

SUSTAINABLE DEVELOPMENT AND ECOLOGICAL EKONOMICS AS BUSINESS PARADIGM

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Abstract: *The philosophy of economic development from the beginning of the third millennium is to establish sustainability on the principles of the New Economy for all the resources involved. The content consists of establishing changes in production and consumption, in which resource utilization, investment flows, technological development, organizational restructuring and institutional changes are in harmony. These changes will enable current generations to meet their needs and open the possibility of future use of natural and built potentials to create their needs. To bring economic development to the line of sustainability of the environment and economics become partners in achieving one goal. Ecological economics is transdisciplinary, pluralistic, integrative and more focused on seeking compromise than on the means to realize it. The Domain of Ecological Economics is the overall interaction between economic and environmental potential. In this paper, sustainable development will be achieved by establishing a balance between resource consumption, consumerism and the ability to revitalize natural systems, and by establishing a steady growth of eco-efficiency consistent with the management's performance.*

Key words: *sustainable development, ecological economy, new economy, eco-efficiency, ecosocial system.*

1. Introduction

Although the recent euphoria and techno-enthusiastic enthusiasm for the latest technological ups and downs (the so-called 3rd technological revolution, the "third wave", the "information society", the "digital society", etc.) have significantly subsided, expectations of new technologies are still very high. New utopias or at least new legitimate hopes for a better (better) life. Unprecedented achievements of the latest technological achievements, in almost all areas of human creativity, especially in the last three decades, indicate at the same time serious limitations of previous development concepts and insufficient criteria for evaluating and evaluating the achieved development. Factorial understanding of technology, economic and quantitative (so to speak quantum) measurement of only visible effects in the basis of deep transformation of modern civilization, has somewhat obscured or set aside often much more significant effects due to which neglect can even question all other effects.

In fact, the technological development of modern civilization has reached a stage when different development goals intersect in a dramatic way. Conflicts of economic and environmental goals are certainly of the utmost importance. And only a few decades ago, only the most knowledgeable barely felt that ecology would significantly affect our overall, not just economic, behavior. And that really happened and today no one responsible can think that this is a passing fashion and some kind of world hit theme and a so-called mess without real coverage.

Therefore, the understanding of sustainable development is gradually expanding with the interconnection of sociology, economics and ecology in the so-called. a magic triangle of development (Figure 1).



Such a triangle for every civilized man (greedy, insatiable, too rich, etc. are less and less, because they have lost their sense of proportion as one of the key features of culture and civilization) should be a minimum not only obligation, but a historical opportunity and space to prove to be a humanist and a true globalist to whom the whole world is truly important, not just 'own' i.e. the local part. Therefore, if we want to look to the future, we must stand firmly on the so-called "tripod". If only one "leg" is missing, the picture of the future will be dangerously defective, distorted and incomplete, if at all possible. SAPIEN-TI SAT!

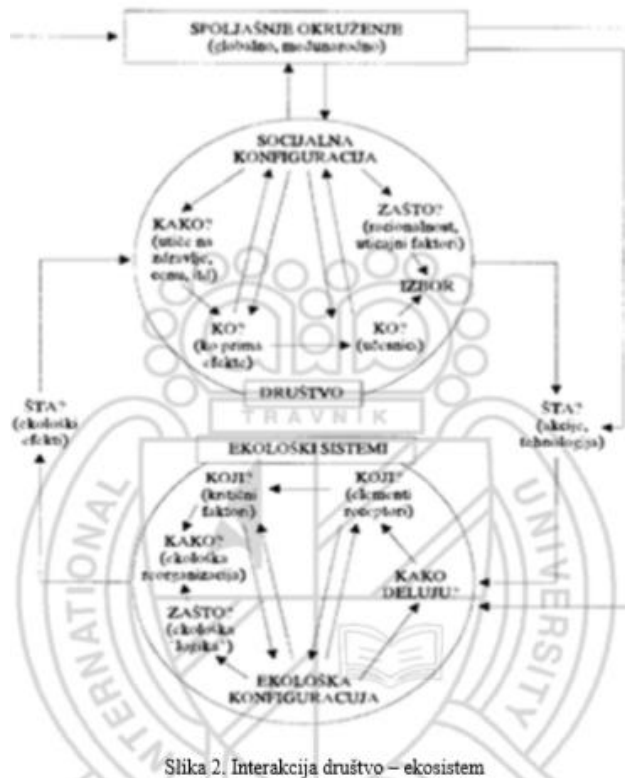
Economic security includes: 1. increasing productivity and production of useful goods and services; 2. poverty reduction in the world; 3. ensuring a fair distribution of goods and continuous improvement of equality in all segments of the economy; 4. insurance of employment, wages, new investments, trade and distribution of goods; 5. raising innovation and entrepreneurship.

