

**SUSTAINABLE DEVELOPMENT: THE ROLE OF UNIVERSITIES IN
SEMINAL THE FUTURE**

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ABSTRACT:

Certainly, sustainable development has to be an essential part of strategy for the future development of the education sector in India. The main objective of this concept is to make the higher education to be recognized as the foremost contributor to society's efforts to achieve sustainability. Acquiring sustainable development needs cooperation among sectors and institutions, and the involvement of all the concerned partners and individuals. Nevertheless, there are a lot of diverse ways people and institutions can work together to share knowledge, to advocate and to take action. These consist of campaigning networks, communities of practice, knowledge networks, public-private partnerships, multi-stakeholder partnerships and strategic alliances. These have all become vital mechanisms for pin pointing priorities, conducting combined research and for appealing other stakeholders in initiating practicable solutions. By means of combining their efforts, members of networks and partnerships are able to have a bigger impact on policy and practice than they would have on their own. An infrastructure building is one of the meager elements of sustainable development and engineering universities play vital role to spread it inconsonance with the social needs. There is great need to establish practical liaison between the engineering sector and the social development sector, it is important for the establishment and maintenance of social cohesion for building the infrastructure for the well being of the masses. This paper highlights the reasons which make the institutions of higher education in India suitable contenders to lead the notion of Education for Sustainable Development. There is no reason that the achievement of this objective cannot be assured exclusively and without proper linkages with government, communities, NGOs and private sector.

Keywords: *Environmental Education, Education for Sustainable Development (ESD),*

European Strategy on ESD Ukrainian Experience, Role of University.

INTRODUCTION

Sustainable development is not a latest notion in the world any longer. There have been years of discussing and elucidating the meaning of this concept in nearly every academic and nonacademic atmosphere. After the creation of the “United Nations Decade of Education for Sustainable Development (UNDES D)”, central attention of the movement on sustainable development has been shifted to the techniques and different ways for achieving this idea. One central theme which has been well declared and emphasized in the key purposes of the UNDES D is the idea of joint venture. UNDES D undoubtedly places its major aim as: “to smooth the progress of set of connections, connections, replace and communication in the various concerned sections in Education for Sustainable Development”. In the 20th century, economic growth has resulted in substantial improvements in health, education, and the quality of life for many people. However, such growth has also caused significant deterioration of the environment.

Negative impacts include (1) destruction of natural ecosystems at an alarming rate resulting in considerable losses in biodiversity, (2) tremendous increases in soil, air and water contamination, (3) accumulation of sizeable amounts of waste in the environment that neither can be assimilated by the biosphere nor managed by humans effectively, (4) global climate changes, and (5) extensive land degradation, including catastrophic deforestation (Miller and Tyler., 1994: 235). Impacts of economic activities have also caused disruptions in natural cycles managing nitrogen and phosphorous and increased food contamination by toxic elements, radionuclide’s and pathogens. Increased energy demands have accelerated the depletion of non-renewable resources, such as gas, oil, and coal (*Melnychuk et al., 2003: 20; Carson, 1962: 25*). Within the last 80 years the population has increased three fold and will grow by approximately 3.7 billion people in the next 30 years. It is estimated that 90 percent of the additional people will live in poor countries.

During the same period, energy consumption is projected to triple, while food consumption is anticipated to double (*Cunningham, 1996:329*). As a result of these projected changes, food security and energy safety will become core issues in determining the extent of human development.

Above description shows the holistic nature of sustainable development and in accomplishing this holistic nature, a joint attempt among various sectors is well expressive. This issue leads to the core and basic concepts of continuous growth which is the concept of partnership.

