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**THE FUNCTION OF ANTHROPOGENIC DEGRADATION AND
CHEMICAL POLLUTION OF BIOSPHERE IN THE MODERN
HUMAN'S LIFE**

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ABSTRACT

With this labor, anthropogenic pollution of the biosphere, which represents the real danger for life survival on the planet, is pointed out. The causes and consequences of the crisis of the modern community in these conditions are emphasized, just like the stability of the biosphere ecosystem as a condition for the life survival.

Key words: biosphere, ecosystem, pollution.

INTRODUCTION

In the scientific and technological revolution's period of time, one of the most important problems that humanity is facing is the problem of rationally exploitation of nature (Djukic and others, 2013). In recent centuries, humans have been exploiting the nature, conquering new territories and nature resources. They were constantly striving to increase their power against the nature in thought that it's resources were inexhaustible. However, along with technical revolution, increasing number of people on the planet (In November 2011, there were around 7 billion people alive) and all our needs, there have occurred some new connections between the humanity and the nature, especially in the past 200 years. Concentration of the nature resources on the qualified surface areas leads to increasing production, also food production, increasing amount of waste from various kinds of production and, with all this, to expanded degradation of ecosystem and specially it's pollution. The connection between the humanity, the economy and the nature has been strengthened. In socio-economic conditions, human community is becoming the most active factor in forming the structure and functioning of the biosphere.

The exploiting intensity is constantly increasing on behalf of the human interest. Undertaking of the nature resources such as atmosphere, water and new land surfaces are more and more expanded. These actions, which are allowing the

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community to realize plenty of different economy missions, are, in some aspects, inevitably followed by negative ecological occurrences, such as: 1) exhaustion of the natural resources; 2) changing natural and native surfaces; 3) pollution of the natural environment by scattering substances during different creating procedures and usage of its products; 4) climate changing and disturbance of temperature balance on the planet because of the increasing energy use. (Djukic and the associates, 2007)

**CAUSES AND CONSEQUENCES OF THE MODERN COMMUNITY'S
CRISIS**

The state of the modern community is defined as in crisis in the different life and mission aspects, such as social, economy and ecological.

Taking advantage of renewable and unrenewable natural resources is constantly present. Supplies of fresh water are lowered, but its necessities are increased. (Djukic, Ristanovic, 2005) It is predicted that, in the next few decades, these needs are going to increase by 30-50%. The supplies of the precious metals (aluminium, copper, lead, nickel, tin) and fossil fuels are extremely drained. It is assumed that existing supplies of oil and gas are going to be completely drained with this intense exploitation within 50 years. (Djukic, Jemcevic, 2003)

We can single out three most important aspects of modern global politics that connect people and the nature: 1) technical and economics, which is connected to draining the nature resources; 2) ecological, which is conditioned on environmental pollution and disturbance of biological balance between humans and the nature; 3) socio-political, because sometimes it's necessary for everyone to participate in solving various regional problems.

With this entire complex process and characteristics of stated spheres, the community is in danger. If we don't solve these problems completely, social and economical causes and consequences, which followed current crisis, will partially weaken, also, followed by big resources and time losses. In these conditions with constant warfare and missing basic living needs, about ten thousands of people pass away every day. This will more and more common, especially because of the dangerous deterioration of the environment. (Djukic and the associates, 2003) The end of the 20th and the beginning of the 21st century are recognized by the degradation of the biosphere, which have become the reality and have taken worrying size. Because of all this, it is considered that planetary economical crises is the most dangerous for the humanity.

**THE STABILITY OF THE ECOSYSTEM-THE BASIS OF THE LIFE
SURVIVAL**

The humanity and the environment are the basic components of the ecosystem, just like any other living organisms and their environment. They are closely related in any ecosystem and this connection is made and maintained by the

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flows of substance and energy, which are constantly crossing their ways. Base of the living organisms survival makes the stability of the opposite flows of substance and energy in the ecosystem. (Jemcev, Djukic, 2000)

With the huge variety of organization forms and ecosystems, they are united with one common feature, which is the existence of direct connections and feedbacks between living organisms and the environment. All natural occurrences are constantly influencing on the environment. These connections are especially strong in ecosystem between humans and the nature. With people being the most important influence on the planet, it is obvious that they are also the ones that cause the most important nature feedback. The feedback of the environment could be that strong to endanger the humanity survival.

Biosphere is planetary ecosystem. The global function of biosphere is maintaining the life on the planet. The humans as the biosphere elements are provided on behalf of the flow stability of chemical substances in the biosphere. Disturbing substance flow with the people's constant economic activity is followed by degradation of the biosphere.

The anthropogenic degradation of the biosphere consists of disturbing it's structure and functioning, which is influenced by the humanity, which leads to violation of ecological functions of the biosphere. The environmental condition, thereby, changes that much that it puts living organisms in danger. Solving this problem, anthropogenic degradation of the biosphere is understood as it's deterioration to the point where it affects the living of humans. The land's stability is also disturbed as it means the most important part of the ecosystem, which is shown in the following Table 1.

Table 1. Dimensions and kinds of the global anthropogenic degradation of the land (Oldeman, 1992).

Degradation type	Expanse of the degraded land, 10 ⁶ ha
Water erosion	1094
Aeolian erosion	549
Chemical degradation	239
-nutritive elements losses	135
-salinization	76
-pollutions	22
-acidification	6
Physical degradation	83
In total	1965

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Enormous expanses of the land are under aeolian and water erosion. Desertification of the land is increasing with it being caused by irrational usage, especially pasture degression.

With all land information that we have, mostly land under various kinds of degradation, it is obvious that polluted grounds aren't dominating, but together with other polluted environments, they are the biggest danger for the biosphere.

Pollution is one of the most dangerous kinds of degradation of the biosphere. It is conditioned by many requirements. Many polluted substances are capable of further spreading from local sources of pollution to global. Their concentration in different environments and it's distancing from big industrial centers has it's tendency to grow. Polluted substances are capable of direct and negative influence on living organisms and people too. The consequences of it's influence are completely unknown. Especially dangerous influence that those substances have on the nature aren't known (pesticides, organic and chlorine substances and other). They are usually uncontrollably spreading . The consequences of the chemical substances influence on the living organisms, which were made by humans, are hard to predict. (Jemcev, Djukic, 2000).

The global flows of the polluted substances are huge. The world's economy is emitting more than $15 \cdot 10^9$ t CO, $200 \cdot 10^6$ t CO₂, $500 \cdot 10^6$ t hydrocarbon and $120 \cdot 10^6$ t ashes into the atmosphere. (Djukic and others, 2008)

53400×1000 m³ yearly wastewater is being made and less than 16% is being purified in Serbia yearly (Veljković N, 2005.). Other difficulties are made from the increasing amounts of solid waste. Every person in Russia makes around 10-15 t of solid waste yearly, and their degree of utilization is around 10-25%. (Djukic and others, 2003).

Our knowledge about environmental pollution and the rate of influence of polluted substances on the people and the biosphere are necessary for creating habits about rational utilization of the nature in community.

CONCLUSION

Based on stated, it can be concluded that

- Characteristics of the modern community are that it is in the social, economical and ecological crisis;
- The most important aspects of the global politics (between humanity and the nature) are: tehnological and economical, socio-ecological and political;
- The life survival depends on the stability of the biosphere ecosystem;
- For the racional usage of the nature resources, it is necessary to be weel-informed about environmental pollution and to rate the influence of the polluted substancies on the people and biosphere in general.

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