Social justice includes: 1. ensuring and encouraging cultural diversity; 2. maintenance and support of institutions of social systems; 3. supporting social justice and gender and racial equality; 4. enabling participation in decision-making of all segments of society; 5. Ensuring equal educational opportunities for all.

Ecological balance includes: 1. ensuring and maintaining genetic diversity; 2. supporting biological production; 3. developing resistance to negative impacts on the environment, as well as encouraging and enabling recovery in the event of negative impacts; 4. ensuring a clean environment and a stable climate; 5. encouraging eco-efficiency in all parts of society. Endangering nature and its reproductive capacity is only

one, but not the only, example that points to the dangerous pitfalls, detours and short-sightedness of the technocentric and productive "philosophy" of development. Therefore, we share the opinion that the new approach to development must be based on a new perception of both science and technology, predominantly within the new ecological instead of the previous techno-economic paradigm. Although in that sense it is necessary to redefine the whole set of previous categories, principles, criteria and procedures, which we cannot do on this occasion, but only in current contexts, but we can announce more extensive pleas for a new holistic and favored anthropo- or humanocentric human situation, and its environment in the processes of modern civilization vortices. In fact, no matter how much we still believe in future development as a function of increasingly directed (though not always autonomous) development of science and especially technology, we are even more convinced that the time has come to reevaluate possible ranges within the existing development paradigm. And all this with the aim of replacing it with a new paradigm in which science and technology will be more in the function of optimizing the quality of life than in the function of maximizing economic efficiency. In fact, the economic, humane and environmental criteria are complementary, but all, or almost all, of the development strategies applied so far have not taken this into account enough. Therefore, modern humanity is facing global challenges and the choice between the penetration of existing content (industrialization, urbanization, automation, etc.) development in the still undeveloped (according to current criteria) parts of the planet, or significant changes in that content, at least at the cost of slowing growth, that current resources of nature can be preserved for use by future generations (sustainable development). Fascinated by the irresistible appeal of economic growth and material growth, modern civilization has either overestimated or underestimated the objective possibilities of the natural environment to withstand such an inherent Skorojević onslaught of increasingly ambitious generations of producers and consumers. philosophical

foundations and refresh them with new visions and solutions. In short, it is necessary to find more or less satisfactory answers to some key questions arising from the socio-ecological nexus (Fig. 2, Gallopin, Gutman, Maletta, 1989) of which we are not only witnesses but also active participants.



Slika 2. Interakcija društvo – ekosistem

The essence of the new, changed in content, and expanded in scope (planetary), logic of valuing everything that has been done in the previous industrial civilization, everything that we are currently doing, and especially what we intend to do, comes down to the now famous but relatively new the phrase: "technology proposes - ecology decides". If our current economic activity on the one hand is a material precondition not only for survival but also for the emergence of a future better, on the other hand this activity is a historical confirmation of the relationship with the previous one, whether we radically break with it (eg technical-technological upswings) or nurture continuity (e.g. nature conservation). After all, without discontinuity there is no continuity, and vice versa, which is best shown by technology and man's eternal struggle for different (diversity), more and cheaper (economy),

better (quality), faster (productivity), more beautiful (aesthetics), etc. which provides it with sustainability and development as a condition and measure of sustainability.

Sustainable development and sustainability of development are revealed as the most urgent global problems and for almost four decades, since they were included in the United Nations Environmental Program (UNEP) in 1972, important areas of research in many sciences (economics, ecology, technology, biology, geography, sociology) remain. legal and political sciences, as well as many others), and areas of national state policies as well as numerous international initiatives and endeavors. The past 37 years have marked a fundamental breakthrough in the true philosophy of globalism and, if not yet complete planetary but certainly ever wider regional, ecologically forced, connecting and transnational integration of ever wider parts of the world, which is undoubtedly a civilizational shift of lasting significance and enormous perspectives. Mankind finally discovers that Nature does not know and does not recognize any borders (state, national, linguistic, cultural, religious, etc.), but still does not know enough how to get rid of its own narrow-mindedness, arrogance, invulnerability, selfishness, superiority complex and all others. limitations that emerge as a de facto lack of vision and mission in the rapidly changing modern world.

