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## DURABILITY PRINCIPLES VERSUS SUSTAINABLE DEVELOPMENT, ECO-DEVELOPMENT WITH REFERENCE TO FORMS OF NATURAL VALUABLE AREAS

**ABSTRACT.** The aim of this article is to identify durability principles in relation to sustainable development, eco-development and forms of natural valuable areas. Sustainable development accepts sensitive and strong durability principle, however, it does not accept a weak durability principle and restrictive principle. Eco-development does not accept a weak and sensitive durability principle, does not partly accept strong principle, but it accepts restrictive principle. Only one durability principle does not refer to any form of natural valuable areas, it is a weak principle.

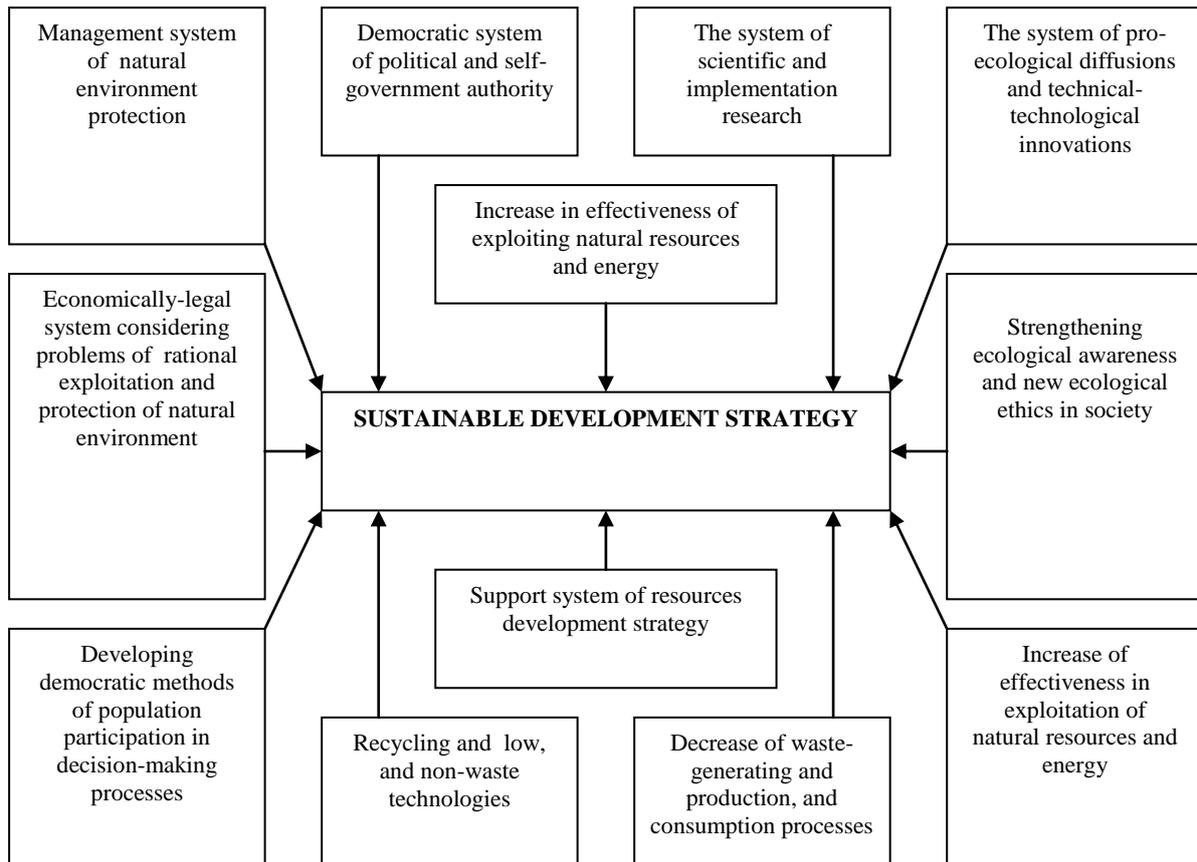
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### Introduction

One should distinguish a term eco-development from a term sustainable development. Eco-development term is narrower than a term – sustainable development, because in a term eco-development we usually focus on environmental and natural context of social development, in the second plan we take into account such issues like: economic development and widely understood social development, and – in case of conflict among these spheres – one accepts the primacy of ecological demands in comparison with economic or social demands (Compare: *Wskaźniki ekorozwoju (Eco-development indicators)*, 1999, section 3; Zabłocki, 2002; Czaja, Fiedor *et al*, 2002, section. 8).

