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Procedia Economics and Finance 26 (2015) 806 – 811

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**Procedia**  
Economics and Finance

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4th World Conference on Business, Economics and Management, WCBEM

## The components of sustainable development - a possible approach

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### Abstract

The sustainable development of society refers to three major components of human existence: economical, ecological and human. The first component is essential, in the sense that the aim of social and economical activity is to satisfy human needs or desires, resulting for the three dimensions of human existence: biological (present in the interactions with the physical, natural environment), social/collective/collective (as a member of some social groups), rational/psychological/spiritual (induced by internal traits, particular to one human being). The relation between economical growth and the protection of the environment is an essential problem in the approaching sustainable development because the approach of economical growth not only by GDP, without trying a quantification of medium and long term advantages, resulting from environmental protection is only a basic form, unacceptable in sustainable development analysis. The human component in sustainable development has a major role, because the concept of equity incorporates several forms of manifestation in regards of sustainable evolution of human society.

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Peer-review under responsibility of Academic World Research and Education Center

*Keywords:* Sustainable development; human; economical; ecological.

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### 1. Introduction

The future of our planet is a matter of great concern. Environmental issues and how man / human communities affect ecosystem concerns have been part of human society from the beginning. Sustainable development has become a recognized goal for human society since the deterioration of environmental conditions in many parts of the world (Bossel, 1999). Therefore humanity is forced to pay more attention to the environment. This is becoming more and more important as modern industrial society requires even more burdens on nature (Wall & Gong, 2001). Thus it is found that the concept of sustainable development has an important role in business and resource

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conservation in the 21st century. This paper aims at presenting the role of sustainable development so that human actions do not violate the terms of the sustainability of life on this planet. The paper is divided into four major sections. Second section contains two subsections: the first presents the concept of sustainable development; the second subsection outlines the importance of sustainable development for the nation. Next section outlines the components of sustainable development. The research concludes with the discussion and conclusions.

## 2. Literature review

### 2.1. Defining sustainable development

Sustainable development is a juxtaposition of two elements of major importance. The first term " *durable* " represents durability and sustainability, while the word " *development* " aimed at expanding or construction the potentialities of; bring gradually to a fuller, greater, or better state. The concept of sustainability is a complex approach which is spoken in a period when environmental problems caused by various human activities require serious solutions. By analyzing various definitions of literature, the authors present the evolution of the concept of sustainable development since 1987 and to date, Table 1. It can be seen that all these definitions involve common and different imperatives. Most definitions integrate many buildings under development: expansion, growth, progress, development and satisfaction. So, all conceptualizations show a directly proportional relationship between economical growth and population satisfaction.

Table 1. Definitions of sustainable development

Authors	Year	Country	Definition
WCED	1987	United States of America	"Sustainable development is meeting the needs of present without compromising the ability of future generations to meet their needs." (WCED, 1987).
Pearce, D., Markandya, A. and Barbier, E.	1989	United Kingdom	"Sustainable development involves devising a social and economic system, which ensures that these goals are sustained, i.e. that real incomes rise, that educational standards increase that the health of the nation improves, and that the general quality of life is advanced." (Pearce et al., 1989).
Harwood, R.R.	1990	United States of America	"Sustainable development is a system that can evolve indefinitely toward greater human utility, greater efficiency of resource use and a balance with the environment which is favourable to humans and most other species." (Harwood, 1990).
Meadows, D. H.	1998	United States of America	"Sustainable development is a social construct, referring to the long-term evolution of a hugely complex system – the human population and economy embedded within the eco-systems and biogeochemical flow of the planet." (Meadows, 1998).
Van der Merwe, I. and Van der Marwe, J.	1999	Sud Africa	"Sustainable development is a program for changing the process of economic development so that it ensures a basic quality of life for all people and at the same time protects the ecosystems and community systems that make life possible and worthwhile." (Van der Merwe & Van der Marwe, 1999).
Viorel, H.J.	2002	Romania	"Sustainable development is a form of economic growth which satisfies welfare needs of society in terms of short, medium and long term, it must meet the needs of the present without, however, compromising the of future generations." (Viorel, 2002).
Stefanescu, F.	2003	Romania	"Sustainable development must be understood as a type of economic development that ensures meeting the needs of present generations without compromising the ability of future generations to meet their own requirements and applicable measures aimed at long intervals and long-term effects." (Stefanescu, 2003).
Beck, U. and	2004	United Kingdom	"Sustainable development is currently a powerful global counter-

