

Rethinking sustainable development – a challenge for the post Rio+20 process

*Refleksje na temat zrównoważonego rozwoju
– wyzwanie dla procesu po Rio+20*

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Abstract. The outcome of the United Nations Conference on Sustainable Development (the Rio+20 Conference of June 2012) is not going to change unsustainable development trends. Thus, before we replace the ambitious and non-achieved Millennium Development Goals by even more ambitious Sustainable Development Goals we should rethink the concepts of sustainable development and sustainable living. Under present definitions no fundamental requirement indispensable for successful implementation of sustainable development – anticipatory (future oriented) learning is included. Throughout all their history, human beings have learnt from their past experience. However, technological development has now provided us with such powers that potential errors may lead to a severe aftermath. It is therefore desirable that we learn, not only from the past, but also from possible futures.

Key words: sustainable development, human needs, anticipatory learning, future.

Introduction

The industrial age has brought a higher quality of life reflected in better healthcare and education, longer life expectancy, etc. But besides the indisputable benefits, the industrial age has also caused many problems which are now assuming global proportions. We remain unable to prevent people from dying prematurely of hunger, and in many regions the environment is damaged or being destroyed. Many animal and plant species are disappearing irretrievably due to human activities, and the growing world population is increasing the anthropogenic pressure on ecosystems and natural resources alike.

The global problems of the human community have been subject to intensive research since the 1970s. Reports to the Club of Rome and some other globally



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oriented reports of the 1970s and early 1980s demonstrated that the exponential growth in population and consumption within the restricted Earth ecosystem could not prove sustainable in the long term. Therefore in 1983 the Prime Minister of Norway, Gro Harlem Brundtland, established the United Nations Commission on Environment and Development with a mission to propose ways in which people and whole nations might develop while sustaining functioning ecosystems and a healthy environment. The efforts resulted in a report called “Our Common Future“, published in 1987 (UNWCED, 1987). The key term of that report was “sustainable development“.

Definitions and principles of sustainable development

According to the UN World Commission on Environment and Development, sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In its broadest sense, the strategy for sustainable development aims to promote harmony among human beings and between humanity and nature.” (UNWCED, 1987)

The above definition is anthropocentrically oriented (meeting the needs of people), but that is not what is fundamentally wrong here. Above all, it is so vague and “all-embracing” that it is impossible not to agree with. Specifically, its most major deficiency is the fact that it fails to attempt to even define human needs.

No unified, generally accepted definition has been provided as yet. Instead, there are many and various sustainable development definitions. Here let us mention just three of these, formulated by Czech and Slovak authors.

The former Czechoslovak Federal Minister of the Environment Josef Vavroušek defined sustainable development as follows: “Sustainable development, or a sustainable lifestyle, aims at the ideals of humanism and harmonious relationships between human beings and nature. It is a way of life that searches for a balance between the freedoms and rights of each individual and his or her responsibility to other people and nature as a whole, including responsibility to future generations.” (Vavroušek, 1993).

Slovak author Ján Topercer characterizes sustainable development as follows (Mederly et al., 2004): “Sustainable development is a purposeful process of changes in the way human society treats itself and its environment (the land and its resources), directed at increasing the present and future potential for meeting the needs of people and other beings while respecting the capacities (limits) of the land and its resources.”

At Charles University in Prague, the sustainable development theory is studied by Ivan Rynda (Rynda, 2000), who characterizes it as follows: “Sustainable development is a complex set of strategies which make it possible for human needs, (material, cultural, as well as spiritual) to be met through economic means and

technology, while environmental limits continue to be respected in full. To make this possible on the global scale of today's World, its socio-political institutions and processes need to be re-defined at the local, regional and global levels."

A definition should be concise; and can never therefore capture the concept of sustainable development in its wider scope. For the vague concept to be clarified, the definitions can be complemented by main principles. According to the report "Caring for the Earth" (subtitled "A Strategy for Sustainable Living"), published jointly in 1991 by the IUCN, UNEP and WWF (IUCN, UNEP, WWF, 1991), the main principles underpinning sustainable development are:

- respect and care for the community of life;
- improvement of the quality of human life;
- conservation of the Earth's vitality and diversity;
- keeping within the Earth's carrying capacity;
- changes in personal attitudes and practices;
- the enfranchisement of communities where care for their own environments is concerned;
- the establishment of a national framework integrating development and conservation;
- the establishment of a global alliance to promote sustainability.

