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## **The Challenges of Today in Ukraine: Education for Sustainable Development**

### **Abstract**

**Purpose.** A characteristic feature of sustainable development is balanced integration of its social, ecological and economic aspects in all institutions: state and administrative, private, civil, educational, scientific, etc. Education for balanced development is to become a new learning process which will equally include economic, social and ecological aspects and will become the lifelong learning process with a clear role of formal and informal education. Education for balanced development should be one of the important instruments of transition from stable production models and consumption, formation by the population of a new system of values conforming to the moderation culture and balanced development principles as a whole.

**Methods:** SWOT-analysis, GAP-analysis, statistical, analytical.

**Results.** Education development is to provide for the formation of ecologically responsible lifelong behaviour, formation of an integral (holistic), interdisciplinary approach in learning and knowing necessary for solving current global problems and advancement to the balanced, ecologically safe and economically stable future.

**Keywords:** European integration, national education system, sustainable development, education for sustainable development.

### **Relevance of the research**

Today no one needs to be persuaded that preservation of the environment is the most acute, urgent, comprehensive problem of human development.

At the household level, we are all well aware what damage to nature can be caused by irresponsible, violent and unconditional human activities.

Uncontrolled environmental changes call into question the possibility of further existence in its current form as an individual, humanity and nature in their present forms.

The response of the international community to the growing threat of global ecological disaster was the development of the concept of

Sustainable Development based on the necessary preservation of the Earth's potential (biological, resource, ecological, etc.) for future generations due to considerable decrease of man-made pressure on the environment.

Officially, the ideas of sustainable development were proclaimed at the UN Conference on Environment and Development (the Earth Summit), in Rio de Janeiro in 1992. Environment and social and economic development were seen at the conference as interrelated and interdependent spheres. The "Agenda 21" adopted at the conference was considered as a program of world cooperation. Harmonious achievement of such goals as high quality of environment and healthy economics for all world nations and meeting the human needs and keeping the sustainable development within a long period of time was related in this document with sustainable development (Andrushchenko, 2010; Shevchuk, 2002).

**Research methods:** SWOT-analysis, GAP-analysis, statistical, analytical.

### **The conception of sustainable development**

Thus, the conception of sustainable development was a result of combining three basic views – economic, social and ecological. A sustainable development paradigm includes requirements for protection of the environment and social justice, without racial and national discrimination.

So, sustainable development is a development that provides a balanced solution of social and economic tasks as well as problems of favourable environment and natural resource potential to meet the contemporary needs of humanity and protect the interests of future generations.

Since then, the ideas of rational social development have become a current problem of theoretical research and the subject of scientific discussions for scholars of different sciences.

To the reasonable concern of scientists in these issues, the international community has responded with creating various international non-governmental organizations for the study of global processes such as the UN Environment Programme (UNEP). There have been held numerous intergovernmental events such as international conferences and summits.

This enabled to unite a large number of interests of not only experts but heads of states and governments. In terms of international commitments, many countries started developing ecological policies and law, with a

new institutional component such as environment ministries and agencies (Isayenko, 2016; Shevchuk, 2002).

Today, the idea of sustainable development has a large number of world advocates who truly consider it as the most advanced ideology of this century and, most likely, of the whole third millennium. They are sure that in the process of deepening scientific grounding, the sustainable development conception will gradually push out other worldview ideologies which, in their opinion, are fragmentary and unable to provide for balanced development of civilisation. And in time, sustainable development will become a single alternative for coping with all other global threats the humanity faces.

It should be emphasized that many countries declare their commitment to the ideas of sustainable development. However, each country has its own way. Such countries as the USA, Japan, EU member states stand confidently on the way for the optimal variant of development while other countries are just beginning their ways.

There are many countries whose strategic aim is to survive. They do not accept the idea of sustainable development. There are countries that bring threats spreading to other countries and entire regions. Close geographic proximity of these countries and globalization processes make potential environmental, economic and social insecurity dangers.