Wilms, J.			narrative to contemporary western lifestyles and forms of governing societies." (Beck & Wilms, 2004).
Hopwood, B., Mellor, M. and O'Brien, G.	2005	United Kingdom	"Sustainable development represents a shift in understanding of humanity's place on the planet, but it is open to interpretation of being anything from almost meaningless to of extreme importance to humanity." (Hopwood et al., 2005).
Vare, P. and Scott, W.	2007	United Kingdom	"Sustainable development is a process of change, where resources are being gathered, an investment direction is chosen, the development technologies directed and various institutions have convergent actions, increasing the potential for human needs and desires." (Vare & Scott, 2007).
Sterling, S.	2010	United Kingdom	"Sustainable development is seen as reconciliation between economy and environment on a new path of development that would sustain the human progress not only in a few places and for a few years, but on the entire planet and for a long future." (Sterling, 2010).
Marin, C., Dorobanțu, R., Codreanu D. and Mihaela R.	2012	Romania	"Sustainability development refers to the ability of a society, ecosystem, or any such existing system to operate continuously in an undefined future without reaching key resource depletion." (Marin et al., 2012).
Ivascu L.	2013	Romania	"Sustainable development can be defined as maintaining system stability by developing a balance of responsibilities: economic, social, environmental and technological support technique without compromising the needs of future generations." (Ivascu, 2013).

The table shows the evolution and implications of the concept of sustainable development as a support for the presentation of the importance of sustainable development for nation.

## 2.2. The importance of sustainable development

The role of sustainable development of society has been noted since 1992 the Earth Summit in Rio de Janeiro and reiterated at the World Summit Sustainable Development in Johannesburg in 2002 (Baron et al., 2001). Without environmental protection can not ensure sustainable development. Sustainable development includes environmental protection, while environmental conditions sustainable development. The European Union requires a new approach to global environmental problems linked to environmental effects and pressure of all socio-economic consequences. Realizing the need for continued economic and social development, it is imperative to protect and improve the state of the environment represents the only possibility to create and maintain the welfare of both the present generation and those to come; this balance was the factor that can and should ensure the development of society as a whole (Glasbergen, 2000). This is the key issue of sustainable development. In the last century, economic and technical progress has led to the neglect and deterioration of natural resources systems. The global economy, however, is now structured and non-renewable resources with a strong impact on the environment, exceeding the capacity of different ecosystems. Examples are: the decimation of forest areas, reducing the area of farmland per person, reduction of drinking water, global warming, melting glaciers and extinction of animal and plant species. Environmental issues and how man / human communities affect ecosystem concerns have been part of human society from the beginning (Popescu, 2001). It is believed today that many prehistoric societies have developed rules and taboos regarding the use of certain common resources so as to protect or ensure their rational exploitation. The natural resources and ecosystems supporting everyday life were represented in many traditions and rituals of communities living in close contact with nature.

In this context, sustainable development is of fundamental importance because:

- The use of renewable resources does not exceed their rate of regeneration with emphasis on preservation of natural resources. In this eco-centric approach, natural resources are assigned an intrinsic value, independently of their usefulness to human beings. It is a romantic vision that sees nature as an antidote to industrialized society.

- The use of renewable resources can not exceed the replacement rate. In this case the emphasis is on conservation of natural resources. This approach is deeply anthropocentric - nature has value to the extent that sustains life and human activity is prevalent even today.
- The release of harmful substances shall not exceed the capacity of natural systems to absorb and compensate. In this case the general welfare of the ecosystem should be the first priority, and human aspirations and needs to be resized and re-evaluated by the fact that they are not a priority, but a small element among many other items.