Probably most important of all is the precautionary principle contained and defined explicitly in Principle 15 of the Rio Declaration: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environment degradation."

Drawbacks of the sustainable development concept

Although the concept of sustainable development has been evolving for a quarter of a century, it is still characterised by an extreme vagueness stemming from the need for it to encapsulate and respond to highly complex global (not solely environmental) problems. Ján Topercer (Mederly et al., 2004) identified the key weak point of the concept of sustainable development aptly as follows:

"Sustainable development anticipates development that would not compromise the ability of future generations to meet their needs as viewed from the perspective of today's generation. This concept of development is considered desirable, which makes it assume a prescribing rather than predicting role. However, the above concept lacks a reliable basis for prescription for the following reasons:

- The idea of a universal hierarchy of needs has not been sufficiently empirically documented, which applies to space (geographically) but perhaps even more to time;

- In addition, our standards of what is optimal and desirable develop over time;
- It is difficult to realize today's needs and capacities and their satisfaction, let alone the future ones, largely due to the fact that certain premises and facts are extremely vague;
- It is extremely difficult, even disputable, to realize and quantify a whole range of marginal conditions, variables, and their threshold values under which the ecosystem's sustainable development may turn unsustainable;
- It is difficult to conceptualize sustainable development (that is why there are so many different approaches and interpretations), let alone design verifiable hypotheses and upon them develop a theory of sustainable development, which in this respect basically still does not exist."

What shall we do?

Four requirements of sustainable development

Although the concept of sustainable development is far from flawless and is not a scientific theory, there is thus far no better way by which to attempt to respond to ever-more acute problems present on the global scale.

We (individuals and the society) have three options when it comes to how to respond to the current global challenges:

- a. We can underestimate, trivialize, or ignore the problems. We can honestly believe, or entertain false hopes, that the situation (i.e. the consequence of climate change, major population increases in developing countries, resource exhaustion, poverty, etc.) is not serious and we need not worry. This logically suggests that there is no need for a response and everything can stay as it is, without any change. But that does not solve the problems. On the contrary, putting off efficient action only makes those problems worse, while we are wasting perhaps the most precious and "exhaustible" resource – time.
- b. We can acknowledge the seriousness of the matter without trying to resolve it. We fear a disaster but do not believe that our efforts could make a difference, or that we ourselves could do anything to avert it. Therefore, we remain passive and resign ourselves to our fate, hoping things will sort themselves out. Or, even worse, we act regardless of what comes next, trying to seize as many pleasures as we can for ourselves before everything is lost. Thus we suppress the instinct of self-preservation and behave cruelly especially as regards our children, and future generations.
- c. We can actively try to affect and alter the present adverse trends, to formulate and assert alternative, positive, and democratic visions of society's development. I see hope in the vision of sustainable development, despite all the imperfections it might have. However, no one can find the answer to: "What are the chances of success?" While the chance may be 80% or just 1%, we should still take it. Although as individuals we are not very responsible for the outcome (usually our

capacity to affect that is very limited), we all are definitely responsible for our individual efforts, and for how much time, energy, and skills we dedicate to what.

Let us try now to sum up the main ideas contained in the definitions and principles of sustainable development into four generalizing basic requirements.

The requirement that all people on Earth should be able to meet their (at least elementary) needs

The trouble starts immediately with the attempt to define elementary human needs. We need food, water, clothes, and shelter for bare survival. Just surviving on a long-term basis is naturally not an option. Despite that, about one billion people around the world suffer from acute hunger and 1.2 billion people have no access to safe drinking water. In developed countries, we would certainly loathe it if we could cover but the most essential needs facilitating survival. But where is the limit to human needs? Probably in “infinity”. And are there any limits to justified human needs? And do they differ in time and space?

Unfortunately, we have not thus far proved capable of defining reasonable human needs, in a manner that would help us determine a reasonable limit for human desires, which are often perceived as needs, or even as something we are entitled to.

The communist ideology carried an appealing motto it never managed (nor was it possible) to honor: “From each according to his abilities, to each according to his needs.” But is a car, a private yacht, or a tourist trip into orbit a justifiable need?

