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A modern concept of sustainable development

Abstract: Sustainable development is oriented towards the development of a model that can meet socio-economic needs and satisfy interests of citizens in a qualitative way, and at the same time significantly reduces the impacts that threaten the environment and natural resources. Sustainable development represents a general direction to create a better world by balancing social, economic and environmental factors. Sustainable development is often related to the protection of the environment, that is, an attempt to connect the survival of life on the planet Earth with the preservation of natural resources and numerous environmental challenges faced by every society, country and humanity as a whole.

Keywords: sustainability, environmental, protection, socio-economic development

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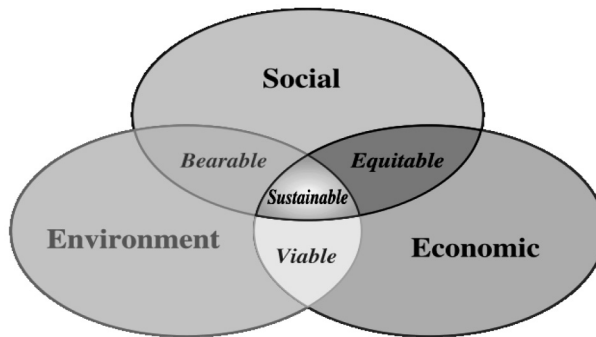
Introduction

Sustainable development implies the development of a society which, using available resources, meets human needs not endangering natural systems and environment ensuring the long-term existence of human society and its environment, so that it also represents a new strategy and philosophy of social development [Giddings, Hopwood, Brein 2002, p. 187-196]. Sustainable development is often related to the protection of the environment, that is, an attempt to connect the survival of life on the planet Earth with the preservation of natural resources and numerous environmental challenges faced by every society, country and humanity as a whole [Djukanovic 2008, p. 86]. Sustainable development, although a widely used phrase and idea, has many different meanings and therefore provokes many different responses. In broad terms, the concept of sustainable development is an attempt to combine growing concerns about a range of environmental issues with socio-economic issues [Hopwood, Brien, Melor 2005, p. 38-52].

Although sustainability became a watchword in recent years, the idea is by no means new. It has a long tradition in various domains ranging from

a basic forestry principle, to economic growth and nature conservation objectives, and the present challenge of sustainable development. The latter does not only involve an extremely important transformation of the ecologically based concept of physical sustainability to the context of social and economic development. It implies the necessity for a holistic approach to integrate some basic principles of sustainability that have been developed in economics as well as in ecology [Hediger 2006, p. 359-394]. Contribution to the actuality of this concept is given by environmental dangers that are reflected in environmental challenges and problems, such as: global warming, ozone depletion, greenhouse effect, deforestation, conversion of arable land in deserts, acid rains, extinction of animal and plant species. In order to preserve the planet for the present but also for future generations it is necessary for modern world to be aware of common responsibility and to harmonize development with the needs of people and nature. Sustainable development can create favourable conditions for future generations and can preserve natural wealth of the planet [Otterstad 2008, p. 224-235].

Figure 1. Common three-ring sector view of sustainable development



Source: Giddings et al., (2002).

The development of market economy is the reason that the attitudes and behavior of economic entities are more and more based on the assumption that natural resources are unlimited and that they can be used more intensive and more aggressive without taking into account the necessity of their renewability and environmental protection. As a reflection of the aggressive behaviour of economic entities towards nature in general, in the process of ruthless exploitation of natural resources, it is obvious that the courses of their optimal reproduction and environmental protection have been disturbed [Ivanovic 2007, p. 55]. The concept of sustainable development implies a balanced economic, social and cultural development without damaging environment. It predicts preservation of natural resource wealth, whereby consumption level of renewable resources will not exceed the limits

within which natural systems cannot compensate it, while the consumption level of non-renewable sources will not exceed the limit within which they can be replaced by renewable sources [Giddings, Hopwood, Brein 2002, p. 187-196]. Besides, sustainable development implies that pollution emissions do not exceed the capacities of soil, water and air in order to preserve quality according to the standards that are at least sufficient for life and well – being of people, flora and fauna. In this way, it will enable future generations to develop themselves at the same or a higher level. It can be broadly defined as an innovation that has to consider environmental and social issues as well as the needs of future generations [Ketata, Sofka 2014, p. 60-75]. The essence of the concept of sustainable development is a correlation of economy development and the environment taking into account laws of ecological systems. This concept focuses on rational use of natural resource wealth of a country and accordingly, on the improvement of quality of environment and quality of life. In order to achieve sustainable development it is necessary to establish new social values based on knowledge, creativity and skills of human resources, in a word, to create a high – quality staff with intention to transform today’s society into a learning society [Magdalinovic, Kalinovic 2007, p. 97].

