

# A NEW PARADIGM OF SUSTAINABLE DEVELOPMENT DIMENSIONS

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**Abstract.** *Sustainable development has become an universal phrase and the area of many policy initiatives, especially those regarding environmental organizations. The revision of the dimensions of sustainable development gives vital support to develop and implement indicators for them. The dimensions of sustainable development are inseparable and mutually reinforcing. Sustainable development actions depend on complexity and working with different interests of environment and development. It is impossible to predict what needs future generations will have. The obligation of the current generation is both to use and protect the world resources in ways that meet human development opportunities more justifiably today, but which do not exclude choices for such actions tomorrow. The aim of the research is to analyse the dimensions of sustainable development. More deeply, the research tasks are to outline the hierarchical organization of sustainable development criteria and indicators and to create a new paradigm of sustainable development dimensions. The methods of research are monographic, quantitative, deductive, and inductive. The key result: a new paradigm of sustainable development dimensions is created. Sustainable development is a concept, possibly surrounding closely every aspect of human society. The meaning of the dimensions of sustainable development is all the time in progress. There is a new approach to the dimensions given in the research. Sustainability could be understood better in terms of “here and now”, “later” and “elsewhere”. The existence of sustainability criteria guarantees sustainability in the long perspective. It can be suggested that the sustainability criteria analysis and their practical use could be further developed.*

**Keywords:** *sustainable development, sustainable development dimensions, sustainability criteria, sustainability indicators.*

**JEL code:** *D63, Q56, I38, F63*

## Introduction

The concept of development involves well-being for all and the concept “sustainable” means that such development must not come at the expense of future generations.

The issue of sustainable development addressing environmental, social, and economic sustainability has become one of the main challenges nowadays. Sustainability is an important idea being generally referenced and widely supported. It is usually considered as the stable pursuit of several things: ecological sustainability, social equity, as well as health and economic welfare. It is grounded on the ethical commitment that not just contemporary populations’ well-being, but also the comfort and enhanced opportunities of future generations are important. Sustainability requirements can be

regulated with the help of different tools, e.g., sustainability criteria, sustainability standards, or their combination.

As the recent leading paradigm of development, sustainable development has been accepted globally and has had a significant influence on international treaties as well as national policies and strategies. The pursuit of sustainable development is now stated as a principal policy goal for most of the world institutions. Sustainable development underlines the obligation to realise further economic growth in an environmentally - friendly way, as the past patterns of the economic development have had grave influences on the global environment. This is confirmation of how understanding of the sustainable development global challenge has moved on to include the complex environmental, social, and economic development.

Equal importance of the achievements of the economic development and environmental sustainability can be recognised after examination of the dimensions of sustainable development criteria. The implementation of sustainable development has faced various difficulties since its appearance as a developed model. A major challenge is the resource use. Economic development processes are strictly related with natural resources. The environment depends on the maintenance of these resources. All the economic activities make demands on the resource base, and the past economic development can be closely associated with the rates of resource extraction. Inequalities in access to the resources also pose the main challenge of sustainable development.

The aim of the research is to analyse the dimensions of sustainable development. More deeply, the research tasks are to outline the hierarchical organization of sustainable development criteria and indicators and to create a new paradigm of sustainable development dimensions. Attention is paid to the fact that sustainability criteria cannot function as the only guarantee for sustainable development. They should be accompanied and complemented by other tools. The existence of sustainability criteria guarantees sustainability in the long-term. It can be suggested that the analysis of the sustainability criteria and their practical use need to be developed further.

The sustainability criteria and their content should be linked to the understanding of what sustainable development and sustainability are.

### **The criteria and indicators of sustainable development**

The concepts of sustainable development and sustainability are the basis for understanding and defining sustainability criteria. Sustainable development was first described in 1987 as probably the best-known basic definition of sustainability. It is stated in *Our Common Future*, also known as the *Brundtland Report* by the United Nations World Commission on

Environment and Development (WCED) published in 1987: “...meeting the needs of the present without compromising the ability of future generations to meet their needs” (Kilbert et al., 2010). Many works have occurred since the *Brundtland Report* to explain the worldwide consensus about the goals of sustainability, development of subsequent and previous global efforts (such as *Agenda 21*, *The Earth Charter*, *The Rio Declaration*) on the aims, standards, and models of sustainability. The definition of sustainable development covers a difference and a potential conflict between the interests of the present and future generations.

Whistler’s 2020 (Canada) sustainable community movement describes sustainability as “... a minimum condition for a flourishing planet in the long term”; it becomes harder to define the term of “sustainability” (Kilbert et al., 2010). The word “sustainability” is used more and more frequently from a wide variety of perspectives with a number of different purposes in mind. As a result, it becomes harder to define the term “sustainability”.