Ukraine has undertaken international commitments on balanced development by signing the documents to the UN conference on Environment and Development (Rio de Janeiro, 1992), World summit on balanced development (Johannesburg, 2002), and the UN conference on balanced development Rio+20 (Rio de Janeiro, 2012), as well as commitments on education for sustainable development reflected in the “UNECE Strategy for education for sustainable development” (Vilnius, 2005) and the final communiqué of the Intergovernmental conference “Tbilisi+35”: “Ecological education for balanced development” (Tbilisi, 2012) (Shevchuk, 2002; Bogolybov, 2012).

### **Basic principles of sustainable development.**

In 2002 at the World Summit there were formulated four basic principles of achieving sustainable development of the humanity. They are:

- recognition of the problem;
- collective responsibility and constructive partnership;

- determination to joint action;
- unity and indivisibility of human dignity.

In fact, they are related to the four basics of education: “Education gives skills to learn: study, live together, work and live”. They were stated in the well-known report “Education: necessary utopia” of the UNESCO Education Commission.

Therefore, the basic documents of World Forums on Sustainable Development (1992, 2002) underline the key role of education. “Education is the foundation for sustainable development”, as Chapter 36 of the “XXI century Agenda” states (Isayenko, 2016).

The Declaration adopted at the World Summit on Sustainable Development in 2002 reflects a single approach of world state leaders to education as a main instrument for creating a society which is humane, equal and attentive to problems of its members where each individual should have his human dignity.

It is education that is considered an instrument aimed at solving such important problems of sustainable development as healthcare and AIDS spread prevention, fighting with poverty and developing rural regions. Education is to become an important factor for dealing with ecological problems, problems of balanced use of renewable and non-renewable natural resources. Education is to facilitate creating gender-sensitive education system at all levels as well as dealing with a wide circle of ethical and legal issues (Andrushchenko, 2010; (Shevchuk, 2002).

Therefore, education is a basic element of society’s transformation towards sustainable development through which the individual and the society can fully realise their potentials.

Quality education is a prerequisite for society’s sustainable development. Education allows to inculcate values, educate behaviour and form lifestyles required for a sustainable future. It should not only provide for a certain amount of scientific and technical knowledge, but also explain and implement social support for developing skills and their use.

Development of thinking oriented to sustainable future should become a key task of today’s education.

It is with this view of the role of education, the UN General Assembly unanimously adopted a resolution 57/254 “On the UN Decade of Education for Sustainable Development, starting from January 1, 2005” in December 2002.

Education

Thus, the universal nature of sustainable development ideas and relevant international agreements led to the emergence of a new type of education – “Education for Sustainable Development” or “Education in the interests of Sustainable Development”. Obviously, the main reason for the appearance of Education for Sustainable Development is the awareness of the need to change the educational paradigm to further sustainable development of society, economy and environment what is stated in the National Report (Isayenko, 2016).

Integration of sustainable development subjects, including the Rio Conventions, in the education legislation and education policy provides reorientation of the educational sector on the principles of steady development of the society and the state, in accordance with the UNECE Strategy on Education for Sustainable Development.

### **Education for sustainable development**

Education for sustainable development is a concept based, according to the UNECE Strategy on Education for Sustainable Development, on synergies in processes of learning and development, “when the sustainable development of society should be understood as a continuous learning process, problems research”, deepening of competence on the subject of sustainable development; integration of objectives of educational programs and programs for sustainable development; systems of formal and informal education, professional training and information systems. A key principle of education for sustainable development is the principle of full system integration from interdisciplinary to inter-institutional.

Education for sustainable development is not environmental education and is not a re-orientation of any one of the education spheres. It should equally include economic, social and environmental aspects and become a process of lifelong learning, with a clear role of formal, non-formal and informal education.