For Stefana Kozłowski eco-development means, “development based on ecological criteria, in other words the one, which is accomplished in accordance with natural conditions, or creating socio-economic development without destruction of natural resources” (Kozłowski, 2000, p. 83). A term sustainable development itself, can be found in Environmental Protection Act (*Journal of Environmental Law*, 2008). In Article 3, Section 5 there is the following record: it is understood that such a socio-economic development, where the integration process of political, economic and social action take place, at the same time retaining natural balance and durability of fundamental natural processes, in order to guarantee a possibility to satisfy basic needs of particular societies or citizens for contemporary as well as future generations.



Scheme 1. Accomplishment elements of sustainable development strategy  
 Source: own study.

At first this idea was called an organic growth, using the influence of ecology and nature studies. In the second report for Rome Club “Mankind in a turning point”, it was written: “... this pattern of sustainable and non-sustainable growth constitutes a crucial source of most urgent problems facing mankind, a leading way to their solution, is a way of organic growth” (Mesarović, Pestel, 1977, p. 40).

The essence of sustainable development lies in finding a proper balance (proportion) among economy, society, space or nature. An attitude towards sustainable development according to a principle criterion lies in the choice of the durability level. A durability level defines pressure on environment protection and strength in approaching to retaining natural capital, taking into account economy and society’s needs in a contemporary generation (Jeżowski, 2009, p. 28).

In the early period, when the concept of sustainable development appeared, more often the notion of eco-development was used, which strongly emphasized ecological dimension of processes. First definitions appeared at the turn of 1980s and 1990s.

Table 1. Way towards sustainable development on Earth

<b>Date of event</b>	<b>Event</b>
1968	Establishment of the Club of Rome
1969	Report of Secretary-General of the UNUThant
1972	First report for the Club of Rome "The limits to growth"
05.07.1972	Conference in Stockholm "The Only One Earth"
1980	World Nature Conservation Strategy
1982	World Nature Card
20.03.1987	Brundtland Report
1991	New World Conservation Strategy IUCN "Caring for Earth"
03-14.06.1992	First Earth Summit in Rio de Janeiro "Environment and Development"
14.06.1992	Declaration from Rioof environment and development
14.06.1992	General ClimateConvention
14.06.1992	Convention on BiologicalDiversity
14.06.1992	AGENDA 21
28-30.04.1993	Conference in Lucerne "For clean environment for Europe"
1995	Conference in Sofia and Pan-european Biological and Landscape Diversity strategy for the 1996-2000 period
12.1997	The Kyoto Protocol
06.09.2000	Millennium Summit of UN General Meeting – Millennium Declaration and Millennium Goals of UN
26.08-4.09.2002	Second Earth Ecological Summit in Johannesburg
1-12.12.2008	Conference in Poznan
7-18.12.2010	Conference in Copenhagen
20-22.06.2012	Summit of Sustainable Development "Rio+20" in Rio de Janeiro

*Source:* own study.

Durability idea refers well to the forms of natural valuable areas, including (look further Zielińska, 2010, pp. 211-220):

- national parks and nature reserves, landscape parks, the areas of protected landscape and Natura 2000 areas;
- the forms of individual protection including: natural feature of historic importance, documentary positions, ecological arable lands, nature-landscape complexes;
- the forms of the species protection of plants, animals and mushrooms (in situ, ex situ);
- botanical gardens, zoological gardens and rehabilitation centres for animals;
- greenery and tree-covered areas;
- and additionally beyond legal protection.
- protection of urban greenery.

Table 2. Selected definitions of Eco-development in Polish literature

Authorship of definition	Definition
Universal Polish Dictionary	Economic and spatial development of a certain area, taking into consideration ecology principles, not causing any damages in natural environment <sup>(1)</sup>
Encyclopedia of Wyborcza Newspaper	Process of long-lasting economic growth, taking place with the attention to environment protection, caused by particular care for intergeneration justice– retaining for future generations appropriate environment quality, including its resources and non-economic arable lands <sup>(2)</sup>
PWN Encyclopedia	Process of long-lasting and permanent, self-supporting economic growth, taking place with the attention to environment protection, caused by particular care for intergeneration justice <sup>(3)</sup>

Source: (1). *Uniwersalny słownik języka polskiego*, (ed.) S. Dubisz, tom 1 A-G, Wydawnictwo Naukowe PWN, (2). *Encyklopedia Gazety Wyborczej*, tom 4, Wydawnictwo Naukowe PWN, Warszawa 2003, p. 472, (3). *Wielka Encyklopedia PWN*, tom 8, Wydawnictwo Naukowe PWN, Warszawa, 2002, p. 124.

What kind of relation are there among durable development and sustainable development? Do durability principles refer to all forms of natural valuable areas? The answer for the above mentioned questions, will allow to understand connection of durable development through durability principles, with the sustainable development concept, eco-development and forms of natural valuable areas. It will result in the assessment in an economical sense of economic potential, which is found in natural valuable areas. They function in accordance with sustainable development. Durability principles do not limit the developmental possibilities of natural valuable areas.

