

SUSTAINABLE DEVELOPMENT: SOCIAL DIMENSION AND LIMITATION OF MATERIAL NEEDS REQUEST

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Abstract. In this study, the main emphasis is put on social issues of sustainable development. The inclusion of the concept of “the necessity to satisfy the basic needs” within the concept of sustainable development is considered as an important transition from mere discussions on sustainable development to particular actions aimed at achieving sustainability and conservation of the natural resource capacity. Therefore, in essence, it is not possible to create a model of sustainable development within one particular country, it is also not possible to divide the world's biological systems and disregard the exchange of goods and resources between countries.

Keywords: social dimension, sustainable development, natural resources, social aspects, systemic approach.

Jel classification: Q560, O130, L590

1. Introduction

In academic research on satisfying unlimited needs of individual members of society, scarcity of resources is mainly considered within individual countries and opportunities generated by foreign trade. This approach to the solution of the main economic contradiction provides more developed countries with a wider access to the resource markets of other countries to ensure satisfaction of the growing needs of the society at qualitatively and quantitatively new level, disregarding the absolute limitedness of renewal capacity of natural resources. Society and research community still pay insufficient attention to the global aspects of resource scarcity.

The ruling economic egoism on the one hand and the efforts of politicians to satisfy the growing needs of the society ‘at any price’ on the other hand, pose a considerable challenge for the scientists to study this conflict. Such research in essence is carried out in conformity with the general concept of sustainable development and its main dimensions – social, economic, ecological and political dimensions.

The subject and object of the research are closely connected with the existing studies on economic and ecological impact of the attempts to satisfy the constantly growing needs of the society. The conclusions and recommendations found in

these studies are related to qualitative and quantitative indicators of economic development, as well as to the features and tendencies of renewable natural resource usage in different countries, country groups, on different continents and in the world in general. In this study the main attention is paid to the social dimension of sustainable development as to a research object, and to the social aspects of limiting satisfaction of individual needs of the members of society as to a research subject, which is systemically connected with institutional, economic and ecological elements of sustainable development.

The methodologies used in many existing studies on sustainable development and its social dimension focus on an in-depth analysis of qualitative and/or quantitative aspects of a single or several aspects of the problem, not taking into account other aspects influencing the objects and subjects of the research. Thereby, biased conclusions are presented to research community and public information environment, which mainly explain the results of socio-economic development of a particular country or a group of countries in accordance with the main existing concept of increasing the level of social welfare, disregarding the problems of growing degradation of the world's ecosystems (Littig and Griessler 2005; Veenhoven 2009). Methodological approaches to social sustainable development and satisfaction of the needs of the society members pay major attention to the

solution of the problems related to the fulfilment of human needs and to the end result of that process – ensuring well-being ignoring the biological resources used to ensure well-being and the origin of these resources on the global level (Costanza *et al.* 2008). This to a certain extent sustains an illusion that it is possible to ensure well-being and the quality of life in the long term disregarding world ecosystem development tendencies and the change in living standards in other countries and on other continents.

The methodology used in the present research has been developed on the basis of systemic approach to the study of the causes of the elements that constitute sustainable social development problems and qualitative and quantitative aspects of the development of the constituent elements of these causes. The models developed within the framework of the methodology provide a clearer view on the object and subject of the research and the elements that influence them.

The aim of the study is to identify the most important social aspects within the sustainable development framework, to clarify the concepts of sustainable social development in the context of limiting the needs, and to reveal its relationship to other key elements of sustainable development.

2. Growing topicality of sustainable social development

The significance of the implementation of sustainable development concept in the global economy is rapidly increasing. More than 40 years has passed since the Club of Rome was one of the first in the world to draw a considerable public attention to environmental issues and rational use of natural resources at the beginning of the 70's of the 20th century (Meadows *et al.* 1972), but this call is still waiting for an adequate political response aimed at reducing the degradation of biological systems.