Definition of sustainability and of sustainable development

As underlined by UNWCED, sustainable development refers to the concept of “needs”, but limitations imposed by the state of technology and social organizations on the environment’s ability to meet present and future needs are also a central concern. Sustainable development must be treated as an ethical code for human survival and progress [Sharma, Ruud 2003, p. 205-214].

The concept of sustainable development implies harmonization of a number of various sectorial interest and priorities. It reflects the need for desired quality and a realistic pace of social development as well as need to balance different social values. There is no single universally accepted definition of sustainable development. The most frequently quoted definition of sustainable development is from *Our Common Future* (also known as *Brundtland Report*) published by World Commission on Environment and Development in 1987: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” [WCED 1987, p. 41].

A comprehensive definition of sustainable development is: sustainable development is an integral economic, technological, social and cultural development, harmonized with the needs of protection and improvement of environment, which enables present and future generations to meet their needs and improve the quality of life. This definition represents norms and patterns of behavior that should be followed in order to meet the needs of

survival and well-being of human community. Three basic components: economic, social and environmental, are incorporated into this definition, and the sustainable development is based on them. Basic provisions of the above components were defined in 1993 by Mohan Munasinghe, one of the World Bank leading economists:

- ❑ economic sustainability: maximizing income while maintaining or increasing natural capital;
- ❑ social sustainability: maintaining stability of social and cultural systems;
- ❑ environmental sustainability: maintaining elasticity and balance of biological and physical systems [WCED, 1987].

Sustainable development is usually presented as the intersection between environment, society and economy. They are interconnected, with the economy dependent on society and the environment while human existence and society are dependent on, and within the environment [Giddings, Hopwood, Brein 2002, p. 187-196].

Solidarity among generations and among nations is also included in sustainable development. It also includes the balance between the needs of present and future generations, as well as the balance of the needs at local and regional levels together with the needs of the whole planet.

Pillars and principles of sustainable development

Sustainable development means dealing with economic and social development with careful use of limited natural resources and environmental protection. On the other hand, economic development takes a central position because other two elements cannot develop without it. Sustainable development theory provides a balance in satisfying the needs of present and future generations. Today's understanding of sustainable development is presented as a combination of social, economic and environmental dimensions in corporate and public decision making within complete participation and contribution. National sustainable development strategies (NSDSs) play a vital role in pursuing sustainable development (SD) at the country level. These strategies help in clarifying priorities and in focusing efforts to more effectively address relevant SD issues. Since its establishment in 1992, the United Nations Commission on Sustainable Development has urged its members to formulate and implement their respective NSDS [Lagarde 2006, p. 111-123.]

Sustainable development is based on the following principles:

- ❑ Environmental quality: a lot of human activities are limited by the physical durability of the environment and it is emphasized that the consumption of natural wealth must be reduced. If we want to provide conditions for a healthy life and development for future generations, we should comply with these restrictions.

- ❑ Future: it is important to have the awareness of future generations and the satisfaction of their needs that we have influence on and that we are responsible for.
- ❑ The quality of life: apart from material, each of the human activities has a social, cultural, moral and spiritual dimension.
- ❑ Equity: wealth, benefits and responsibilities should be fairly distributed among countries as well as among different social groups within the society. The needs and the rights of the poor and of those who are not treated equally, regardless of the reason, should be taken into consideration recaptions: this principle should be applied in the case when we are not sure how a certain act or event can have impact on environment.
- ❑ Comprehensiveness: all factors that affect a problem should be taken into consideration when solving complex problems [National sustainable development strategy 2007, p. 13-15].

Solving a complex problem of sustainability requires participation of all relevant factors that affect the problem in order to solve it. Many different approaches for national sustainable development strategies (NSDS) have been proposed since 1992, with some components common to all. A country's national strategy should be designed to help mainstream environmental concerns into policy. More broadly, it should coordinate local policy with global concerns, as well as integrate scientific knowledge into policy and development planning [Brodhag, Taliere 2006, p. 136-145].

Dimensions and the principles of sustainable development

Sustainable development means the inclusion of economic, social and environmental aspects, as well as aspects of institutional development, most often those related to good governance. These aspects are often called pillars or dimensions of sustainable development. These pillars should be interconnected and these connections realized. In addition to environment, economic, social and cultural values are resources we should obtain for future generations. Special attention must be paid to the relationships among of all these three dimensions of sustainable development, as well as to their influences they have on each other [Otterstad 2008, p. 360-377]. Sustainability standards are meant to prevent a range of unacceptable socioeconomic and environmental consequences, such as threats to biodiversity [Englund, Berndes 2014, p. 26-50].