The aim of this article is to identify durability principles in relation to sustainable development, eco-development and forms of natural valuable areas. The author does not aim at pointing out, which durability principle is the most universal one for natural environment.

### Nature of durability principle

Durability of development is a category, which relations towards conventional and unconventional development, through which we understand sustainable development and eco-development, are not clear enough. Therefore, it should be asked if one can identify durable development with sustainable development or eco-development? In order to do that, we have to get closer and examined mentioned in the literature durability principles (Cf. *Wskaźniki ekorozwoju*, 1999, pp. 70-75), which show an existing conflict among a conservative attitude towards environment and expansive forms of natural environment managing. That is why a term – durability does not have a universal character, but is grading according to “strictness” or restrictiveness principle of retaining natural capital. There are four durability principles (Fig. 1).

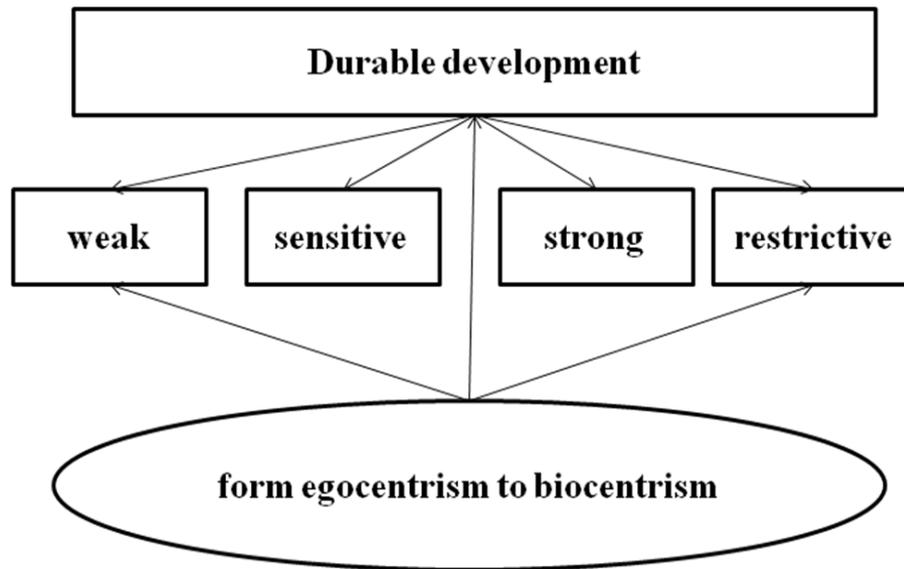


Fig. 1. Durable development principles

Source: worked out on the basis of *Opracowanie modelu wdrożeniowego ...*, T. Borys (ed.), 2004.

A detailed approach towards durability principle is introduced by Tadeusz Borys and Bogusław Fiedor, who identify the following principles (criteria) of capital durability, look: *Wskaźniki ekorozwoju*, 1999, p. 72; Fiedor, 2004, p. 8; *Opracowanie modelu ...*, T. Borys (ed.), 2004, subsection 2.1.1; Ayres, *et al*, 1998, No. 3; Neumayer, 2003; Turner, 1992, vol. 26):

1. Weak principle (or excellent substitution of capital) means a need to retain capital source as a whole, regardless of its structure, including natural capital, created by a human being (anthropogenic – economic and cultural) and social (human). It is assumed that, different kinds of capitals are excellent substitutes, at least in the limits appointed by a current level of business activity and existing resources at that time. It is an approach towards typically conventional development, in this sense durable development cannot be identified with sustainable development or eco-development.
2. Sensitive (moderate) durability principle, requires not only retaining the whole source of capital, but also a stability of its structure. This approach is based on an assumption about a limited range of substitution (in a strictly defined limits) of natural capital, which is created by a human being. Therefore, a proper functioning of a system, sets a demand, it means that capital elements have to be present there all the time, or eventually it defines their mutual proportions or minimal participation in a whole. Because we do not know the limits appointed by critical factors, necessary amounts of particular kinds of capital, that is why, a practical conclusion is a careful exploitation of nature resources and avoiding their fast wasting. Then, one takes into account ecological limitations of human's activity and, at the same time considering possibilities to reach a compromise and translating ecological premises into practical language of natural resources managing, retaining durability of their usage.
3. Strong durability principle (or capitals' complementarity) requires retaining resources of all kinds of capitals, according to the quantity as well as quality. It results from an assumption that, anthropogenic and natural capital are not

substitution towards each other, but rather complementary. It concerns, most of all, regulative environment's functions. It means that, a loss of a certain kind of resources should be compensated by the growth of the same resource, not an investment into another kind of capital. A condition for development is keeping natural capital and not allowing for a negative change in quantity and quality of goods and environmental services.

