan, Rusu, 2007, pp. 20-24).

In June 1992 in Rio de Janeiro was held the United Nations Conference on Environment and Development, which gathered 115 leaders of world states. On this occasion, internationally, it was officially recognized the need to integrate economic and environmental objectives of sustainable development and there was also stated the importance of the growing discipline of international law of the environment as a mechanism to codify and promote sustainable development (Bejan, Rusu, 2007, pp. 20-24). After the conference resulted:

• Rio Declaration, which contains 27 principles.

• Agenda 21, which is an action plan for sustainable development starting in the twenty-first century, translated into 40 chapters for areas of specific programs, structured in terms of:

- Base action;
- Objectives to be achieved;
- Activities to be undertaken;
- The implementation modalities.

• A document with no binding power, which contains *principles for conservation management and sustainable development of all types of forests* (Statement of Principles on Forests).

• Institutional organization of the World Commission on Sustainable Development.

• The funding mechanism for the implementation of Agenda 21.

The Rio Summit brought firmly in the public arena the environmental and development issues. Together with Agenda 21 and the Rio Declaration, an agreement was reached on two binding agreements (EC, 2011, Bejan, Rusu, 2007, pp. 20-24):

- The Convention on Biodiversity;
- Framework Convention on Climate Change.

Despite these positive consequences, the overall objective of Agenda 21, which called for a radical change in the dominant value systems existing at conventional and institutional processes, could not be reached (EC, 2016). Unfortunately, neither these high level meetings had on the environment protection have not resulted in a positive resolution, including the most recent summit from Paris of 2015, when all the solutions offered have remained speculative, because the US and China, major global polluters have not signed any firm and official resolution.

The foundation of the concept of sustainable development rooted in promoting sustainable use of natural resources. Legal regimes aimed at conservation of marine resources, wildlife habitat, protecting cultural and natural heritage, protecting the Antarctic area etc. aim to protect resources and the global environment indicates a wide acceptance for sustainable use of natural resources.

Definitions of sustainable use are varied, but reflects the concept of intergenerational equity. The Convention on Biodiversity said: *"Sustainable use is the use of components of biological diversity in a way and at a rate that does not lead to long-term decline of biological resources, maintaining therefore their potential to meet the needs and aspirations of present and future."*
Although the concept of sustainability is easier to understand when it comes to renewable resources, it also has major implications for non-renewable resources *"non-renewable resources of the planet should be exploited so as to avoid the danger of depletion of their future and ensure that the benefits of this type of operation are shared by all humanity."* – Principle 5, the Stockholm Conference (Bejan, Rusu, 2007, pp. 20-24).
Sustainable development is a challenge common to all countries, but due to different development paths of the world countries, industrialized countries are required to bear a larger share of the immediate difficulties.
One of the most controversial provisions of the Rio Declaration, Principle 7, developed countries explicitly recognize their main responsibility for this environmental degradation and environmental remediation. This responsibility is reflected in many international environmental agreements.
Many of the principles, duties and obligations above are based on the submitted environmental pollution control. Equally important to achieve sustainable development are issues on the sustainable use of natural resources.
After all estimates by specialists in demographics due to increased hyperbolic world population will exceed the figure of 8 billion in 2020 and will reach saturation value of 9 billion in 2050. Even with a zero environmental footprint Earth will fail to provide resources for the entire population.
Since the publication of the document *"Our Common Future"*, sustainable development has become a target of global concern (Bejan, Rusu, 2007, pp. 20-24). In terms of renewable natural resources as well as non-renewable resources, sustainable development supports the idea that the rate of resource utilization should not exceed in any way the ability to find new resources or to recycle acceptable substitutions. In addition, efforts should be made to use processing technologies that prolong "life" of non-renewable resources.
Sustainable development understood that the industrial mining should use resources carefully. Mining must not endanger natural life support systems – air, water, soil, flora and fauna (Bran, et al., 2000). Mineral resources can generate substantial welfare, but are exhaustible and non-renewable. For a substantial development, these resources should be used so that it generates welfare that can effectively substitute exhaustible mineral resources. This is of course important for countries that are dependent on mineral resources for their economic development.

Conclusions

Global economic growth and increasing global population (9 billion by 2050) will result and consolidate a rapid consumption of the Earth's natural resources. Resources such as water, soil, clean air and ecosystem services are vital to the health and quality of life, but are available only in limited quantities.
Increasing competition for certain resources will lead to higher prices, which will affect all economies, but especially the European economy. Resources must be managed more efficient throughout their life cycle, from extraction, transportation, processing and consumption and to waste disposal.
This is why the European Commission insists on the concept of "efficient resource utilization". Efficiency in resource consumption means to produce more value with fewer

resources and change our consumption habits. This will limit the risk of creating deficits and maintain environmental impact in the planet's natural limits.
It is a general principle that applies to all natural resources from food, timber and biodiversity to energy, metals, soil, water, minerals, air and the entire Earth.
In conclusion, to give hope for the future of our planet, we will have to secure the protection and conservation of resources and the environment is also a priority policy for all areas of human activity, even before the rise of living standards, transforming it for each individual (through continuing education) in true religion, and assuring that the following is acknowledged: nature is not a legacy from our ancestors, but a loan from children.

References

1. Angelescu, C., Stanescu, I. (2004). Politica de crestere economica, *Economica Publishing*, Bucharest.
2. Antonescu, A. G., Ciobotaru, A. V., Popescu, C. (2015). Evaluarea economica a resurselor naturale, *Constantin Brancusi University Annals*, no. 3, 180-186.
3. Bejan, M., Rusu, T. (2007). Exploatarea resurselor natural si conceptul de dezvoltare durabila, *Buletinul AGIR*, no. 1, 20-24.
4. Bran, F., Ioan, I., Radulescu, C. V. (2000). Geografia economica teritoriala a Romaniei, *ASE Publishing*, Bucharest.
5. Busan, G. (2007). Mediul şi resursele naturale în strategiile de dezvoltare durabilă, *Constantin Brancusi University Annals*, no. 1, 539-542.
6. *** European Commission – EC (2016). Eficienţa utilizării resurselor – un imperativ în afaceri, *Oficiul pentru Publicatii UE*, Brussels.
7. *** European Commission – EC (2011). O Europa eficienta din punctul de vedere al utilizarii resurselor – intiativa emblematica prevazuta in strategia Europa 2020, available at: ec.europa.eu/resource-efficient-europe.
8. *** United Nations World Commission on Environment and Development – WCED (1987). Our Common Future, *Oxford University Press*, New York.