Education for sustainable development is to become a new learning process. Now important is the transition from the traditional process of teaching to the innovative learning process in terms of education for sustainable development.

Wide cooperation in the field of education for sustainable development will facilitate mutual understanding between countries, strengthening of peace,

security and common welfare. Education for sustainable development should be one of the important instruments of transition from stable production models and consumption, formation by the population of a new system of values conforming to the moderation culture and balanced development principles as a whole.

Education development is to provide for the formation of ecologically responsible lifelong behaviour, formation of an integral (holistic), interdisciplinary approach in learning and knowing necessary for solving current global problems and advancement to the balanced, ecologically safe and economically stable future (Isayenko, 2016).

Regulatory and legal framework providing for education for sustainable development exists in Ukraine, but it requires a thorough refinement.

The problem is that currently Ukraine has no legally defined integrated national educational policy. Some of its provisions are stated in various educational legislative acts. In particular, the new Law of Ukraine “On Higher Education” defines the principles of promoting society’s sustainable development by means of lifelong learning. However, the Law does not define the integration mechanisms of such promotion.

To improve the policy and institutional frameworks for integrating the Rio Conventions provisions into sectoral policies of Ukraine, there is used one of the components of the UN Program – Global Ecological Fund “Integration of provisions of the Rio Conventions into the national policy of Ukraine”, which has been implemented by the UN Development Program in Ukraine in 2014.

This included:

1) development of general frameworks for sectoral analysis of the related ministry;

2) SWOT-analysis and GAP-analysis (drawback analysis) of sectoral policy, legal acts, programs and plans of the related ministry to provide for recommendations on their improvement in conformity with the Rio Convention provisions.

### **The Rio Convention requirements**

It should be noted that the Rio Convention requirements are stated in the texts of the conventions and in their strategies and plans as well as in the

conference resolutions and recommendations of international organisations on certain activity aspects in terms of the Conventions:

1. Convention on biological diversity preservation.

In 2010 the 10<sup>th</sup> Conference of the Parties approved a *Strategic Plan on Biodiversity (2011-2020)*, stating the goals on biodiversity.

2. UN Framework convention on climate change.

The United Nations Development Program (UNDP) has developed recommendations on reducing the environmental emissions and working out development strategies which have no impact on the climate. There have been developed OECD recommendations on CEO application. The 19<sup>th</sup> Conference of the Parties on climate change (Warsaw, November, 2013) took resolutions on fulfilment of obligations on reducing greenhouse gas emissions.

3. Convention on fighting with desertisation in the countries suffering from serious drought and/or desertisation.

The convention provisions are mostly based on the 10 -year strategy (2008-2018).

To conduct a detailed industrial analysis, there have been chosen the following subindustries:

1. Education (level formal).
2. Postgraduate education.
3. Informal education.
4. Science (Bogolybov, 2012).

### **SWOT-analysis and GAP-analysis**

For each subindustry there were performed SWOT-analysis and GAP-analysis.

SWOT-analysis is a universal methodology of systematic analysis, research and assessment of problems, potentials of their solving by comparing strengths and weaknesses of the research object; assessment of potential threats from weak points and their possible avoiding or reducing with the help of strong points and tendencies. SWOT-analysis as a universal methodological instrument which can be used in any field of work, particularly, in education, and for any research object – an enterprise, an educational establishment, a field and a region.

The goal of SWOT-analysis of policies and legal acts is to define

the current state of the national policy of sustainable European integration development; problems of integration of RIO Convention provisions into education and other sectoral policies, legal and regulating documents, assessment of problems containment of integration and improvement processes.

Respectively, GAP-analysis is a methodology of in-depth analysis of official documents defining the educational policy and its legal base to assess gaps and develop recommendations on their elimination to facilitate the integration of RIO Conventions.

The legislation analysis made in the filed “Education and Science” includes the analysis of legal acts of the Verkhovna Rada of Ukraine, decrees of the President of Ukraine, resolutions of the Cabinet of Ministers, orders of the Ministry of Education and Science (MES) of Ukraine regulating scientific and educational activity in Ukraine.