Although this initiative was soon intercepted by the United Nations, which in 1980 published a study "World Conservation Strategy" with clearly outlined the need for sustainable development of the environment (World Wildlife Fund 1980), the reduction of reproductive capacity of the biological resources has not been stopped yet. At the beginning of the 70's of the last century about 75% of the volume of renewable resources was consumed in the world annually. However, on 20 August 2010 the Earth's Overshoot Day was reached – the day when the environmentally acceptable natural resource consumption limit was infringed (Global Footprint Network 2010).

In the study carried out by the World Bank it was indicated that more than 2.6 billion of the world's population were forced to live on not more than \$2.5 per day (Chen, Ravallion 2008). According to the data published by Food and Agriculture Organization of the United Nations at the end of 2010, 925 million people suffered from malnutrition. The number of hungry people increased by 145 million compared to the indicator that was achieved at the end of the last century (Food and Agriculture Organization of the United Nation 2010).

The lack of healthy and sufficient food is mostly affecting children, on average every child in such circumstances is sick 160 days per year or more than 5 months a year. Hunger is the major cause of the death of 6 million children in different countries around the world. More than 70% of malnourished children live in Asia, in Africa 26% of children suffer from malnutrition, and 4% of children of the Caribbean Basin countries of Latin America are undernourished (UNICEF 2004).

In the first decade of XXI century the first winds of change in the field of energy appeared. Investments in increasing the share of renewable energy in the total energy balance in 2008 exceeded the financial contributions in increasing the extraction volumes of fossil fuels and in modernization of applied technologies by 155 billion USD. This result appears to be even more significant considering the fact that in 2004 investments in creation of alternative energy exceeded investments in fossil fuel extraction only by 35 billion USD (Steiner 2009).

Such restructuring of the investment profile in the energy sector initiated positive social effect. Renewable energy industries employ over 2.3 million economically active people, and that exceeds the number of people employed in oil and gas extraction and processing and transportation of fossil fuels (Ki-Moon, Gore 2009).

Although in recent decades, some progress has been made regarding reduction of child poverty and illiteracy in the world as a whole, recent research on child poverty in the U.S. showed that a proportion of children growing in poverty in the recent years was increasing and in 2007 it reached 18%, and that was the highest rate since 1998 (Moore *et al.* 2009). This again indicates the presence of threats to the sustainable development of the society not only in less developed countries but in some highly developed countries as well.

So far, political parties have left social aspects of sustainable development concept in the second place, placing more emphasis on the issues of increased environmental degradation and overall increase in pollution as well as turning attention to

economic growth problems, which become more acute with the accelerated decline of regeneration capacity of biological resources, taking into consideration world globalization conditions (Ciegis *et al.* 2009).

In this study, the main emphasis is put on social issues of sustainable development, revealing their connection to the overall concept of sustainable development and the necessity of systemic approach.

3. Systemic approach of the sustainable development concept

One of the most commonly observed errors in the institutional and academic environment is a mechanical approach to solution of the challenges of sustainable development. For example, efforts to reduce environmental pollution, the measures implemented to reduce CO₂ in the atmosphere, increasing the proportion of renewable energy resources in the energy balance, and a lot of other measures, which seems to be aimed at the conservation of the environment, actually do not restrict the consumption of natural resources.

Measures taken so far do not address the question essentially - destructive impact of economic activity on the environment continues with increased intensity and the reproductive capacity of biological resources is steadily declining. The solution of ecological problems that have appeared due to the endless economic growth and the continuous efforts made to improve the welfare level should be found in a systemic approach to ensuring sustainable development.

According to the model developed by the authors of this paper (Vanags *et al.* 2010), the following four components are included in the sustainable socio-economic development system – social, economic and environmental elements as separate subsystems, as well as institutional environment, which in this case refers to political subsystem.

Littig and Griessler (2005) believe that in the concept of sustainable development three separate systems should be included - social, economic and ecological. This approach largely explains the failure to materialize ideas of sustainable development that has persisted over the past 30 years. Several authors have made efforts to over-simplify the idea of sustainable development and offer such approach to the solution of global socio-economic and ecological problems in their works. For instance, Sebastian Brandl includes relationship,

which is formed between the two systems - social and ecological systems, in the concept of sustainable development (Brandl 2002), ignoring the economic system, the direct impact of which on the environment is much higher compared to the social system, particularly, ignoring the fact that the economic system includes the contradiction between the limited natural resources and unlimited public needs.