### **3. Components of sustainable development**

#### *3.1. Economic component*

Economic development desired to produce a maximum flow of income in terms of rational use, resource efficiency, particularly scarce resources. As a manifestation of macroeconomic dynamics, economic development requires a set of quantitative transformations, structure and quality, both in economic and in scientific research and manufacturing technologies in organizational structures and mechanisms of economic functioning in thinking and people's behavior (Becker, 2001). In this approach, the main concern is related to how countries develop their economies. It is shown that rapid economic growth with obtaining maximum benefits, especially for developing countries, creates a heavy burden on the ability of the planet to support. From the perspective of sustainable development, economic growth should be such that negative environmental impact is limited. The concept of sustainable development represents a paradigm shift in this area - sustainability is not just about pivita environmental protection but is discussed in the context of connection with other areas, especially those involving economic activity (Krajnc & Glavic, 2005). Therefore, development must be conceived as a process multidimensional, involving major changes in social structures, attitudes popular and national institutions, aiming at accelerating economic growth, reducing inequality and poverty eradication. On the one hand, the economic dimension aims to ensure a balanced and sustainable economic environment by producing goods and services continuously to maintain manageable levels of government and external debt and avoid extreme sectoral imbalances affecting agriculture and production industrial, and in order to achieve needed training a competitive industry, diversification of industrial production and attracting investment. On the other hand, the economic dimension of the strategy is strangled by other countries that fail to recover from the economic crisis, putting its future difficulty. Moreover, the common objectives, they must reach a certain level joint and above this impediment can change the results (Stefanescu et al., 2009). These issues need to be resolved in a manner that inspires even if the problems are difficult, however, to have full exhalation solutions. Instruments that lead to economic purpose is achieved education, scientific and intellectual potential that is available, the target technology and natural resources, thereby triggering role in economic activity, which in turn helps in achieving the ultimate goal of the strategy.

#### *3.2. Ecological component*

Environment development can be defined as the ability to hold whiles the three basic functions of the environment: the power function of resources, waste receptor function and the direct utility (Wardle & Giller, 1996). By its complexity, ecological component of sustainable development captures not only the actual economic development in relation to the environment, but the entire development. Ecological development is closely correlated growth and interrelation with environmental laws, the ecological balance. Wheeler (2004) says that currently witnessing a transition from an economic perspective toward an environmental perspective. This dimension is oriented towards satisfying specific practical requirements, and long, proposing harmony and complexity, excluding unilateral orientation to a branch or another of the industry. In other words, in an area environmental development is the capacity to grow and to bring the environment and its peculiarities, while ensuring the protection and renewal of natural resources and environmental heritage. Environmental protection is considering physical and biological system stability, developing their capacity to adapt to change and less conservation status considered ideal (Bran, 1991). Assuming a complex structure, diversified term eco-development is characterized by greater capacity according to the requirements of a stage and some major goals. It requires caution in ecologically; stimulates the development of knowledge based on consumption, but subordinate planning

opportunities; expected a harmonious development, cautious, in full agreement with the possibilities at a time and in a particular place. Thus, economic growth should not affect the environment in order to talk about sustainable development. International organizations have proposed environmental policy, but there are a lot of people who do not like the actions targeting the environment, on the issue as a political commonplace. As said above ecological development is an objective of developing countries that stretches over a long period.

### 3.3. Human component

Assuming that viable alternatives have been identified to maintain ecological balance, and authorities everywhere so converting raw materials purchasing in material goods to be made in accordance with the requirements for efficiency and optimality, quality of life and labor standards is the prerequisite fulfillment and satisfaction professional, social or otherwise. Human sustainability has regard to social interactions, relationships, behavioral patterns and values of humanity (Dempsey et al., 2011). Human component aimed at socio-cultural stability, achieve fairness both at the same time a generation is concerned maintaining cultural diversity "world village", as the prevention or cure of "social ills" of contemporaneity: loneliness or alienation, lack of job satisfaction (continue under a narrowing of specialization on the basis of "knowing more and more about less and less" that difficult for the worker to perceive the finished product and understand the usefulness of his work), the relativism of values, the end of history, uncertainties about the nearer future or more distant "disease" postmodern age specific. Realizing the need for further social development (without harming the environment) is imperative to protect and improve the state of the environment represents the only possibility to create and maintain the welfare of both the present generation and those to come, this balance was the factor that can and should ensure development company whole.

Minica and France (2008) synthesize the human aspect of sustainable development worldwide involves the following objectives:

- Promotion of education, training and public support for the environment
- Protecting and promoting human health (focused on access to medical facilities, especially in rural areas, control of infectious diseases, risks pollution and ecological risk).
- Fight against poverty (through access of the poor to sustainable livelihoods, promoting human development and integrated policy investment in human capital).
- Demographic threatening sustainable development (focusing on population growth, especially in developing countries).