The list of these legal and regulatory acts has 25 laws and bylaw regulatory acts in the field “Education and science”, including: 10 Laws of Ukraine (including 3 drafts of Laws of Ukraine submitted to the Verkhovna Rada of Ukraine), 2 Decrees of the President of Ukraine, 1 project of conception, 8 resolutions of the Cabinet of Ministers of Ukraine, 4 orders of the Ministry of Education and Science of Ukraine and 2 orders of the Ministry of Ecology and Natural Resources of Ukraine (Isayenko, 2016).

The system analytical methodology consists of the methods of SWOT-analysis and GAP-analysis of the state of integration of RIO Convention provisions.

SWOT-analysis consists in dividing sectoral policy factors into four categories: Strengths and Weaknesses of industrial policy; Opportunities opened in the course of industrial policy implementation; Threats hindering the industrial policy implementation. In terms of integration of RIO Convention provisions into the national policy of Ukraine:

<p><b><i>strong points</i></b> – a general description of the RIO Convention requirements that have been integrated into the policy, program and plans of related sectoral ministry as well into legal acts to be developed by this ministry</p>	<p><b><i>weak points</i></b> – a general description of the RIO Convention requirements that have not been integrated into the policy, program and plans of related sectoral ministry as well into legal acts to be developed by this ministry</p>
<p><b><i>opportunities</i></b> – outside aspects that could be used for integration of RIO Convention provisions into the national policy of Ukraine;</p>	<p><b><i>threats</i></b> – any processes or phenomena, external limitations hindering the integration of RIO Convention provisions into the national policy of Ukraine</p>



SWOT-analysis was performed for every subindustry and for each of the three RIO Conventions.

GAP-analysis (deficiency analysis) – method of analysing primary information which studies strategic divergences between the real and desired result. Analysis of deficiencies of sectoral policy is a comparison of factual implementation (sectoral policy, programs, plans, legislation) with the RIO Convention recruitments.

In terms of the obtained results of analysing the deficiencies of relate sectoral policy:

- RIO Convention recruitments – basic specific requirements of the RIO Convention to be integrated into the national policy. An expert, according to his own experience, chose the main RIO Convention recruitments whose integration is the most important, advisable and possible, and defined the gaps for these requirements. Analysis of all RIO Convention recruitments is too complicated, time consuming and not always advisable;

- Considering the RIO Convention recruitments in sectoral policy and activity of related ministry – analysis of the degree of integration of a RIO Convention recruitments into the national policy of Ukraine (*the analysis of what has been done*). In this column the expert states how the provision of the related RIO Convention s reflected in the policy, program and plans of the related sectoral ministry as well as legal acts to be developed by this ministry;

- gap – analysis of how the situation in the related sectoral policy (plans, programs, legislation) of Ukraine differs from the specific requirement of the RIO Convention (*analysis of what is to be done*);

- recommendation – expert’s proposition on changes in a specific strategy of the sectoral policy, plan, program or legal act on considering the related requirement of the RIO Convention (*proposition on what exactly must be done*) (Andrushchenko, 2010; Isayenko, 2016; Shevchuk, 2002; Bogolybov, 2012).

The gap analysis was made for each subindustry and for each of the three RIO Conventions.

Generalising assessment of weak and strong points, opportunities and threats concerning integration of RIO Convention provisions (SWOT-analysis) has shown that:

1. Lack of national education policy with integration mechanisms of implementation of RIO Convention provisions makes it impossible to transform the national education system into a national motive force

of society's sustainable development as a European model of social and natural integrity.

2. Restraining the integration of ecological and social provisions of RIO Convention does not favour the growth of ecological and social awareness of social public groups, stable ecologically balanced society's development.

