Economics of Agriculture SI - 1
UDK: 502.131.1

SUSTAINABLE DEVELOPMENT – CONDITION FOR THE SURVIVAL OF THE PLANET

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Abstract

Society's desire for continued progress has found in the economic development the necessary support to foreshadow the future of human evolution. This attempt is another characteristic of people, to try to guess the direction, purpose and manage all of this at individual, community and nation level. This has created a range of possible options for an economic future, differentiated after the author's philosophy, simplifications made in the choice of variables etc. This shift of emphasis from man to nature was the result of limited intake of natural resources proving in the process of human evolution, continued growth of world population, extention of environmental pollution process. New limiting or pessimistic concepts of economic development appeared, which foreshadow the deep crisis that threatens civilization today. The man's complex thinking systems at the beginning of the third millennium should also outline the bi-univocal nature-society dimension.

Key-words: sustainable development, the new economy, economic growth, ecology

The concept of sustainable development – brief history

Prediction regarding the evolution of society was a man concern as at the individual, city, and nation level and a focus on the philosophical level, long before the relationship man-environment-economy in the context of the human society development became an stuying issue. Since the eighteenth century, thinkers reported the limited natural resources and the need, given the increasing population of Earth, to maintain a steady state between the natural resources and environment, stable on the

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long-term, as beeing a prerequisite for any development.

Early twentieth century marks the emergence of concerning of the neccessity to protect the resources and promote through various means their rational use . Although scientists have been sided, over time, often diametrically opposed positions, oscillating between pessimism and optimism in the Planet future assessment, in the recent decades, the need for major changes in world economic order by reducing disparities between rich and poor countries by profound social, political and institutional development in developing countries, became a must (Bruntland, 1987).

„The Club of Rome" begins to report the disparities between the rising industrial civilization and its impact with the planet's resources and environmental quality.

Five factors were considered essential for economic development: population, natural resources, industrial production, agricultural production and pollution. It was noted that two of them are positive loops of opposite connections of the economic system (stimulates exponential growth) and three other factors could be negative loops - development restrictions such as pollution, natural resource depletion and hunger (poverty).

The scheme in which are inserted the five types of reverse connections easily lead to the observation that the management of such a system is primarily the control of population growth, and the harmonisation of the output growth with the resources potential, in the long term.

The report's conclusion, expressed concisely by „stifling economic growth," or imposing „zero growth" has not satisfied the expectations of scientists or the representatives of less developed countries at the UN Summit meeting, in Stockholm in 1976.

Another interesting conclusion finds that the development of poor countries on the model of industrialized countries would stronger request the Earth's natural resources.

"Mankind at the crossroads" report, coordinated by M. Mesarovic and E. Pastel, proposes a compromise between linear growth and exponential growth by introducing the notion of „organic growth". The authors highlight the explosive accumulation of factors and the existence of the crisis in the economy phenomena. Inequalities between geographical regions and countries, economic and social criteria, must be managed differently, according to their level of development.

The critics of the Pastel & Mesarovic model warned that the model did not reflect the differences in the social order and its own value systems.

Third Report of "The Club of Rome" (Jan Tinbergen, 1978) focuses on the resolution of the sixth special session of the UN General Assembly in April-May 1974, which proposed "the establishment of an international economic order". The report noted that "the political independence does not necessarily lead to an economic independence, and without economic power, the independence of a nation is incomplete and uncertain".

The Fourth Report of "The Club of Rome" entitled "Time to get out of waste", authors Dennis Gabor and Umberto Colombo, presented a rigorous analysis of present and future natural resources, focusing on their irrational management, especially in industrialized countries.

The reduction of the industrial technologies, the saving of resources, promotion of production and consumption behavior compatible with the environment are suggested solutions to the reduction of resources and environmental conservation need (Rădulescu et al., 2010).

In 1968, in a thematic UN General Assembly, is the first concern for environmental protection issues. Later, in Stockholm in 1972 takes place at the initiative of U.S. and Scandinavian countries, the Conference on the Human Environment (ECO 1), recommending and organizing a UN Environment Program, an event that will become real as the United Nations Environment Programme - UNEP. It also takes place the first World Climate Conference (Geneva 1979) and also the foundations of an international policy consensus for this purpose.

In the early '80s, the UN has asked former Chancellor Willy Brandt to conduct a study on "North-South, a program for survival", published the same year that identifies the current crisis situations, the most serious and urgent to solve is considered the reducing disparities between the countries of North and South, between the rich and the poor.