At the United Nations Conference on Environment and Development – UNCED held in Rio de Janeiro in 1992, a detailed information about sustainability was given for the first time and national strategy on sustainability was required. On this occasion, some important documents were adopted: Climate

Change Convention and the Convention of Biological Diversity. Agenda 21 is a global action plan with regard to sustainable development where activities at all levels are represented. The structure of Agenda 21 is constructed so that it considers all relevant aspects of sustainable development: fight against poverty, gender equality, climate protection, exploitation of natural resources, protection of diversity, etc. Declaration from Rio and Agenda 21 emphasize two most important principles of sustainable development: integration of economic, social and environmental priorities and the participation all interested parties in the process of development [Milutinovic 2004, p. 7].

Economic and environmental understanding of sustainable development

Linking two scientific disciplines such as economy and ecology represents undoubtedly the basis for understanding the concept of sustainable development. Today, this view has taken the central position when considering the long-term prospects for mankind's survival and progress. The concept of sustainability and sustainable development has now become a widely accepted concept as a condition of mankind's survival and progress. Environmental conservation and economic growth can be compatible with each other, without jeopardizing social welfare [Hediger 2006, p. 359-394]. A key challenge at the beginning of the 21st century is to de-carbonize and de-materialize the global economy in time to avoid irreversible changes to the global and local environment while generating enough social and economic development opportunities to reduce poverty and inequity [Glemerec, Oliveira 2012, p. 200-214].

Economic sustainability requires that the total value of economic capital fund must be preserved. In the long run, consumption must not exceed value added (income) in order to preserve the substance of the total economic capital. Economic capital does not refer only to manufactured capital goods, but to natural capital sources as well (forests, energy sources, mineral sources, water, air, etc.). To some extent, they are mutually complementary and can be substituted. With a rapid growth of produced capital, the attitude towards natural sources has been significantly changed. Today, limited natural resources, energy in particular, have become one of the key limitations of sustainable development. Standard economic approach fails to fully reflect some very important problems in evaluating natural capital. Environmental understanding of sustainability primarily relates to the preservation of natural capital and resources, as well as the preservation of general welfare. Natural capital includes natural resources (water, soil, air, energents, etc.) and natural conditions (ability of eco-system to absorb and recycle wastes). In order to understand development from the environmental aspect it is necessary to respect limitations of biophysical environment. In other words, environmental

sustainability means sustainable total consumption in the given biophysical constraints of the total eco-system using renewable resources at rates that remain within regenerative capacity of the source, that is, maintaining the amount of waste within assimilative capacity of the environment. The concept of sustainability means interaction between economy and environment that does not endanger functional integrity of eco system. It implies natural heritage that is transferred from generation to generation, that can be changed, but must retain flexibility in order to absorb disorders caused by economic activities [Filipovic 2011, p. 553-557].

Conclusion

Modern world is faced with common responsibility and necessity to align its development with the needs of people and nature. The present generations have the right to use natural resources and healthy environment, but must not jeopardize the same right of future generations. It can be said that at global level, a hard work on the integral perception of the environment and economic development has been greatly degraded by the existing trends in production, consumption and economic instability. Exploitation of natural resources is increasingly growing whereby more and more pollution is generated. Therefore, contemporary humanity needs a concept of sustainable development that simultaneously economically uses non renewable and renewable energy sources and unites environmental, social and economic aspects of life. At the same time, this concept emphasizes the responsibility of each individual in protecting the environment and thus allows the improvement of productivity and standards of living. Sustainable development is oriented towards the development of a model that can meet socio-economic needs and satisfy interests of citizens in a qualitative way, and at the same time significantly reduces the impacts that threaten the environment and natural resources. It can be said that sustainable development represents a general direction to create a better world by balancing social, economic and environmental factors.

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Nowoczesna koncepcja zrównoważonego rozwoju

Streszczenie: Zrównoważony rozwój jest zorientowany na opracowanie modelu, który może zaspokoić potrzeby społeczno-ekonomiczne i zaspokoić interesy obywateli w sposób jakościowy, a jednocześnie znacznie zmniejszyć wpływ, który zagraża środowisku i zasobom naturalnym. Zrównoważony rozwój stanowi ogólny kierunek tworzenia

lepszego świata poprzez równoważenie czynników społecznych, ekonomicznych i środowiskowych. Zrównoważony rozwój jest często związany z ochroną środowiska, to znaczy próbą połączenia przetrwania życia na Ziemi z zachowaniem zasobów naturalnych i licznymi wyzwaniami ekologicznymi, przed którymi stoi każde społeczeństwo, kraj i ludzkość jako całość.

Słowa kluczowe: zrównoważony rozwój, ochrona środowiska, ochrona, rozwój społeczno-gospodarczy

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