3. Integration of RIO Convention provisions facilitates the formation with young people of understanding cause and effect relationships in life and nature, developing respectful attitude to nature. Restraining such integration into educational programs and standards in the system of pre-school, school and out-of-school education limits the ecologically responsible development of youth, their caring attitude to living beings and their environment (Shevchuk, 2002).

4. Post-graduate education currently does not play any advanced role in re-orientation of education to sustainable development. Environmentalisation of education should be started from post-graduate re-training, deepening of ecological competence of teachers and instructors.

The results of the in-depth gap-analysis of the current legislation allowed to draw grounded conclusions and develop specific recommendations on making changes to current or new framework legal acts. The goal of refinement of the national legislation is to be implementation of basic RIO Convention provisions and their fulfilment.

A national legislation deficiency can be the fact that though the majority of analysed legal acts state an important role and place of ecological education in solving country's security problems, and certain legal acts provide for taking specific steps, the legislation system in general is not integral and balanced. In particular, legal norms are concentrated in many documents issued by various law-making subjects but their fulfilment is charged with different executors whose powers in the field of education organisation for sustainable development (including ecological education) are not clearly defined by the law.

Having defined the weak and strong points, opportunities and threats, there has been performed in-depth analysis of legislation gaps. In particular, there has been formed a clear and detailed description of current legislation gaps on highlighting basic of RIO Convention requirements and legal provision of their fulfilment.

The recommendations provide for specific steps on changing the current legal acts or developing new framework legal acts.

**Generalising assessment of the state of current education legislation, policy, programs:**

1. The current legislation is to have integration principles facilitating sustainable development of the society and state as well as mechanisms of their implementation.

2. Refinement of current education legislation is to be based on systemic principles of the Conception of national educational policy of Ukraine, on the principles of stable European integration development of society and state.

3. Project of Conception of education development in Ukraine for 2015-2025 does not conform to the requirements of the national policy of European integration and sustainable development.

4. The provision on educational districts is to be based on integration principles of local plans of actions for sustainable development.

5. The new Conception of ecological education in Ukraine is to be based on triune components defined by the Strategy of the UN European Economic Commission on education for sustainable development.

6. The new Law of Ukraine “On out-of-school education” is to contain integration provisions on environmentalisation of out-of-school education taking into account the RIO Convention provisions.

7. The provision on the order of creation of innovative educational activity is to contain integration mechanisms of “green” economics, principles and tasks of environmentalisation of education and innovation activity.

8. Educational aspects of the draft of the Law of Ukraine “On scientific and scientific and technical activity” are to be based on integration interdisciplinary and multidisciplinary research and approaches.

9. The new version of the constitutional (basic) Law of Ukraine “On education” is to be developed on new conceptual bases with reference points of society’s sustainable development. That is first there is to be developed a Conception of national educational policy of Ukraine on the principles of stable European integration development and only then – the Law of Ukraine “On Education” (Isayenko, 2016; Bogolybov, 2012).

**The role of scientific work in higher educational institutions**

It should be separately noted the traditional role of scientific work in higher educational institutions which includes training and selecting the most talented young people to apply for post-graduate course to refill the higher school personnel.

Thus, scientific work influences directly the professional level of the teaching staff. At the same time, the role of science in the modern higher school should not be limited to this function only. A strategic objective of higher school science is to be its turning into the society's real productive force.

That is scientific work in higher educational institutions is to be considered as an interrelated process when science is made by experts having high quality education, and scientific activity engages people having abilities and aptitude to scientific research. The result of this process is to be gaining new knowledge and transformation of intellectual potential into an innovative product.

Such innovation activity needs new quality experts who have mastered not only newest technologies, but have skills for communication, adaptivity, self-improvement, who are capable of fast obtaining and analysing new information and taking efficient economically grounded decisions. The solution of the problem is in transition to lifelong education where basic education is added with educational programs based on the newest knowledge obtained.

At the same time, it should be noted that implementation of basic RIO Convention provisions in education is made complicated with the following factors.

