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ELEMENTS OF DECISION TO PROTECT OWN NATURAL RESOURCES

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Abstract:
The world of the 21st century must find elements of cooperation between economic and social development, enhancing the environmental protection policies and sustainable development. Legislation in this area needs to be harmonized globally to support the growing needs without endangering the future of next generations. Sustainable development strategy represents the compatibility of economic, social, environmental and environmental elements with sustained progress in these areas worldwide. Global restructuring means coherent legal policies that would keep în balance the ecosystems and protect the environment. The solutions also mean limiting the use of non-renewable resources: cutting the forests, reducing arable land /head of the population, reducing the volume of drinking water globally, etc.

Key words: sustainable development, environmental protection policies, legislation in the field, arable land, drinking water resources.

1. Introduction

At the beginning of the 21st century, environmental problems are becoming increasingly aggravating and more frequent. It is necessary to develop and implement strategies to limit and eliminate the negative effects that come together with the explosive global economic growth. The economic policies of the developed countries have as a result the impoverishment and slow destruction of the ecosystems that feed humanity, as well as environment.

2. Natural resources and consumption

The economy of the 20th century has been oriented towards excessive consumption, waste and based largely on non-renewable energy - fossil fuels.

Numerous global and European Union bodies have drawn the attention to the close interdependence between the economy and the environment. This concept has represented an important issue in economic policies since the 1970's.

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Continued economic growth is on the background of ever more limited natural resources, environmental constraints and the exponential growth of the world's population. According to international statistics, in 1804 the world population numbered 1 billion inhabitants in 1927, 2 billion in 1960, 3 billion in 1974, 4 billion in 1999, 6 billion in 2011, 7 billion in September 2018, 7.65 billion inhabitants. It is estimated that in 2023 there will be 8 billion people, and in 2037, there will be 9 billion inhabitants on Terra.

Considering that, the notion of sustainable development acquires multiple meanings, and the elements: water, air, soil, which are indispensable to life, come into the area of concern for economists, ecologists, architects, sociologists, agronomists and other specialists; they are in the sphere of politics, local government and international bodies.

Sustainable development means the use of raw material and natural resources in such a way that the increasing use of renewable energy resources is not exhausted or degraded.

According to www.eorldometus.infor/ro/, of the total of 299,298,572 MWh of energy consumed in the world, the non-renewable energy is 242,557,318 MWh, that is 81%, and 19%, i.e. only 56,741,254 MWh, represents renewable energy (at the level of year 2018).

From the point of view of World Bank, sustainable development means "economic growth, poverty eradication and friendly management of environment".

F.A.O. says that "sustainable development requires the development and conservation of natural resources in a manner that satisfies the needs of current and future generations." It is the conservation of land, water, the use of non-hazardous materials for the environment.

The statistics say that in 2018 5,250,136 ha of agricultural land were lost due to the erosion of the soil, and by desertification, 8,998,560 ha of land.

In Romania, in the year 1990, 2.2 million hectares were set up to fight against soil erosion, meaning 42% of the 5.3 million hectares, which need to be arranged. Between 1990 and 2000, works were carried out on 248,000 ha; over time, due to forest cuts and hydrological and climatic changes, the areas affected by erosion have increased.

In the world, it is estimated that 10% of the area of agricultural land is affected by soil erosion (Batjes, 1996).

An element indispensable to life, and which will become more "expensive", is water. According to FAO statistics 2016, water needs and consumption are as follows:

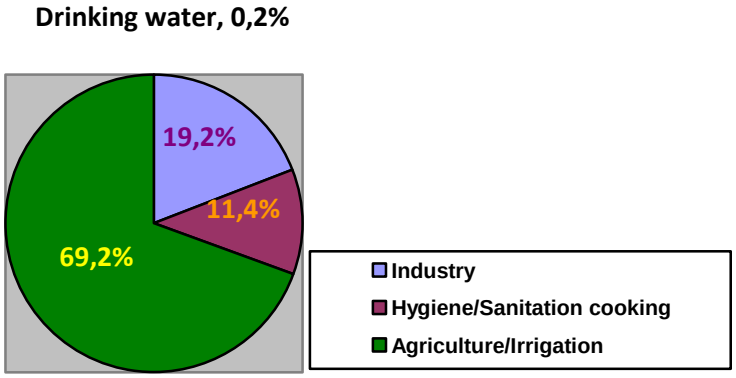

Fig.1 World water consumption (source: FAO AQUASTAT, 2016)

In 2010 the consumption per person was 1,600 l, of which 3 liters of drinking water.

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According to "Solar Power to the People", 2016, water demand for food production was (table 1):

Foods	Measurements	Litres
- Slice of bread	30 g	40
- Orange	100 ml	50
- Glass of wine	125 ml	120
- Cup of coffee	125 ml	140
- Pint of beer	568 ml	170
- Glass of orange juice	200 ml	170
- Bag of potato crisps	200 g	185
- Glass of milk	200 ml	200
- Hamburger	150 g	2.400

Table 1 Water consumption embedded in foods (source: A.Y. Hoekstra, 2008)

It is found that about 70% of the water is used in agriculture.

Simultaneously with the growth of the world's population, urbanization and global industrialization increase the demand for water.

Lack of water was a local phenomenon 50 years ago. Now it affects many countries and is visible in the international grain trade: imports in the countries of North Africa, Middle East and Asia, where populations are growing.

Analysts say some future conflicts will target water resources.

Also, statistics show that in 2018, 857,933,170 people did not have access to water.

Excessive use of the underground source leads to increased scarcity of water.

Global warming also leads to massive water volume losses.

Hydroelectric power plants represent an important component of renewable energy in Romania, producing about 30% (according to INS) of total national energy production (2016).

And yet, the construction and over-exploitation of micro-hydropower plants on mountain rivers has led to irrecoverable losses on these watercourses, destroying biosystems and losing biodiversity.

Hidroelectrica owned 140 micro- hydropower in 2012, of which 88 were put up for sale.

U.E. studies encourage the use of MHC, but still while being upgraded and protecting the environment.

According to National Geographic Romania, Nov. 2013, in 2011 there were 536 micro-hydropower plants and in 2012, 411 MHCs were in different phases of approval and execution.

In 2018, the specialized commissions of the U.E. "Romania is one of the countries in the EU which has been heavily affected by hydropower." Reference is made to some sites of micro-hydropower plants in protected areas under the Natura 2000 project.

3. Conclusion

The environment represents a basic element of sustainable development. According to the Rio Declaration on Environment and Development and Agenda 21, the sustainability of future economic activity is based on the following arguments:

- Moral – the current generation should not harm future generations!
- Ecologic – human activity must not threaten and reduce biodiversity and ecological stability!
- Economic – A rational behavior maximizes social welfare over time!

Sustainable development at global level means applying the principles of eco-economy through the cooperation of international decision-factors.

The barriers with regard to the legislative, cultural, economic development and traditions must be correlated and overcome.

It is necessary to implement well-documented and scientifically verified systems using more and more renewable resources, in line with the requirements of current and future generations.

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