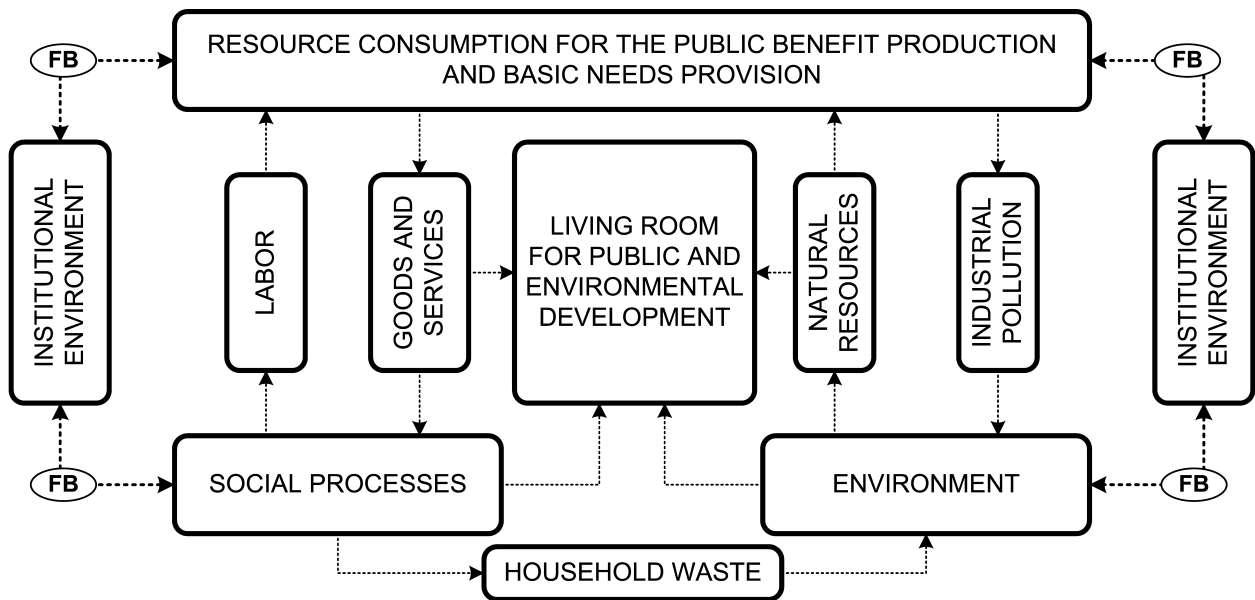
According to the authors' viewpoint, only the sustainable development system that is focused on the maintenance of human-environment interaction balance, its theoretical research and the use of the acquired knowledge for making political and economic decisions could give the necessary directions to the solution of acute social and environmental challenges in different countries around the world.

It is important to note that in this case, for the entire system and each component of the system, the main condition is retention of the regeneration ability of the environmental biological capacity and of the economic potential used to solve escalating social sustainability challenges, putting greater emphasis on qualitative rather than quantitative aspects of economic growth, as determined by Vanags *et al.* (2010).

Improved functional interaction model of the sustainable development system developed by the authors of this paper is shown in Figure 1. This model provides more detailed picture of the relationship between the elements, their interaction and positive and negative aspects caused by this interaction.

The components included in the sustainable development system - social, economic and institutional components, while interacting with the ecological subsystem and an institutional environment are able to ensure achieving of the system objectives: to establish and to maintain a biologically appropriate living space for a human as well as the environment for preservation of the biological capacity of the Earth.

Close relationship between social processes and the environment regarding the resource consumption for production of public goods within the framework of the economic subsystem, as well as the waste and pollution endangering ecosystem's ability to reproduce the necessary resources for human existence in an appropriate quantity and quality, are clearly shown in the offered model.



Abbreviation: FB – feedback

Fig.1. Functional interaction model of the sustainable development system (Source: developed by the authors)

Also, for the operation of the institutional environment and modernization of the state institutions the environmental and social resources are used. It is important to note that the institutional environment in this case has a special mission: to develop common objectives for the socio-ecological and economic systems. The aforementioned objectives correspond to the nature of the concept of sustainable development: recognition of the resource consumption limitations in the context of sustainability.