The requirement as regards the satisfaction of needs as stated in the definition of the United Nations Commission on Environment and Development is thus appealing, but unfeasible and indeed undefineable. It seems more logical and adequate to condition the satisfaction of human needs in line with respect-for ecosystems’ carrying capacity and the need to preserve valuable natural features and biological diversity for present and future generations, as is declared e.g. in the European Parliament definition of sustainable development. Once again – the elementary requirement that development be sustainable should not be formed in relation to the satisfaction of human needs, but rather in terms of respect for ecosystem carrying capacity, upon which the activities of people living in individual regions and time periods must be based.

The requirement that future generations have the right to meet their needs

This is a great new challenge. In history, various groups of inhabitants like slaves, serfs and colonised nations strived (whether by violent or non-violent means) to assert their rights. Today the problem is whether we will be able to respect the rights of those who are not here yet but will be – our children and

all generations to come. This general statement can be specified with the help of Herman Daly's three principles (Daly, 1996) suggesting how sustainable use might be made of the Earth's natural resources and ecosystems:

- a) Exploitation of renewable resources (forest, fish populations, etc.) does not exceed the rate of regeneration.
- b) The rate of depletion of non-renewable natural resources (e.g. fossil fuels) does not exceed the rate of growth of renewable substitutes.
- c) Waste emissions do not exceed the renewable assimilative capacity of the local environment (and therefore will not exceed ecosystem carrying capacity).

The requirement that the rights of other living beings be respected

This is another great challenge that did not receive much attention in the 20th century, when people were "conquering" nature. As with the first requirement for sustainable development, we are unable to define the optimum status here. Should humankind use its dominant position among other living beings and act as the "lord of creation" or should it rather be a responsible manager of this planet? Or should we consider other beings equal to us (regardless of the fact that this radical requirement could not be given effect to anyway)?

Should we differentiate between individual species, depending on what place they occupy in some kind of evolutionary hierarchy?

These are questions we have no answers to, and nor can we determine clearly what is good and what is wrong. However, we should not ignore the above challenges and instead formulate the answers gradually, even if it takes decades and perhaps even longer. We should gradually approach harmony in relationships between human beings and both animate and inanimate nature, as Josef Vavroušek states in his definition. Full harmony we will probably never reach. But we can always feel respect for life and nature in the sense of the legacy of Albert Schweitzer (Schweitzer, 1974).

Requirement for learning from the future

This requirement does not ensue from the aforementioned definitions but it is indispensable for the implementation of sustainable development. The report to the Club of Rome "No Limits to Learning" (Botkin et al., 1978) elaborates on the idea of "anticipatory learning", i.e. learning based on anticipation of the possible consequences of our current activities. Anticipatory learning is thus a path leading to fulfilment of the key principle within sustainable development, the precautionary principle.

Throughout its history, members of the human species have learnt from their own past experience, or from that of their fellow humans. This model

functioned well for thousands of years, as long as the consequences of our deeds (and errors) were space- and time-limited. However, scientific knowledge and technological development have provided us with such powers that potential errors may now lead to a severe aftermath, whether it concerns, for example, the peaceful or military use of nuclear energy, genetically modified organisms, climate change, or whatever. These facts denote an essential need for us to learn, not only from the past, but also from possible futures, as well as a further requirement that we behave and act in line with what we discover.

This “forgotten“ requirement should become one of the corner stones of the sustainable development concept. Already Max Weber pointed in his classic work “The Protestant Ethic and the Spirit of Capitalism“ (Weber, 1950) to the Protestant ethic and its influence on the development of capitalism in Europe and North America. People (“human resources“) focused on the future, asceticism, hard work and entrepreneurship as the essential preconditions for long-term prosperity and development. The postponement of current consumption, saving, investment, all with the vision of God’s salvation after this life would offer a typical example of future-oriented thinking that determines our current behavior and actions. The opposite is the attitude of a person or whole communities that live only for the day without caring about the future. For some, a full refrigerator is enough for a feeling of security; without any vision of the future. Others live from paycheck to paycheck and if they do not make ends meet they usually prey on others in a variety of ways. If the number of such people exceeds a critical number, whether in family, community, ethnicity, or state, it is difficult to expect the arrival of prosperity and sustainable living.