Efforts to feed the increasing population have resulted in desertification in many parts of the world. The process of desertification typically leads to increases in soil erosion and salinity and reduction of natural vegetation. Problems resulting from economic growth and population increases are global and require the immediate response of stakeholders groups including governmental officials, politicians, and environmental workers, members of non-governmental organizations, educators, and researchers. Because university professors, teachers and researchers are involved closely in the formation of attitudes of the next generation toward the environment, education has a significant role in addressing the impacts of economic growth, population expansion and nature preservation (*Jenkins, 2003: 435-443*). These attitudes will influence the choices of the next generation in dealing with future world development.

As UNDESA, 2001b, paragraph 3 indicates; “synchronized, combined, harmonized and recurring development of contemplations and acts attaining financial, ecological and communal purposes in an impartial and incorporated way” is essential getting the objects of continuous growth. Keeping in mind this present situation and type of the troubles which now face up to as a community of nations and peoples, everybody is currently more than ever bound collectively by a universal future. This general fate and its mechanisms of accomplishment can be well described in the local and national level first and then being developed to the

international scale. Nonetheless, in view of the important function of education as core of UNDESD in addition to its combination with the concept of partnership can guarantee on achieving the selected goals of sustainable development. This paper discusses the reasons which make an institution of higher education a suitable contender to lead the perception of learning for continuous growth and why the success of this management cannot be certain exclusively and devoid of suitable linkages with the government, communities, NGOs, individuals and private sector.

EDUCATION FOR SUSTAINABLE DEVELOPMENT

In accordance with UNESCO's definition; 'Objective of the United Nations Decade of Education for Sustainable Development (2005-2014, *DESD*), aims to incorporate the various sets of values, principles, and goals for the purpose of learning and continuous growth'. The enlightening endeavor can promote alterations in attitude and perceptions. It can produce new sustainable opportunity regarding the ecological reliability, financial feasibility, and the creation of the ideal society. Rio Summit declares that the purpose of education should be for the socio-economic betterment of the society on the whole. The 21st century has witnessed the technological changes, ushering a new era for the educational planners and practitioners. The notion of education for continuous growth also facilitates the masses expanding comprehension, standards and expertise to take part in different mechanisms, independently and jointly at local level or at the global level.

INSTITUTIONS OF HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT

The function of the higher educational institutions is to prepare the future managers, doctors, engineers, and social scientists to serve the people at larger level. They have a responsibility of taking care of the society and getting purge of the all the hurdles in the way of sustainable socioeconomic development. They are

the role models and the public is largely looking forward to these progressive segments of society to overcome the issues. From this introduction, it is obvious that sustainable development has to be an essential component of the policy for the future development of the education sector. The decisive purpose of this concept is to make the higher education to be accepted as a chief provider to the demands and challenges of the modern technological era - in the course of the proficiencies and acquaintance of the degree holders to be taught in that way that they meet challenges of the world at large. Keeping this in view, it is obvious that the function of academic circles is very important to the accomplishment of any arrangement or policy for sustainably developed society. Then again, it is furthermore widely recognized that there are still many barriers in the communication between academia and society. Over and over again, academic institutions have been in conflict with their societies over their missions and responsibilities. On the doorstep of the 21st century, many universities in the world are reassessing their available resources to equip their students with the best technological learning. They are trying to meet the economic challenges and capacity building measures are on the way to make the education more viable to the community on the whole. They are functioning to make easy economic development, provide much-needed social services, support public, offer technical assistance to community-based organizations, target research that provides guidance for community problem solving, and create opportunities for faculty, students, and community residents to learn from one another. This matter generates an exceptional place for an institution of higher education to operate as the meeting point of the society's different groups, NGOs, individual, etc. and a place for different ideas and prospective to meet and share the experiences. Nevertheless, with the purpose of understanding the degree in which an institute of higher education can give to the concept of sustainable development, some critical issues have to be addressed and considered.