Commission on Environment and Development proposed UN General Assembly in 1983 to discuss the report "Our Common Future", prepared under the direction of former Prime Minister Gro Harlem Brundtland, who has the authorship concept of "sustainable development".

Essential components of a strategy for a sustainable development are generally considered the following: stabilize the population; reducing dependence on oil; development of renewable energy resources; soil conservation; protection of Earth's biological systems; recycling.

Closer today are the following reformulations and additions: resizing the economic growth, having as a model a more balanced distribution of resources and emphasis on quality production side; eliminate poverty conditions in order to meet the essential needs for jobs, food, energy, water, housing and health; controlled population growth; preserve and enhance the natural resources, biodiversity of ecosystems, monitoring the environmental impact of economic activity; reorientation of technologies and risk control implementation; decentralized forms of government, increasing participation in decision making; harmonization of the decisions regarding the environment and the national economy with the international plan.

Many experts debate around the concept, as seen from the number of the definitions and the theoretical interest. Detailing these issues makes Miron Popescu from Bucharest Polytechnic University in "Energy Management Treaty", published in 2005.

The two interpretations could be avoided if sustainable development would be focused on human forces so that the correct definition in the European Union's vision of sustainable development is "the capacity of all human communities, including those deprived, to satisfy the basic needs in terms of housing, drinking water, food, health and hygiene conditions, participation in decision making, social, cultural and spiritual. "

From civil society, "the green movement" is expected to develop a concept supported by the UN General Assembly to be taken into account in the preparation of national development strategies and economical policies, to look at the current challenges to the economic development.

Alternatives to the concept of sustainable development

Other institutions, organizations, independent researchers, in addition to the above, have signed the „campaign" for deciphering the future world economy and find a paradigm to guide mankind, nations and individuals to be guided to this future, that must be removed from uncertainty and must be made possible.

By far, stands an institute dedicated to the study of global issues, namely the World Watch Institute, led by Lester R. Brown, that became an important center for monitoring the threats to economic development, human society and environmental quality. Since 1984, it published an annual report entitled "State of the world", in which are the results and proposed solutions in their studies. Favorite topics addressed are: irrational use of resources and environmental deterioration, energy chapter; population: twenty-two dimensions of population policies, malnutrition; environment: the desert expansion, loss of fertile land, species extinction, acid rain; first steps towards a sustainable society: recovery, reuse, recycle; modern urbanism: „cities growth", air pollution; clima şi viitorul pădurilor; climate and forests future.

After the year 2000, Lester R. Brown founded a new institute - Earth Policy Institute - in which the concept of "eco-economy" was launched, with the creation of a subtitle for our planet: Eco-economy is trying to remedy, to replace the current economy that was out of sync the ecosystem that it depends. It recognizes that the economic theory and economic indicators do not reflect how the economy undermines and destroys the planet's natural systems.

The concept requires the establishment of the new proposed frame of economic policies based on ecological principles, and economists and ecologists work together to shape this new economy.

Transforming the current economy - distinct from the environment - in one that can support progress is conditioned by a revolution in our economic thinking and recognition that the economy is part of the planetary ecosystem (Popescu and Rădulescu, 2010).

In view of applying the concept to the realities of the twenty-first century, two studies were developed: "Plan B 2.0 - Rescuing a Planet Under Stress and a Civilization in Trouble" and "Plan B 3.0 - Mobilizing to save civilization", both studies completing plan A.

Plan B 2.0 suggests the following courses of action: eradicating poverty and stabilizing population, restoring the meals a growing population, climate stabilization, sustainable urban design, building a new economy.

Plan B 3.0 finds the aggravation of the problems mentioned above, but most urgently to be addressed are energy and food security deterioration, climate change,

effects of temperature increase, the shortage of water resources, natural systems at risk, the economic effects of large economical differences.

Lester R. Brown outlined a budget for combating poverty, ensuring access to education, eradicate illiteracy, basic medical services and to control reproduction through family planning, which requires financial funds of 70 billion dollars. Achieving the other goals set out in Plan B 3.0 for restoring the Earth would cost another 95 billion dollars, so a total of 165 billion dollars or 16.5% of the total of about one trillion dollars from the annual military budget of expenses recorded in each year in the world.

The human-environment-economy relationship

From a random selection and order of the approximately one hundred concepts that refer to human-environment-economy relationship, a few concepts are mentioned below, to emphasize the premises and grounds of the economic development .