Conclusions

For generations we have been used to behaving in line with the pattern “trial – error – experience“. Our present situation is much more complex. We have the power and possibilities to realize things that will affect, not only family, community or region, but also the development of nations and the entire world. (For example, when speaking about the effects of global warming on the Earth, we can note how present anthropogenic activities are behind most of the past, recent and future changes.) Moreover, the relation between cause and effect is not usually clear. Whether our activities affect the climate system or, for instance, the ozone layer in the stratosphere, will only show in the long term and it is extremely difficult to predict what will happen and where. Still, we cannot cease searching for the answer because otherwise we would be in the dark, behaving like children incapable of realizing the consequences of their actions.

It is not within human capacities to forecast a definite future. Science cannot and most probably will never be able to predict the definite future of

humankind and human society. In terms of science, we can only explore and study future opportunities and dangers (or a range of possible futures) that could occur under certain conditions. These images of possible futures may help to make our present decisions more qualified and responsible.

Most probably the United Nations Conference on Sustainable Development (Rio+20 Conference) is not going to change present unsustainable development and trends. Therefore before we replace in Rio de Janeiro or later the ambitious (and not achieved) Millennium Development Goals by even more ambitious Sustainable Development Goals let us first try for a better rethink of the concept of sustainable development (or sustainable living), and ask at least three fundamental questions: What do scenarios for our future really look like? What are future risks and opportunities? And how can we outline possible measures which go, as Thomas Schauer (Schauer, 2010) says “beyond present cosmetics”? What can we do as individuals as well as communities for a better future by 2015 and beyond?

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REFLEKSJE NA TEMAT ZRÓWNOWAŻONEGO ROZWOJU
– WYZWANIE DLA PROCESU PO RIO+20

Era przemysłowa przyniosła wyższą jakość życia odzwierciedloną w lepszej opiece lekarskiej i edukacji, dłuższym oczekiwanym trwaniu życia, etc. Jednakże, oprócz niezaprzeczalnych korzyści, stała się przyczyną wielu problemów współcześnie przybierających proporcje globalne.

Globalne problemy ludzkości są przedmiotem intensywnych badań od lat 1970. Raporty Klubu Rzymskiego i inne globalnie ukierunkowane raporty z lat 1970. i początku lat 1980. pokazują, że wykładniczy wzrost ludności i konsumpcji w ramach ograniczonego ziemskiego ekosystemu nie byłyby zrównoważone w dłuższym okresie. Dlatego w 1983 r. powołano Komisję ds. Środowiska i Rozwoju ONZ, powierzając jej zadanie zbadania możliwości rozwoju ludzi i narodów przy zachowaniu funkcjonujących ekosystemów i zdrowego środowiska. Wynikiem włożonego wysiłku był raport pn. *Nasza wspólna przyszłość* opublikowany w 1987 r., a kluczowym terminem stał się „zrównoważony (trwały) rozwój”.

Pojęcie zrównoważonego rozwoju ewoluowało przez 25 lat, ciągle jednak jest wyjątkowo niejasne – wynika to ze sposobu, w jaki ujmuje i odpowiada na złożone problemy globalne. Ján Topercer (Mederly i inni, 2004) scharakteryzował główny słaby punkt koncepcji zrównoważonego rozwoju następująco: „Zrównoważony rozwój zakłada rozwój, który zapewni przyszłym pokoleniom zdolność zaspokojenia swoich potrzeb patrząc z perspektywy dzisiejszej generacji. Takie pojęcie rozwoju jest bardzo pożądane, dając przewagę zaleceniom nad predykcją. Nie ma jednak wiarygodnych podstaw do sformułowania zaleceń, z poniższych powodów.

- Idea uniwersalnej hierachii potrzeb nie została wystarczająco udokumentowana empirycznie, w odniesieniu zarówno do przestrzeni (geograficznie), jak i – być może bardziej – w odniesieniu do czasu;
- Nasze standardy, co jest optymalne i pożądane, zmieniają się w czasie;
- Trudno uświadomić sobie obecne potrzeby i kompetencje (uprawnienia) do zaspokojenia ich;
- Jest wyjątkowo trudno uświadomić sobie i wyznaczyć warunki brzegowe i zmienne, jak również ich progowe wartości – kiedy zrównoważony rozwój ekosystemu może stać się niezrównoważony;
- Zrównoważony rozwój trudno konceptualizować, ograniczmy się zatem do podania weryfikowalnej hipotezy i na jej podstawie skonstruujmy teorię zrównoważonego rozwoju, która w rzeczywistości nie istnieje.”