## 4. Discussion and conclusions

Retaining common elements, rational and useful of the three conceptions regarding the protection of the natural environment can lead to generalized one: concept of reconciliation of man with nature and with himself. This concept implies respect for the laws of nature in economic, ecological balance, health Earth and social progress. Thus, this involves creating an attitude that leads to preventing deterioration of environmental conditions, in terms of compatibility between product development and the environment. Analysis of components of sustainable development shows that the economic potential of sustainable development in a changing very slowly, while the socio-economic development changes very quickly.

## Acknowledgements

This work was partially supported by the strategic grant POSDRU/159/1.5/S/137070 (2014) of the Ministry of National Education, Romania, co-financed by the European Social Fund – Investing in People, within the Sectoral Operational Programme Human Resources Development 2007-2013.

## References

- Baron, P., Snack, O., Neacsu, N., (2001). *Economia Turismului*, Editura Expert, Bucuresti  
 Becker, G. S., (2001), *Comportamentul uman o abordare economica*, Editura ALL, Bucuresti

- Beck, U., Wilms, J., (2004). *Conversations with Ulrich Beck*. Cambridge: Polity Press.
- Bossel, H., (1999). *Indicators for sustainable development: theory, method, applications*. Winnipeg: International Institute for Sustainable Development.
- Bran, P., (1991), *Economia valorii*, Ed. Stiința, Chisinau
- Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development*, 19(5), 289-300.
- Glasbergen, P., (2000). The environmental cooperative: self-governance in sustainable rural development. *Journal of Environment and Development* 9, 240-259.
- Harwood, R.R., (1990). The history of sustainable agriculture, in "Sustainable Farming Systems". In Edwards et al. (Eds), pp 3-19
- Hopwood, B., Mellor, M., O'Brien, G., (2005). Sustainable development: mapping different approaches. *Sustainable Development* 13, 38-52.
- Ivascu, L., (2013). *Contributii privind managementul riscului in intreprinderea* . Editura Politehnica, Timisoara
- Krajnc, D., & Glavic, P., (2005). A model for integrated assessment of sustainable development. *Resources, Conservation and Recycling*, 43, 189-208.
- Marin, C., Dorobanțu, R., Codreanu, D., Mihaela, R., (2012). The Fruit of Collaboration between Local Government and Private Partners in the Sustainable Development Community Case Study: County Valcea. *Economy Transdisciplinarity Cognition*2, 93–98.
- Meadows, D. H., (1998). *Indicators and information systems for sustainable development*
- Minica, M., Franț, F., (2008). The dimensions of durable development. *Annals of the University of Craiova Economic Science* XXXVII, 34323439
- Pearce, D., Markandya, A., Barbier, E., (1989). *Blueprint for a Green Economy*, Earthscan, London
- Popescu, I., (2001). *Certitudine si risc intranzitia social-economica*, Editura Eficient, Bucuresti
- Sterling, S., (2010). Learning for resilience, or the resilient learner? Towards a necessary reconciliation in a paradigm of sustainable education. *Environmental Education Research* 16, 511-528.
- Stefanescu, F., (2003). *Gandirea economica a lui A.D.Xenopol*, Oradea
- Stefanescu, D., Herman, E., Georgescu, A.M., (2009). *Sustainable development and Business Opportunities*, Series: European Entrepreneurship Education, Petru Maior University of Targu Mures Printing House, Targu Mures
- Vander-Merwe, I., Van-der-Merwe, J., (1999). *Sustainable development at the local level: An introduction to local agenda 21*. Pretoria: Department of environmental affairs and tourism.
- Vare, P., Scott, W., (2007). Learning for a change exploring the relationship between education and sustainable development. *Journal of Education for Sustainable Development* 1, 191-198.
- Viorel, H. J., (2002). *Dezvoltarea durabila in Romania*
- Wall, G., & Gong, M., (2001). On exergy and sustainable development—Part 1: Conditions and concepts. *An International Journal* 3, 128-145.
- Wardle, D.A., Giller, K.E., (1996). The quest for a contemporary ecological dimension to soil biology. *Soil biology and Biochemistry* 28, 1549-1554
- WCED. (1987). *Our Common Future*. Oxford University, Press: Oxford, New York, p.4.
- Wheeler, S.M., (2004). *Planning for Sustainability. Creating Livable, equitable, and Ecological Communities*, New York: Routledge