Further clarifications of the concept of “sustainable development” have been mainly based on the three-pillar approach, which distinguishes among environmental, social, and economic dimensions of sustainable development (Iglesias et al., 2008).

The history of the sustainable development concept is closely linked to the changing perceptions of environmental concern, nature conservation and development during the last century. The flourishing of the sustainable development concept and its emergence as a new development paradigm can be explained by the rise of international environmentalism and development studies in the middle of the 20<sup>th</sup> century. There have been many changes in thinking in relation to the meaning, purpose, and actual practice of development since the emergence of development studies in the 1950s. During the 1960s, economic growth and the use of modern scientific and technical knowledge to achieve progress in the developing world were prioritised (Elliott, 2008). The main difficulties concerning the concepts of sustainable development and sustainability are still transformation and operationalization at the practical level.

It is necessary to examine the dimensions of sustainable development criteria in order to gain a detailed understanding of this multifaceted concept. By exploring the criteria of sustainable development, the way in which the concept has unified the ideas of various disciplines in order to make best use of economic and social development in an environmentally-friendly manner is emphasized. By bearing in mind the challenges, which the sustainable development implementation practices meet, as well as the limitations of looking for economic growth and environmental sustainability could be recognized. The theoretical knowledge of sustainable development criteria could be used for analysis of how sustainable development practices

have been implemented and determination of how well-matched the criteria of sustainable development are, both in policy and in practice.

There are many uses of the indicators and the criteria of sustainable development, so sometimes there is confusion of the terms.

Sustainable development is a large issue. It refers not only to physical aspects. It involves many other aspects, for example, environmental such as public health, education and many more. In order to qualify and evaluate those different aspects and choose the best one, considering existing resources, mainly funding, the criteria are needed.

There should be some indicators for the criteria. For instance, the number of educated persons per 1000 inhabitants. Such kind of indicators has recommended values generally produced by international organizations. Indicators of a sustainable community point to areas where the links between the economy, environment, and society are quite weak.

The criteria are intermediate into which the indicator providing information could be integrated. The indicators define what information is delivered to evaluate the criteria. To infer the status of a particular criterion as variable components, the indicators can be used.

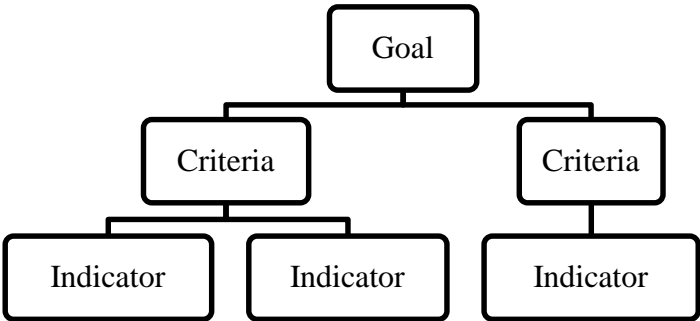


Fig. 1 Hierarchical organization of criteria and indicators  
*(Source: compiled by the author)*

It is important to measure sustainable development. The society needs statistics to shift emphasis from measuring economic development to sustainable development. The concept involves choice - making between using resources to maximise the current human well-being and preserving resources for the future use.

Many composite indicators and criteria have been proposed in the academic literature during the last two decades. The sustainable development indicator “knowledge of countries and organizations” has increased significantly, as the emphasis has been placed on measuring progress of achieving sustainable development including the Millennium Development Goals (MDGs) at the national and international levels.

In a number of sources, the assessment function of sustainability criteria has been highlighted. Thus, Zink (2005) defines sustainability criteria as criteria that are applied to assess opportunities and risks deriving from economic, environmental, and social sustainability dimensions. Koplin et al. (2007) points out those sustainability criteria of an environmental character form requirements to reduce the input of natural resources and minimize environmental risks. Goldschmidt et al. (2013) underlines that sustainability criteria could be of a qualitative or quantitative nature. The research group also stresses that sustainability criteria are not static and often require continuous assessment and modification over time (Pavlovskaia, 2014). Sustainable development criteria can provide crucial guidance for decision-making. Thus, criteria can be used for translation of social sciences into manageable elements of data that can facilitate the decision-making process. They can support calibration progress towards sustainable development goals. They also can provide an in-time warning system to avoid economic, social and environmental problems.

The issue of sustainable development criteria has also been examined from different perspectives. The indicators have been along the following levels, precisely:

- global;
- national;
- local.