In addition, the attributes of institutional environment - the laws and regulations, monitoring of the situation, timely identification of irregularities and their cause identification, as well as adequate preventive and corrective actions, ensure the conformity of the functional interaction elements included in the system to the objective of the sustainable development of the system. For this purpose, feedback possibilities of the system are efficiently used.

The importance of the appropriate institutional environment becomes particularly urgent for ensuring sustainable social and ecological development. Thinking about the development of the system of social sustainable development, ensuring its practical operation, it is important to realize that for sustainable development the borders of the countries set by this civilization do not exist. Such borders do not exist for the world's biological and ecological systems: no country is and will be able to provide itself with oxygen, fresh water, food and other biological resources necessary for its existence and development that are required for their survival in isolation from the elements of the

biological system located in the other parts of the world.

Quantitative and qualitative aspects of the world's social problems more clearly indicate the need for a solution outside the administrative boundaries. Therefore, it is not, in essence, possible to create a model of sustainable development within one particular country, it is biological systems and disregard the exchange of goods and resources between countries. However, citizens and government of each particular country can contribute to the sustainable socio-economic development in the world.

4. Fundamental needs as a base of the sustainable development concept

Since the concept of sustainable development appeared, there have been lots of articles written by journalists and politicians; many studies carried out by scientists regarding different issues of sustainable development have been offered to the public use. Due to this fact, now the society comes across such concepts as "environmental sustainability", "urban and rural sustainability", "weak and strong sustainability", "sustainable management", "sustainable culture", "sustainable residential houses", "sustainable construction" and many other "sustainable" categories, in which often everything and nothing in particular is included, they have nothing to do with the original nature of sustainable development. In this way the chaos of taxonomy, which makes it difficult to understand the social, economic and ecological content of the concept of "sustainable development" and to apply it in practice and research properly, is created.

To a large extent impartial terminology problems are associated with the dual content of the term “sustainable development”, which merges two important, but so far largely contradictorily perceived and evaluated concepts of “development” and “sustainability”. This can be explained by the selfishness of political action of the developed countries and fragmentation of scientific thought in studying such global challenges as social cohesion of the countries of the world and maintaining the limited regeneration capacity of biological resources in order to meet constantly growing needs of the society.

Different levels of development of the countries of the world as well as socio-ecological aspects of the development challenges, quantitative and qualitative aspects of the interaction between developed and less developed countries and enhanced intensity of the world globalization have contributed to the debate on sustainable development and have created a fertile ground for different interpretations of this concept. Already in the middle of the 90's of the last century in the economic literature over 300 explanations of the concept “sustainable development” were offered (Jacobs 1995).

Different interpretation of the concept of sustainable development is related to both the objective and subjective aspects. The most important objective aspect is related to a clarification of the concept of the restriction of meeting the needs of an individual, social group, society and the state, the necessity of which is associated with the rights of the individuals of future generations to satisfy their needs (United Nations 1987). If this approach for public purposes can be afforded by politicians, philosophers and anthropologists, for the economists it is not acceptable in principle.

In the economic theory the needs of each individual are clearly separated from the utility and consumption. If the need is the function of imagination and emotions, then the actual utility - the amount of purchased goods and services - is the function of budget revenue and expenditure. Regularities of the market economy determine that households, companies and other economic entities limit their needs having regard to available budget that is at their disposal and resource prices.

Thus, individual, company and state consumption to a greater extent is related to budget availability, prices of public goods and, to a lesser extent, to satisfaction of the resulting needs, not denying the importance of the impact of the needs on quantitative and qualitative aspects of the consumption. In this respect, it is important to take into consideration that the spectrum of human needs goes far beyond the physiological and hous-

ing needs, which have the highest relative weight among the people in less developed countries (Chuengsatiansup 2003).