The difficulty of using the logical models, mathematical, tracking developments in national and world economic space is not only methodological, but new variables appear in the equations - many incompletely known, that can change the hierarchy of the known variables.

On the other hand, the last 50-60 years researchers have focused their attention on the triad: human-environment-economy, and this no longer satisfactory, the information technology and technical progress is added.

"The new economy" means changes in the essence of the concept. Researchers have highlighted the relationship between the economy and the social complex, and allowed the economy to evolve as a science, away from the social human nature.

But the term economy could not develop alone, it got the political economy where the economy is taken by the political elements. Subsequent theoretical developments have given shape to the normative dimension of the political economy based on capital accumulation and led to the neokeynesism and neomonetarism, the development of neoclassicism, which are found in the free market fundamentalism.

The new economy changes the functional structure (Figure 1) and its object: the joy of living is replacing the obsessive objective of materialism, the political interest is replaces by the spiritual criteria, of the human being.

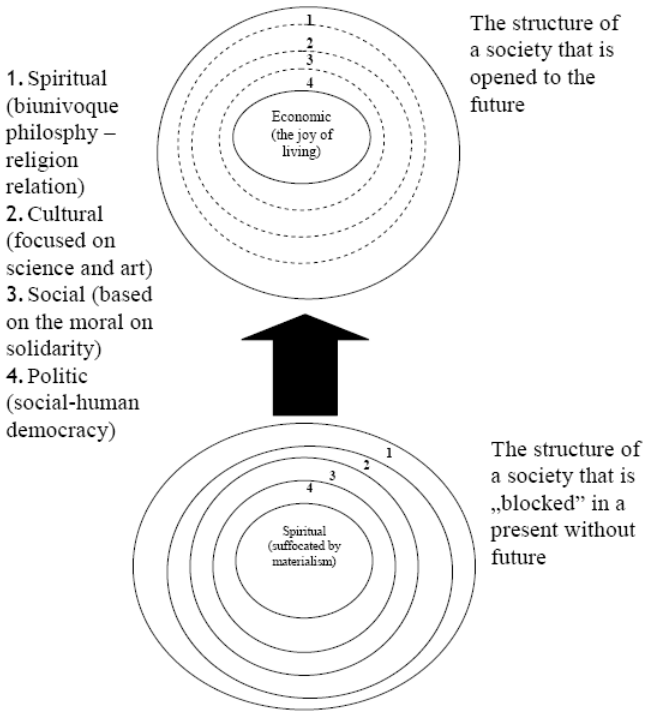
It is expected that the new economy will facilitate, the reintegration of the economy at a macro-economy level and mondosocial level, freeing it from the guardianship or from the political dictatorship. It can also achieve a balance between positive and normative in the new social economy.

And finally, the new economy makes the transition from today's society, where the spiritual matters are considered minor, in a society where economics replaces the joy of living well - a summary of the Aristotelian ideal of N. Georgescu-Roegen desire.

The approach spectrum of the new economy is much broader than the one outlined above. There were novelties reported in the political economy, as the occurrence of a mixed economy, that allowed China PR to exceed the state of a developing country, propelling it to the top of the world hierarchy, recording growth rates of GDP of about 10% per year over long periods of time.

Functional structure of an „open to the future" human society

Fig. 1. To a future generating human society



Source: Saptamana financiara, no.976, 2009

Human development - concept belongs UNDP - calls for good governance that guarantee the implementation of a development strategy that is sustainable for the therm. Four components are essential for a sustainable human development: productivity, equity, sustainability and participation.

Prerequisite for achieving the four requirements is the concomitant simultaneous progress, to ensure economic growth for scaling qualitative aspect of production and elimination of poverty.

National government or inside government is the mechanism that enables human development as a model that will include both national interests, the identity of nation, culture, people calling and ability to adapt to world integration into global flows of products (Brown, 2008).

The concept of "human development" is the materialization of the decision of the UN Conference on Human Rights (1992) which considers that "the right to development is an inalienable human right and that is part of fundamental human freedoms. They do not concern only the person but all peoples that can exercise their full and complete sovereignty over their natural resources for social and cultural development".

According to the Preamble to the Declaration of the Right to Development, UN General Assembly in 1986, art. 1 (1), developing means a "comprehensive process of

economic, social, cultural and political that aims at continuous improvement of living standards, both in the general population, and in each individual".
Analyzing the UN definition of the development process, shows that there is no upper limit to development. In this case the lower limit would represent a fundamental need, and then the upper limit should not be dependent on natural resources?

