

# THE LIMITS OF SUSTAINABLE DEVELOPMENT

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In the last few years it is usual that the affected environment and the entire surroundings of man are understood as a demonstration of the political system: us and them; a black and white treatment of nations and individuals; technocrats and protectors of nature; rich and poor people; fed and hungry people.

All the time we have to ask the question why, while we are trying to explain any phenomenon - word as well as activity. Why do individuals, communities, states and the whole of mankind behave in this or that way? We have to ask ourselves again and again whether man is a part of nature or its master and ruler as it is mentioned in the Bible, in the first book of Moses, Chapter 1, verse 26. If man is a master of nature does it mean that he can use up nature? As its owner, does he have the right to destroy it ruthlessly and not allow anybody to touch this possession and, hence, restrict its usage? It is indisputable that self-reflection and the realisation of the need for sustainable development does not only have an ethical but also an existential and materialistic dimension.

According to psychologist A. H. Maslow<sup>1</sup>, the basic interest of man is the satisfaction of his physical needs from which the most important are the physiological needs: water, food, shelter, personal and collective safety, protection against injury, possibility of self-defence or escape if attacked. Under the condition that these needs are satisfied, man starts realising his social needs: family, friends, country, as well as the need to love and to be loved, and be recognised by society. Only at the top of this "values pyramid" are the psycho-logical needs, such as self-realisation and aesthetic feelings (Figure 1).

In other words, just as a man already fed and protected can be thinking about spiritual matters, technologies and the production activities of society, including agricultural technologies can be divided into two groups: (a) obligatory technology for survival and (b) desirable technology for wealth.<sup>2</sup>

Among the key industries and technologies are the ones that secure sustenance. Experts have formulated a principle for the security of the sustenance of the world population. This means that the practical policy of each state must lead to the security of the inhabitants' sustenance. Technologies or procedures range from classical, such as usage of soil and other natural sources, to modern, such as improvement of plants, breeding and improvement of animals, and the most updated bio-genetic and bio-technological procedures.

The world resources for food security, energy and sewage production would last, taking into account the present living standard in the Slovak Republic, for 4.5 to 5 billion people and, taking into account the present living standard in the USA, for approximately 1 to 1.5 billion people, which corresponds to only half of the present world population. However, in September 1994, at a Conference about the world population in Slovakia, the program for world population stabilisation was accepted, stating that the population should be stabilised at the level of 9 billion. This is, according to the experts, the maximum number of people for whom sustenance could be secured by the Earth's natural resources.

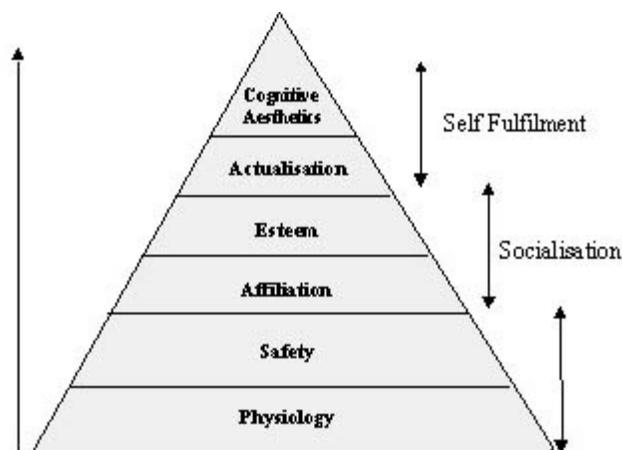


Figure 1

In the developing countries, where the biggest lack of food is, we can observe two kinds of so-called "explosions" that make the establishment of sustainable development very hard. The first is known as the population explosion and it is rooted in the absence of basic social care for the poorest inhabitants. It is very common for families with many children to send them to work at an early age to earn money, and sometimes to

beg or steal money too.

The second, less known or often ignored, but not less important explosion is the "explosion of expectations." This could be a real danger for the part of society that is living in wealth at present. People living in the margin of civilised society long to live the way they see on TV screens and, at this point, a dilemma that cannot be solved develops: the poor people want to live a better life but the rich will hardly abandon, voluntarily, even just a bit of their wealth. This kind of gesture would be considered a loss, because people do not like giving away what they are used to. It would be naive to expect that the richest countries of the world would voluntarily slow down the development of their own wealth to help solve the problems of hunger in the world. These expectations were stated by Andrei Sakharov nearly 30 years ago, but they never found any response among the world leading experts. Humankind has to use all the means available for the purpose of world population stabilisation, including the influence of the church. If we look critically at the continually increasing world population, it seems, that humankind fulfils God's words, spoken at the moment of Creation: "Breed and multiply, spread all over the Earth and conquer it."