Along with the rise of the standard of living, such needs as security, sense of belonging - the need for family, friends and love, the desire for dignity and gaining recognition and appreciation by other people and the desire for being praised in order to enhance the self-esteem, as well as the need for self-actualization as the highest expression of the hierarchy of needs, become more important. L. Seghezzeo believes that all of these needs cannot be classified as social needs of sustainable development (Seghezzeo 2009).

Taking into account socio-economic differences of the countries of the world, within the framework of the sustainable development concept, the concept of “needs” is narrowed down and defined as “basic needs” or “fundamental needs”, which in Maslow's hierarchy of needs are at different levels of needs.

The following needs that are important for each individual are included in the concept of the basic needs of the society individuals (Max-Neef *et al.* 1989):

- 1) Existence - the need for food, employment and housing.
- 2) Protection - the need for security, adaptability, availability of health protection and social security system, the need to cooperate in order to achieve the required level of safety.
- 3) Devotion - the need for family, respect and the need to show respect and love, friendship.
- 4) Understanding and self-awareness - the need for education, contact with wildlife, the need to research, meditate and otherwise mentally develop oneself.
- 5) Participation - the need to take responsibility, to perform duties, to engage in work and public events.
- 6) Recreation - the need to relax physically and mentally, the need to participate in different games, cultural events; the need for peace and quiet, etc.
- 7) Individuality - the need to perceive oneself as a unique, permanent personality, which belongs to a specific country, language, culture and family traditions.
- 8) Freedom - the need for personal autonomy, the desire to express one's emotions and affection, to participate in discussion of different issues and express individual view, to take risks and develop the skills of understanding, etc.

The eight needs included in the category of “basic needs”, in essence, make a related, functionally compatible set of needs, which determines human behavior at a given age and situation. Needs,

included in the category “fundamental needs”, by their nature are comprehensive for all countries of the world; they do not depend on the level of development of the country and public welfare.

Basic needs remain the same irrespective of the location and the geographical situation of the country, the dominant cultural traditions, the legal environment and the prevailing religion. This allows including fundamental needs in the international comparisons in order to analyze and evaluate the compliance of the social system to the sustainability framework and satisfaction of basic human needs.

It should be admitted that inclusion of the concept of “the necessity to satisfy the basic needs” within the concept of sustainable development is regarded as an important step in the long way from mere discussions on sustainable development to particular actions aimed at achieving sustainability and conservation of the natural resource production capacity.

“Materialization” of the concept of sustainable development is greatly interfered by explanation of the classical concept in which the utopian possibility of meeting the needs of the current generation without compromising the chances of future generations to satisfy their own needs is described. The current sustainable development approach does not take account of the processes of the market economy, within the framework of which the criterion of need restriction is the budget of the economic subject on the one hand and the prices of resources and goods on the other. It is essential to include such aspects as basic needs satisfaction opportunities, equal access to resources and just allocation of public goods into the framework of sustainable development.

5. Conclusions

The following conclusions of the study performed on the most important aspects of sustainable development within the framework of sustainable social development have been drawn:

1. The topicality of the issues of increase of social dimension of sustainable development is largely determined by progressive environmental degradation and the decrease of renewable resource recovery capacity in the human life space, causing social problems of global nature - pervasive extent of poverty in the world, high level of infant mortality, low education level, uneven income increase and injustice in satisfaction of basic human needs of the individual members of the society.

2. It is important to include such social aspects as the possibilities of meeting basic needs,

more equal access to resources and equitable distribution of public goods within the framework of sustainable development. In the definition developed by the authors of this study, an attempt to reduce the failures having occurred in the interpretation of the concept of sustainable development in academic and public environment with regard to unlimited needs of different social groups in time and space replacing them with “basic” or “fundamental needs” is made.

3. The biggest obstacle to ensure sustainable social and ecological development is a conservative institutional environment, which does not provide the balancing of the economic impact of globalization with the necessity to reduce the degradation of the environment and to maintain the reproductive capacity of biological systems. Recognition of global limitations of natural resources on the one hand, and bringing into compliance the required benefits (goods and services) with the basic needs and with the amount of resources (renewable and non-renewable) that is at the disposal of the society on the other hand, open up new opportunities to preserve the Earth as a healthy living space for future generations.

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