Firstly, there is no integrated legally defined national educational policy on the basis of sustainable development of European integration.

Secondly, one can acknowledge the rejection by heads of executive authorities of different levels of necessary modernisation of the structure, the content and organization of the educational sector based on sustainable development.

Thirdly, it is obvious that the strategic development planning of the educational sector of Ukraine is insufficiently focused on the sustainable development of society and the state in accordance with the UNECE Strategy for Education for Sustainable Development and the Association Agreement between Ukraine and the EU (Andrushchenko, 2010).

And fourthly, it is recognized that priority directions of scientific activity have outdated technocratic sectoral focus, and therefore do not determine the strategic long-term prospects in strengthening research capacity in areas related to environment and development.

That is why reformist changes that are now taking place in education should be primarily focused on how to eliminate the imperfections of the current national legislation which does not allow to respond quickly to the changes taking place both in our state and in the whole world.

Accordingly, in the part of system-wide recommendations, it is appropriate, in our opinion, firstly to formulate and legislate the holistic Conception of national education policy developed on the basis of the UNECE Strategy for Education for Sustainable Development and the Association Agreement between Ukraine and the EU.

Secondly, to develop and adopt a normative legal act with the working title “National Strategy of Education for Sustainable Development” and prepare regulations for execution of its tasks.

### **Conclusions**

In order to modernize the education subsectors, we recommend to determine such basic tasks.

First, to create an integral national system of training, retraining and advanced professional development for sustainable development, primarily for teaching staff and civil servants.

Second, to form the legislative base for cooperation of scientists, public officials and the general public within formal and informal education of Ukraine’s population to implement the training materials developed jointly by international and national experts in the educational process of educational institutions.

Third, to develop coordination mechanisms at national and regional levels for the active involvement of civil society in the process of implementing the strategy of Education for Sustainable Development (Isayenko, 2016; Bogolybov, 2012).

In reforming the science subsectors, it is recommended to primarily solve the following problems.

Firstly, in order to ensure comprehensive integration of scientific and industrial activities in the educational process of higher educational institutions, it should be considered that in the international legal acts on education for sustainable development signed by the State of Ukraine, as it is stated in Chapter 35 of the Agenda, the following five program science fields have been legally defined as priorities:

- strengthening the scientific base to promote sustainable development;
- improving scientific understanding of the sustainable development processes;
- improving long-term scientific assessments;
- creating scientific potential and possibilities;
- promoting scientific research in the field of Education for Sustainable Development.

Secondly, to the current educational legislation and the draft Law of Ukraine “On Scientific and Scientific and Technical Activity in Ukraine”, there should be integrated the principles and mechanisms of scientific promotion of sustainable development in a separate section or develop special bylaw “On scientific and educational promotion of sustainable development of society on the basis of program scientific fields” (Bogolybov, 2012).

Today the idea of sustainable development in the world has a large number of supporters who truly consider it the most promising ideology in this century, and perhaps the entire third millennium. They are convinced that in the process of deepening the scientific substantiation, the sustainable development strategy will gradually replace other worldview ideologies, which, in their opinion, are fragmentary and unable to ensure a balanced development of civilization.

And over time, sustainable development will be the only acceptable alternative to overcome all the other global threats faced by the humanity. That is why now, when the UN is discussing and finalizing the program of action for the second decade (stage) of implementation of the UN Strategy for Education of Sustainable Development for our country and, above all, is critically necessary for the scientific elite to start reforming the educational and scientific sector on the principles of sustainable development.

Implementation of the proposed actions will facilitate re-orientation of the national educational system to the principles of the Strategy of the UN European Economic Commission on education for sustainable development, formation of new environmentalised national education policy of Ukraine (Bogolybov, 2012).

Education is to become an important factor which will enable people to change their approaches in order to learn to assess and solve problems through the prism of sustainable development principles.

Education

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