EDUCATION FOR SUSTAINABLE DEVELOPMENT AS A RESPONSE TO ENVIRONMENTAL CHALLENGES

Overcoming the global ecological and social crisis requires a new ideology of life and modern innovative approaches to education leading to a new cultural and ecological world outlook. Sustainable developments' imperative should become paramount in training students and specialists, particularly those specialized in the field of political science, economy, environment and agriculture. This is the only way to reduce the harmful influence of society on the environment and to protect and preserve a biosphere for future generations. Efforts to gain individual profits at any price should become a thing of the past. As noted, a key issue in creating this new ideology is strengthening the role of education and education for sustainable development in particular with using a multidisciplinary approach (*Pidlisnyuk et al., 2005: 46; Kasimov et al., 2002: 149-157*). The crucial importance of a strong educational component for global development was stressed at the 1992 World Summit in Rio de Janeiro, Brazil. Chapter 36 of Agenda 21 states, "Education, including formal education, public awareness and training should be reorganized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues (*Melnychuk et al., 2003:32*)." Education is an instrument for training human resources to optimize productivity by encouraging technical progress and by promoting cultural conditions conducive to social and economic change. The objective is to use all forms of capital, including the human one, to achieve rapid, more equitable economic growth with elimination and avoiding the impact to the environment (*Kasimov et al., 2003: 15-32*). The Dakar Framework for Action proclaimed that "education is a fundamental human right. It is the key to Sustainable Development ... for effective contribution in the societies and economies of the 21st century, which are affected by rapid globalization (*UNESCO, 2000: 228*)." At the final

Agreement of 2002nd World Summit on Sustainable Development in Johannesburg, South Africa it was stressed that “the achievement of the internationally agreed development goals, including those contained in the Millennium Declaration will require a significant increases in the flow of financial resources to education and awareness raising” and to “integrate sustainable development into education systems at all levels of education in order to promote education as a key agent for change (UN, 2002:152).”.The Aarhus Convention on the Right to Access to Information, Public Participation in Decision Making and Access to Justice in Environmental matters, with its rights-based approach to learning for sustainability can be seen as another important step toward changing in educational process (Pidlisnyuk , 2002: 27).

Recognizing the crucial role of education, a UN’s Decade on Education for Sustainable Development (ESD) has been globally announced for the period 2005-2014. The Decade aims to see ESD implemented in thousands of local situations on the ground, involving its integration into a multitude of different learning situations. These initiatives can be catalysts for action and contribute to the goals and objectives of the Decade. In such ways, organizations, local communities and individuals, different educational units can be actors within the global movement toward sustainable development.

EUROPEAN CONCEPT OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

In Europe the progress of Education for Sustainable Development received particular attention at the 5th Pan-Ministerial Conference "Environment for Europe" which was held in Kyiv, Ukraine in 2003. Among other major European environmental issues, the importance of environmental education and education for sustainable development was stressed. It should penetrate educational systems and spheres at all levels - from elementary education to the retraining of experts and

decision-makers. The Kyiv Conference also called for the development and delivery of an ESD strategy (*UNECE, 2003: 77*).

Both education and sustainable development are complex issues. Therefore, it was crucially important to develop the Strategy on ESD through a participatory process involving governments, international leading organizations, public experts, NGOs and other stakeholders from the environment and education fields. Noting the political, economic and social diversity existing in the region, the text of the Strategy had to be made flexible enough, so that its implementation could be adapted to each country's priorities, specific needs and national features. Taking these circumstances into account, a draft Strategy on ESD was elaborated by international group of experts in 2002-2003 under the leadership of UN Economic Commission for Europe and in years 2002-2004 broadly discussed within the European region at the number of meetings. In 2005 in Vilnius (Lithuania) Ministers and other officials from European Educational and Environmental Ministries adopted the Strategy on ESD at their joint meeting. Various stakeholders, including international organisations, business, non-governmental organisations, regional environmental centres and research institutions took part in the meeting and provided valuable contributions. The meeting also launched the United Nations Decade for Education for Sustainable Development in the region. (*UN, 2005:178-190*).