Chociaż pojęcie zrównoważonego rozwoju jest nie doskonałe i nie jest teorią naukową, dotychczas nie ma nic lepszego, co służyłoby poszukiwaniu odpowiedzi na ważne problemy w skali globalnej.

Szukając podsumowania głównych idei w różnych definicjach zrównoważonego rozwoju, warto odnieść się do czterech podstawowych wymagań generalizujących.

1. Wymaganie (żądanie), aby wszyscy ludzie na Ziemi mogli zaspokoić swoje (przynajmniej podstawowe) potrzeby.

Są problemy ze zdefiniowaniem elementarnych potrzeb ludzkich. Pożywienie, woda, ubranie i mieszkanie (schronienie) są potrzebne do przetrwania, ale samo przetrwanie oczywiście nie jest opcją długoterminową. W krajach rozwiniętych z pewnością nie do przyjęcia jest sytuacja, gdy zaspokajamy tylko najbardziej podstawowe potrzeby umożliwiające przetrwanie. Lecz gdzie jest granica ludzkich potrzeb? Prawdopodobnie w „nieskończoności”. A jakie są granice uzasadnionych potrzeb ludzkich, i czy różnią się one w czasie i przestrzeni?

Bardziej logiczne i adekwatne wydaje się uwarunkowanie zaspokojenia potrzeb człowieka od respektowania pojemności ekosystemów – tak, aby zachować wartościowe naturalne cechy i bioróżnorodność dla obecnych i przyszłych pokoleń.

2. Wymaganie (żądanie) odnoszące się do praw przyszłych pokoleń do zaspokojenia ich potrzeb.

To jest nowe wielkie wyzwanie. W przeszłości różne grupy mieszkańców Ziemi (nie wolnicy, chłopci pańszczyźniani, narody kolonialne, etc.) sięgały po przemoc, aby dobrać swych praw. Obecnie sami powinniśmy respektować prawa tych, których jeszcze nie ma, ale będą – naszych dzieci i wszystkich przyszłych generacji.

3. Wymaganie (żądanie), aby respektowane były prawa innych istot żywych.

To także wielkie wyzwanie, któremu poświęcano niewiele uwagi w XX w., kiedy ludzie „ujarzmiali” naturę. Czy rodzaj ludzki ma wykorzystywać dominującą pozycję wśród innych istot żywych i działać jako „pan stworzenia”, czy raczej powinien być odpowiedzialnym menedżerem planety? Czy powinniśmy traktować inne gatunki jak równe nam, czy też różnie, zgodnie z miejscem jakie zajmują na drzewie ewolucyjnym?

4. Wymaganie (żądanie), aby uczyć się z przeszłości.

To żądanie nie jest następstwem podanych wcześniej definicji, lecz jest niezbędne, jeśli mamy mówić o rozwoju zrównoważonym. W czasie swojej historii, ludzie uczyli się na przeszłych doświadczeniach – własnych lub innych ludzi. Ten model dobrze funkcjonował przez tysiąclecia, tak długo jak konsekwencje naszych czynków (i błędów) były ograniczone przestrzenią i czasem. Jednakże, wiedza naukowa i rozwój technologiczny wyposażyły nas w taką moc, że potencjalne błędy mogą obecnie prowadzić do poważnych następstw. Konieczne jest więc uczenie się nie tylko z przeszłości, lecz także ze spodziewanej przyszłości oraz odpowiednie zachowanie i działanie.

Wyniki Konferencji nt. Zrównoważonego Rozwoju ONZ (Konferencja Rio+20 w czerwcu 2012 r.) nie zmieniają obecnego niezrównoważonego rozwoju i tendencji. A zatem, zanim zastąpimy ambitny (i dotychczas nieosiągnięty) Milenijny Cel Rozwojowy (*Millennium Development Goals*) jeszcze bardziej ambitnym Zrównoważonym Celem Rozwojowym (*Sustainable Development Goals*), możemy spróbować lepiej przemyśleć koncepcję zrównoważonego rozwoju (lub zrównoważonego życia), stawiając przynajmniej trzy fundamentalne pytania: jak wyglądają scenariusze naszej przyszłości? jakie są przyszłe zagrożenia i możliwości? oraz co możemy zrobić jako jednostki, a także jako społeczności, dla lepszej przyszłości w 2015 r. i później?