Ecology as a science of survival, by daily warning of the growing risks of increasing discontinuity and the dangers of their excessive or excessive duration, also has the role of human conscience, helping it to "save its soul" before the court of future generations. Today, we can no longer be satisfied only with quantitative empirical findings on real developmental shifts compared to the previous generation, but it is far more important in civilization how much and what kind of legacy we leave to future generations. Environmental quality is certainly the most comprehensive criterion for assessing the overall development of an observation unit (country, region, enterprise, etc.) in a given period.

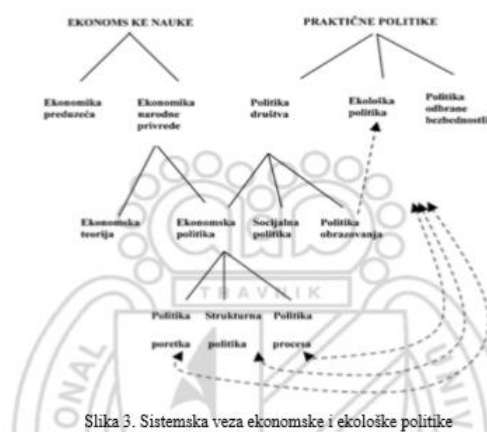
Because of all this, the concept of sustainable development leads to the much-needed symbiosis of key categories and criteria of both economics and ecology, as both are geared towards the development goals of more and more people (2050 billion people in 2050 - FAO data). for 2009) in conditions of realistically increasingly limited natural resources. In that sense, maintaining development, ie maintaining conditions for development, is not only a material precondition for the survival of present generations, but it is also an ethical issue of defending the part of civilization before future generations. In fact, sustainable development implies a balance between resource consumption and the ability of our natural systems to meet the needs of future generations. In other words, sustainable development means maintaining the Earth's capacity to provide life for each of its current as well as unborn inhabitants. It is understood that the responsibility for this lies with each current generation, which must find the best way to manage not only the available resources but also the ways of discovering and using still unknown resources.

In all this, great attention is always paid to technology as a factual stronghold of all technocentric ideologies, visions and policies, both those with optimistic and technolatric overtones, who see technology as a cure (panacea) for all "diseases" of the modern world, and those pessimistic, ie. technophobic, who again unjustifiably blame technology for all the disasters of this world, openly spreading fear of technology and resistance to it.

In short, already at this point we can conclude that it is through ecology that the real nature and essence of technology can be best understood as the sum of human knowledge, how Nature can permanently serve man, maintain living conditions.

All other determinants (development, efficiency, quality) of this simple relation: man-knowledge-nature arose during the historical development in which man increasingly aggressively ("more productively" and "more efficiently") attacked nature, always taking into account

his current needs (and interests) and less about long-term. His "tech" has always been aimed at solving practical problems of life, but such instrumentalist treatment of technology has produced such a type of social structure in which environmental degradation and endangerment of Nature can be noticed and understood only when they move so far as to become a serious threat to survival. and man as its most developed part. Because of everything, we can say that as a mental assumption of the so-called. new philosophies of development and a kind of "mental infrastructure", necessary when designing any further (r) evolution and use, especially the so-called. new / high-tech technologies - today, a new philosophy of technology is also lacking. It is necessary today as a clear and strong critical demarche to the misconception that man must dominate Nature (which is, in fact, the reverse of the notion of man's dominance over man), but also as a thought pleading for radical action to preserve the biosphere as the most important of all human needs. and thus as the best of all indicators of human development. In this sense, it is necessary to establish a new relationship between economic and environmental policy. One possible way is shown in Figure 3.



Slika 3. Sistemska veza ekonomske i ekološke politike

It is also important to point out possible ways of policy action on appropriate environmental challenges, especially from the point of view of the presence of growing environmental risks, both endogenous and exogenous. In this sense, the following four environmental policy options are possible:

- proactive, in response to small exogenous and large endogenous environmental risks;
- strategic, which represents a possible

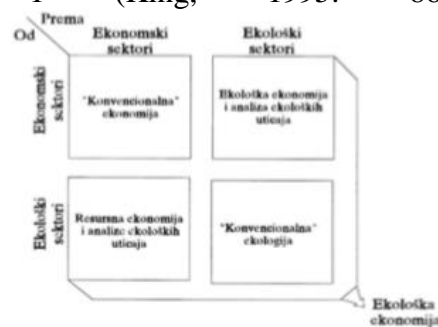
response of the company to the situation with large and endogenous and exogenous environmental risk; - reactive, which offers a solution for a situation in which small exogenous and small endogenous ecological risks prevail, and - crisis-preventive, which offers a solution for a situation when large exogenous and small endogenous ecological risks prevail.