UN avoided this statement, but if it was made, it would have been correct at a global level, but at national level it would have complications, given the uneven distribution of resources and excessive consumption of developed countries: 5% of Earth's population consumes 25 % of world energy resources, for example. It can retain the notion that improvements are needed for development, for the sake of avoiding the development of rich and developing countries, and finding the tools to ensure countries possessing natural resources and their ability to promote them in their own interest (Rădulescu, 2008).

Smart economic growth or "green" economic growth is provided in European Socialists Manifesto as a paradigm of the European economy which has the purpose not only to protect the environment, but to create new jobs in "green" technologies. It is expected that two million people will work in these new areas (Farmache and Andreica, 2010; Andreica et al., 2009).

"Entropic approach to the economy" of Nicholas Georgescu-Roegen emerges as the best illustration of the presence of the romanian thinking in the debates regarding economic development.

According to Georgescu-Roegen, a monopoly of the present generations at the expense of the future generations could be reduced in the context of any economic system based mainly on the exploitation of solar energy. But, such an economic system would continue to source from terrestrial dowry, especially with materials, which requires as a necessary first order, to avoid as much as we can, the use of social importance resources.

How can this objective be achieved? In the context of his bio-economic concept, a concept that attaches great attention to the energy used by man in his economic activities, Georgescu-Roegen propose a "minimum bio-economic program", which, despite its obvious utopian character, traces a series of viable guidelines.

CONCLUSION

1. Most concepts converge to warning the trend of depletion of natural resources, followed by deterioration of the quality and integrity of the environment and maintaining the production and consumption behavior unrelated to people's basic needs.

2. Human activities, when they manage their future, they should be of a negentropic type, calling for more scientific and technological progress, moderation and reason.

3. A third of people are living near or in poverty and are hopeful that the short or medium term solutions appear to eradicate poverty. Number of "failured" nations increase, and inequalities between rich and poor is widening. In common parlance, these inequalities form the "gap" - a term that wants to show the difficulty of passing

from one side to another socio-economic condition of the population.

4. The current model of civilization, based on natural resources consumption, reducing bearing capacity of natural ecosystems, the consumption of fossil fuels, the lack of ideas, the lack of real solutions to control the number of inhabitants of the Earth is unsustainable. Unfortunately, it is the ongoing and is followed by emerging countries like China PR, India, Brazil, which will exacerbate some dangers for the future of Earth.

5. The emergence in the economic and social world of novelties such as information, biotechnology, globalization, weapons aimed at climate change or human behavior, altered food quality, etc.. do not facilitate the predictability of the future and adds new hazards to man and nature.

6. There are some type of pessimistic concepts, falling directly into the category of survival, providing arguments that deserve to be taken into account.

7. The variability of the concepts is explained by the main criteria taken into account (for a variety of other criteria), the authors options focusing between centralising the analysis on man, environment or economy. Their integration into a unitary conception, would find the desiderata for a new economy.

REFERENCES

1. **Andreica, M., Nicolae, D., Andreica, E.M., Todor, L. (2009)**, *Working out forecasts on the Basis of Statistical Extrapolation Principle*, Economic Computation and Economic Cybernetics Studies and Research, Nr.2, Vol. 43, pg.85-108.
2. **Brown, L.R. (2008),** *Planul B 3.0. Mobilizare generala pentru salvarea civilzatiei*, Editura Tehnica, Bucuresti.
3. **Brundtland, G.H. (coord.) (1987),** *Our common future*, Oxford University Press, Oxford.
4. **Farmache, S., Andreica, M. (2010),** *Improving Stock Management Assessment Instruments*, Metalurgia International, Nr 3.
5. **Popescu, D., Rădulescu, C.V. (2010),** *Behavioral influences in decision making*, Quality - access to success, vol.11, nr.10, pp.12-15.
6. **Rădulescu, C.V. (2008),** *The quality of agricultural production and its effects on the economic and financial results of a sustainable agricultural holding,* Quality – access to success, 3, pp.38-44.
7. **Rădulescu, C.V., Bălu, F.O., Maricescu, L.D. (2010),** *Implementation of sustainable banking principles in banking risk management,* 17th International Economic Conference The Economic World Destiny: crisis and globalization?, 13-14 mai 2010, Sibiu.