Many false ideas in the understanding of sustainable development are a taboo. These ideas are also related to agriculture, which is the main producer of food and fulfils the most elementary needs of the population. It is false and misleading to be talking about the over-production of food when most of the population is still starving. We very often forget about the social part of agricultural production that is able to absorb workforce and help decrease the number of unemployed inhabitants. This aspect should be taken into account especially in developing countries, which have a very low share of industry, and, up to a certain level, in the post-communist countries that are going through a transformation process and are fighting with unemployment due to stagnation in industrial production.

The technologies of the future must be generally less energy demanding, but this does not mean that the question of new sources of energy production has been solved or is unimportant. The question of energy will be of high importance also in the future, not only in reference to the security of mankind's sustenance but also in reference to another important role. From the point of view of sustainable development, the incineration of fossil fuels is not a solution, not only because of the greenhouse effect and the problems with the ozone layer, but also because the fuel resources could soon be depleted. Not all countries can produce enough electric energy by using their rivers. Crude oil and gas will one day be depleted and this is the reason, even though there are many protest actions all around the world, why production of electric energy by nuclear power stations is still a perspective. We cannot agree with burning straw, suggested by experts as a replacement method, due to the fact that the energetic potential of straw ploughed into the soil is many times higher and more useful for the population.

Energy, as well as food, is considered to be a strategic resource. This matters for the market of ecologically relevant products, because with a lack of food and energy everything can be sold. The limiting factor for sustainable development is also the production of sewage. In connection with this, it is suitable to mention a genial remark by German innovator, Karl Bosch, who, when presented with an efficient and cheap technological process of chemical synthesis by two young engineers, asked: "What will you be doing with the sewage sirs?" After they had thought about a possible solution, it became clear that the proposed process was not so cheap as it seemed to be at the beginning.

From the point of view of sustainable development, technology without sewage as a side product could be indicated as the technology of the future. By the same token, technologies with the production of very little sewage or those that use sewage as a resource for production, can also be included in this definition. The most urgent question of today is the reduction or obstruction of sewage production. Any form of sewage liquidation is in a way an oppressed process, to which we were condemned by nature, because mankind started realising this problem too late. Technologies of sewage liquidation or its reconstruction are different, from very simple to very modern and demanding, but it is very common that these processes are very expensive. Furthermore, following water purification processes, some concentrated residues remain in the atmosphere and these are not suitable for the production of compost, used for soil and plants, due to the presence of toxic elements in these residues.

Man is a part of nature and a component of living Creation. If the Bible says that God created man in His image, the main reason for this was to give man the brain to prove to the rest of Creation that he is able to use this brain in the right way, not misuse it. Nature does not have any auto-regulative mechanism that would secure harmony with nature and the sources of sustenance in proportion to an increase in human population and its unlimited demands. If man, at the onset of his existence, approached nature with the purpose of future survival, it was only for his own comfort.

The departing century will leave us not only with a whole range of local, regional and global problems, but also with a whole range of expectations and hopes. The most civilised states have already entered the new, post-industrial society, that is very often called "the information society." A society governed by scientific knowledge, research, new modern technologies and efficient techniques can guide population development and play a key role in this development.

In the 1980s and 1990s, the world triumph of the market economy was appealing to mankind. This gave an impulse for the globalisation of the world economy, but, up to now, it has not shown any way to harmonise the necessity for a solution to global problems with the principle of competitiveness, that is very own to the market economy. From the point of view of the weaker economies, the process of globalisation is understood as a process of their liquidation by the stronger ones. This is the main reason why this process is not accepted as an essential way to solving the global problems of mankind, including the problems of sustainable development.

Globalisation of the world economy running on the principle of "the poor countries export raw materials and cheap labour force and the strong ones will take care of final production" is false and leads to the deepening of the present disproportion. Eventually, this will lead to global environmental damages and to transboundary social disturbances. In this way, environmental problems will persist and be aggravated, and the social injustice, inside a society, from these world-wide measures will be deepened too.

On the other hand, the international competition and rivalry between private entrepreneurs and national economies is stronger, in an effort to secure industrial growth. This will heighten the social and ecological imbalance in individual parts of the world even more. Any attempt to solve the global problems of mankind needs not only declarations but, mainly, wide-spread and engaged international co-operation and solidarity. If the most modern technologies do not respect solutions to the global problems but see only profit, we can expect the endangerment of all life on Earth. This is an appeal and a threat to mankind's future at the same time.

### **References**

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