The state, as a legal and legitimate holder of public authority, can and must, in order to protect the vital interests of its citizens, prescribe appropriate standards and norms of behavior that will be binding on all economic entities, but it is best when only the company in its content organizational culture has built-in environmental approaches. Fortunately, this is happening more and more often, but still at an unsatisfactory pace. 3. Conceptualization of ecological economy and ecological management

The greening of production and all types of business in a new way erases the boundaries between the so-called. microeconomics and the so-called macroeconomics definitely inaugurating the ecological economy as the best, most complete, and we believe in the future perhaps the only, analytical framework for assessing the success of a business, and especially production, activity. In real life, economics can only be properly divided into successful and unsuccessful, and all other divisions have only limited methodological significance. From the presentation so far, it could be seen that there can be no real and long-term economic success if ecological measures of success were not built into its realization. Today, it is becoming completely clear that no one wants or wants to pay for someone's environmental failures, which in the form of "savings" they want to turn into an economic and financial result. In short, savings on environmental costs can no longer and must not become a source of anyone's economic success, because in the long run it would mean unethical capture of other people's income.

The coupling of ecological and economic vectors of activities of individual companies and the transformation of conventional economy and conventional ecology into a unique concept of ecological economy are shown in Figure 4 (King, 1995: 84). A closer comparison of these types of economies

according to the selected criteria is given in Table 1 (King, 1995: 86).



Slika 4. Različiti domeni ekonomije i ekologije

Tabela 1. Poređenje „konvencionalne“ ekonomije i ekologije sa ekološkom ekonomijom

	"Konvencionalna" ekonomija	"Konvencionalna" ekologija	Ekološka ekonomija
Osnovni pogled na svet	Mehanistički, statički, atomistički	Evolucijski, atomistički	Dinamički, sistemski, evolucijski
Vremenski okvir	Kratak	Širok raspon	Širok raspon
Prostorni okvir	Lokalni do internacionalnog	Lokalni do regionalnog	Lokalni do globalnog
Okvir vrsta	Samo čovek	Sve sem čoveka	Ceo ekosistem, uključujući i čoveka
Primarni makro ciljevi	Rast nacionalne ekonomije	Opstanak vrsta	Održavanje ekološkog ekonomskog sistema
Primarni mikro ciljevi	Maksimalan profit (firme) Maksimalna korisnost (pojedinci)	Maksimalan reproduktivni uspeh	Mora biti prilagođen da odražava ciljeve sistema
Pretpostavke o tehničkom napretku	Veoma optimistične	Pesimistične ili bez stava	Mudro skeptične
Akademski stav	Disciplinaran	Disciplinaran	Transdisciplinaran

Sušтина ovog procesa svodi se, u krajnjem, na ostvarenje održivog razvoja kao paradigme

The essence of this process comes down, ultimately, to achieving sustainable development as a paradigm that can no longer have an alternative. Unfortunately, today a significant part of the world still has great problems to "embed" the logic of economic (rational) behavior in its development philosophy and practical life, while ecological logic still seems to it somehow too fashionable and unnecessary for now, and all that together not only inhibits any more serious development, but directly contributes to the development of underdevelopment.

Fortunately, on the other hand, there is a growing group of countries whose bearers of development are well aware of the importance of applying the principles and criteria not only of conventional economy and conventional ecology, but also their mutual interference and strong affirmation of new ecological economy practices. acceptable and ethically legitimate business. The basic features of this new concept of ecological economy are reflected primarily in the significant theoretical and methodological shift of traditional analytical frameworks and economics and ecology with

the basic goal of maintaining ecological ecological system, not only ecological or only economic, because such reductionisms and partial approaches cannot be the path to the realization of sustainable development. In fact, this new concept fully follows the logic of the so-called holistic (holistic) development.

In that sense, the so-called environmental management as a science and skill of managing different levels of organizational systems (companies, states, etc.) by controlling the risks that threaten the survival of these systems. It is understood that, due to the fact that the basic goal of environmental management is the survival of organizational systems (these always consist, among other elements, primarily of people), such defined management is not just "achieving things (goals) with people" (MP Follett) but is primarily about achieving things for the sake of people.