4. Restrictive (a very strong one) durability principle is an extreme example of previous principle and leads to not reducing any of the capital resources. Non-renewable resources would not be exploited at all. In case of renewable resources it is possible to use only this part, which is its annual growth, so it will not reduce capital and influence on the ability to renew in further periods. This conception comes from ecological knowledge about ecosystems and puts the emphasis on applying conservative principle of nature protection, in all possible areas of human being's functioning.

In subject literature, one can find an attitude towards reducing these durability principles to two basic ones: weak and strong, look: Neumayer, 2003; Turner, 1992; Ayres *et al*, 1998). In the first case, balance is assessed in accordance with the assumption of resources substitution, in other words the assumption accepting substitution of capital. Economic system is in balance with environment, as long as it creates resources of equal value of used resources. Therefore it is accepted that, development based on a weak durability principle is not sustainable development. In weak development, substitution concerns not only natural resources (industrial resources), but also nature resources (biological diversity, ecosystems, soils, landscapes etc.) and resources created by human beings (anthropogenic resources). In a case of strong sustainability, one includes mutual incomparability of some resources, and a fact that, some foods cannot be substituted (lack of substitution). Strong sustainability rejects possibility of substitution acceptance.

Sustainable development acknowledges sensitive and strong durability principle, however, it does not acknowledge weak durability principle (excellent capitals' substitution), and to great extent restrictive principle. Eco-development is strongly connected with a term nature capital and with its durability principles at least in "strong" version. Eco-development does not accept weak and sensitive principle, and to great extent it accepts restrictive principle of nature's capital protection. Restrictive principle accepts such development, which allows to hold possessed heritage of natural environment, in an untouched state for some time. In other words it means that, it allows to hand over possessed capital, containing conditions for providing life quality for future generations. That is why, eco-development to little extent should be explained through the principle of integrated order, because the main aim of this development conception is protection of natural capital (environmental). Eco-development is only a part of integrated order.

### **Durability principles for natural valuable areas**

None of single durability principles does not translate into all forms of natural valuable areas. If we take natural valuable area as a sustainable development idea's element then, one should take into consideration a fact that, it should be preserved in time (for future generations, so called intergenerational justice), it means to obey rules of conduct with the principle of capital's durability. Analysing one by one, all durability principles, one should eliminate weak principle, which does not refer to any form of natural valuable area. Whereas, sensitive (moderate) durability, where cautious exploitation of natural resources is needed, and preventing their qualitative degradation, refers to such forms of natural valuable areas like: botanical garden, zoological garden, rehabilitation centre for animals, urban greenery,

urban parks, areas of protected landscape, Natura 2000, documentary positions, ecological arable lands, nature-landscape complexes. Next, strong durability principle pays attention to a necessity to preserve each capital resource, it concerns national parks (partial protection), landscape parks and natural feature of historic importance and species protection of plants, animals and mushrooms (in situ, ex situ). While, restrictive principle, prohibiting depleting any of resources concerns nature reserves, national parks (rigorous protection).

Such an approach towards principles for natural valuable areas is connected with economic, social and spatial activities, which take place within different kinds of ecosystems, they are subject to continuous modifications and changes. That is why, a problem of sustainable development and eco-development durability, always has to answer the question: what natural valuable areas do we want to preserve for present and future generations? Here, one should aim at caution principle, which means a need to avoid irreparable changes in natural environment and means to assure that the effect of economic-social-spatial activity would be safely absorbed within continuously changing assimilation abilities of ecosystems.

On the basis of durability principles, it results that the accomplishment of sustainable development idea refers to all forms of natural valuable areas, except form nature reserves, national parks, where eco-development idea is applied. For nature reserves and national parks (rigorous protection) harmony order is weakened (ecological, social, institutional and spatial), because a dominating order is an ecological one (environmental).

Sustainable development idea of natural valuable areas has to take into account a condition of preserving fundamental, irreplaceable natural capital. Using natural resources of these areas has to include their harmony with economic rationality and social acceptance.

## Final conclusions

On the basis of conducted theoretical analysis, the following conclusions can be formulated:

- Eco-development is a narrower term than sustainable development.
- One should pay attention to the role, which durability principles play, in defining relations among durable development, sustainable development or eco-development, semantic range of terms – sustainable development and eco-development.
  - Unconventional development conceptions (sustainable development and eco-development) cause wider understanding through anthropocentric values system.
  - Sustainable development accepts sensitive and strong durability principle, however, it does not accept weak durability principle and restrictive principle.
  - Eco-development does not accept weak and sensitive principle, partly strong principle, however to large extent it accepts restrictive principle of natural capital protection.
  - Sustainable development is accomplished for all forms of natural valuable areas, except form nature reserves and national parks, for which eco-development idea is applied.

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