The global level is needed to ensure national comparisons.

Since the UN Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil, in June 1992, there have been a numerous attempts to find more operationally useful definitions and sustainable development criteria. These have been broadly categorized into three areas, precisely:

- economic;
- environmental;
- social (Qizilbash, 2001).

The United Nations Conference on Environment and Development in 1992 documented the significant role that indicators of sustainable development could play in decision making about sustainable development. The Commission on Sustainable Development (CSD) approved its Work Programme on Indicators of Sustainable Development in 1995. The first of CSD Indicators of Sustainable Development were developed between 1994 and 2001. The new reviewed edition of the CSD indicators has been established in response to conclusions by the CSD and the World Summit on Sustainable Development in 2002. A large number of countries had developed their own national indicator sets, mostly based on the CSD indicators. Further work on indicators continues at the national and local level in a harmony with national circumstances and priorities.

## Sustainable development dimensions

As tools for policy monitoring, indicators should not be related only with governmentally defined targets, but in order to permit policy assessments, it has to be clear, which value of the indicator is more desirable than another one. Indicators to be used on different levels of decision-making obviously need different levels of detail.

The specific topics of sustainable development need to be measured for the three conceptual dimensions of human well-being, i.e., “here and now”, “later”, and “elsewhere” (Framework and suggested..., 2013).

There is no academic agreement on how to measure the human well-being of the present generation (“here and now”). Basically, human well-being is determined by what people consider as most important in their lives. This could be a combination of subjective and objective measures (Framework and suggested..., 2013). Selection of the measures is based on a number of important empirical measures. For instance, these measures could be labour, education, housing etc.

The well-being of future generations depends on the resources the current generation leaves or saves (“later”). Typical prejudice is that most of the future people are non-existent; therefore, the question is why we should sacrifice for non-existent people.

The “elsewhere” dimension captures the ways that the countries affect the human well-being of the rest of the world. The transboundary impacts of a country may affect other countries via various channels. For example, the indicators on international aid from the developed countries to the less developed ones, the extent to which one country may deplete the resources of other countries etc. (Framework and suggested..., 2013).

Taking into account the previous quotes of the research, the following relevance between sustainable development criteria and indicators at different levels and dimensions is worked out.

Table 1 Sustainable development criteria dimensions and some possible indicators (*Source: compiled by the author*)

Dimensions	Criteria	Indicators (examples)		
		Levels		
		Global	National	Local
“Here and now”	Social	Human development index	Poverty	Community participation
“Later”	Environmental	Biodiversity	Air quality	Local air quality
“Elsewhere”	Economic	Gross domestic product	Taxes	Employment

These have been the most commonly used criteria with measurement indicators of sustainable development. Integration of the sustainable development dimensions is not just an ambition, but it is vital for the ecosystem, society, and economy existence. Such an integrated approach may appear too complex to implement. However, there are many examples of successful interlinks that follow the above-mentioned principles. There should be a movement from a sectoral approach to a more holistic one, with sustainable development as a main context.

### **Conclusions and suggestions**

#### Conclusions:

1. Sustainable development has become a universal phrase and the area of many policy initiatives, especially those regarding environmental organizations. Sustainable development is a concept, possibly surrounding closely every aspect of human society.
2. More than three decades after the WCED had defined “sustainable development” and put this notion of sustainability on the global agenda, the meaning of the sustainable development dimensions is all the time in progress.
3. Barriers to the efficient function of sustainability dimensions may occur because of different implementation approaches among the involved performers on different levels.

#### Suggestions:

1. The author of the research suggests a new approach to sustainable development dimensions. Sustainability could be better understood in terms of “here and now”, “later”, and “elsewhere”. The dimensional sustainability framework is more inclusive, plural, and useful to outline specific policies towards sustainability. The revision of the dimensions of sustainable development gives vital support to develop and implement indicators for sustainable development.
2. Sustainable development dimensions have to perform many functions:
  - to lead to better decisions and more effective actions by simplifying, clarifying and making combined information available to policy makers;
  - to help incorporate physical and social science knowledge into decision-making;
  - to help measure progress by using sustainable development indicators;

- to provide an early warning to prevent economic, social, and environmental setbacks;
- to be a useful tool for presenting ideas, thoughts, and values.

The sustainable development dimensions are inseparable and mutually reinforcing. The sustainable development actions depend on the complexity and combining different interests on the environment and development. It is impossible to predict what needs future generations will have. The obligation of the current generation is both to use and to protect the resources of the world in ways that meet human development opportunities more justifiably today, but which do not exclude choices for such actions tomorrow.

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