Environmental management is a completely anthropocentric or humanocentric concept of business management, which significantly distinguishes it from all other managerial approaches and systems. Likewise, it is not only the science and skill of effective and efficient behavior and achieving goals in the right way, but it is the true knowledge and practice of achieving the right goals, ie those concerning the survival of man and the quality of his life. We can say that no field of management application so strongly and convincingly confirms the dominance of the principle of effectiveness over the principle of efficiency, ie the inability to compensate for the lack of effectiveness (bad, therefore inhumane and unenvironmentally chosen goals) even with the greatest efficiency. In this sense, environmental management can (and must, in the future) become a kind of management infrastructure and a test of the success of any management practice. We are of the opinion that ecomanagement already goes beyond any business and state management practice and grows into a kind of metamanagement.

The global process of introducing international standards for environmental management (from 1994) will undoubtedly contribute to this. Their primary role is to provide uniform guidelines for

environmental policy; to define strategic and operational environmental objectives; to identify and evaluate environmental effects; establish methods of internal and external audit; establish communication principles and define training obligations, etc. In this sense, the standards of the environmental management system represent a further elaboration and concretization of the well-known Charter for Sustainable Development adopted in 1991 within the International Chamber of Commerce. It was then proclaimed that environmental management is a key determinant of sustainable development and that it must be a priority task of the company and that its improvement must be an ongoing process; that employees must be constantly motivated and environmentally taught; that a continuous assessment of the environmental consequences of each new process and product must be carried out; that the company must take responsibility for the behavior of its subcontractors and suppliers; that the company must be open to dialogue about

environmental risks and engaged in joint efforts to improve environmental awareness and regularly inform all stakeholders. In fact, the essence of environmental management comes down to respecting the following 10 principles:

1. protection of the biosphere,
2. sustainable use of natural resources,
3. waste reduction,
4. energy conservation,
5. production of environmentally and health-safe products,
6. environmental restoration,
7. informing the public,
8. regular monitoring and reporting on the work of the company ,
9. social responsibility of managers,
10. risk reduction in business

Consistent application of these principles would provide economic security for most of humanity and social justice at the highest level, but also ecological balance at a level that does not threaten any cataclysms (eg global warming, climate change, biodiversity loss, energy deficit, etc.). In other words, sustainable development would be ensured on the entire Planet, and that is an essential precondition for the survival of our species as the most responsible for everything that happens on the Planet. Of course, the mechanism for regulating such a deliberate

development can be neither simple nor one-sided. It must be based on the market, but also on planning, which is not only in the hands of the state, but also of numerous structures of civil society.

The bottom line is that "the ideology of egoism and utilitarianism advocated by market fundamentalism and the reckless pursuit of profit maximization based on it must be replaced by an ideology of social solidarity and humanism as well as a broader, holistic understanding of economics, consequences of economic decisions and processes". (Mesarić, (2006: 967).

Unstoppable processes of globalization and the accompanying greening of consciousness, but also business, can be a good opportunity, not just a threat, for all those who think broadly and far, who have a long-term vision of their business, as well as knowledge of possible trends in science and technology and culture. After all, the ultimate goal and measure of economic growth must be to improve the quality of life of all citizens, expanding not only the content of the term "quality of life", but also the circle of people to whom it refers. Therefore, the benefits of economic growth must be fairly distributed, and that is not the case today. On the contrary, the polarization into the world of the rich and the poor is deepening more and more, and every thinking and well-meaning person must be worried. In the whirlwind of current neoliberal globalization, the worst are the small, weak and poor, which is why nation states must develop development strategies based on their own national interests, not indulging in the illusion that the market and free enterprise will leave development in the desired direction. social problems.

4. Conclusion

Mentioned attitudes and analysis allow us to conclude that the ecological logic and criteria of ecological evaluation not only affirm the economy and its logic of rational use of scarce resources, but also revive the primordial anthropocentric meaning that everything happens in the economy. center. Therefore, the concept of sustainable development can be accepted as an appropriate analytical framework and a new development and business paradigm,

because it respects all the necessary and sufficient conditions for the reproduction of the human species at an ever higher level of development. Any escape from strictly defined frameworks must be sanctioned, either economically (mild punishment), or ethically (very severe punishment), or ecologically (the most severe punishment). Conversely, anyone who respects the principles of environmental economics and environmental management can count on all kinds of rewards: from long-term market success, through gaining and maintaining public reputation and business image, all the way to a sense of harmony with nature as the most important of all possible recognitions. a visa to survive on "this only Earth" and the best recommendation for a fair and dignified encounter with unborn generations.

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