The objective of the EU Strategy is to incorporate key themes of sustainable development in all education systems (*UNECE, 2005: 27*). These themes include a wide range of issues: poverty alleviation, peace, ethics, democracy, justice, security, human rights, health, social equity, cultural diversity, economy, environmental protection, natural resource management. The next milestone in the process is the implementation of the EU Strategy. Countries agreed to develop indicators to assess the implementation, organize thematic and sub-regional workshops and compile good practices in education for sustainable development.

The Strategy also calls for the transition from professional environmental training to an economically and socially focused model of education based on wide interdisciplinary knowledge and a complex approach to the development of society, economy and environment. At the further Pan-European Ministerial meeting “Environment for Europe” in 2005 in Bratislava (Slovakia), the Strategy on ESD received a further practical development. At the latest meeting held in the fall 2007 in Belgrade, Serbia the first progress achieved in first phase of the Strategy’s implementation was reported by countries. It was established that further Strategy implementation should focus on strengthening of the initial measures and on the development of competences, ESD content and teaching tools and materials. A more integrative conceptualization of ESD was needed to better integrate all other components of SD with the environmental one, which was the focus of Environmental Education. This key objective would only be achieved with the promotion of stronger partnerships through multi-stakeholder cooperation between education on the one hand, and environmental sectors on the other. One of the priority activities for countries in their further activities should be the development and start of implementation of the national plans. ESD should be promoted through capacity building, the dissemination of good practices and the exchange of positive experiences. Implementation should be needs-driven and respond to country-specific challenges and common interests identified by groups of countries formed subregion. Partnerships with the private sector, in particular with the local businesses, should be further enhanced and encouraged in promoting ESD. Stronger links with economic issues, including through exploring economic incentives and “greening” procurement, should be promoted. Raising awareness of the potential contribution of indigenous and other traditional and local knowledge with respect to moving towards a more sustainable world should be given attention (*Kasimov et al, 2003:15-32*).

FROM ENVIRONMENTAL EDUCATION TO EDUCATION FOR SUSTAINABLE DEVELOPMENT

Environmental education gained substantial international attention in final decade of 20th century. Together with tremendous transformation from the early association with “nature study” and “conservation” to multidisciplinary knowledge it united sustainable development, ecological and environmental literacy, globalization and socio-political aspects (*Jenkins, 2003: 437-443*).

Environmental education looks mostly as a complex system of scientific, technological and practical knowledge from different disciplines, which accommodates political, socioeconomic, historical and cultural issues.

The term “environmental education” sustains multiple meanings and rationales very different curriculum practices. To the extent that environmental education may engage with socio-political activism it challenges the purposes of schooling that traditionally use the acquisition and transmission of knowledge. Environmental problems could not be separated from their wider personal, social and political dimensions while teaching the environmentally sound subjects. All mentioned circumstances point towards the need for diversity, local sensitivity and experimentation in programs of environmental education. There is an obvious interrelation between education in general, environmental education and education for sustainable development. It is evident that any true education, by definition, works to the benefit of sustainable development. However, it is also important that the introduction of ESD provides a unique opportunity for reviewing and strengthening education as a whole, especially in former Soviet Union countries. This realization provides an opportunity to incorporate ESD into modern training; a chance to re-integrate the post-Soviet educational space; a chance to restore the traditional values of education as part of our culture and at the same time to introduce the most recent innovations in this sphere (*Kasimov et al., 2003:437-443*).

However, at the same time, the level of environmental, cultural and social responsibility of the population to the challenges arising is far behind the present-day knowledge and interests. To overcome this gap it is essential to update the existing education system and develop new education programs in the field of sustainable development. Given that the achievement of sustainable development is an integrated natural, social and economic target, ESD should also integrate natural, social and economic knowledge. In accordance with the goals of sustainable development, the content of ESD also has three parts (Kasimov et al., 2003:437-443):

- **Environmental** - protection of the integrity of ecosystems, the carrying capacity of the biosphere, biological diversity, and the quality of the environment;
- **Economic** - providing the imperative of sustainable development for economic management (efficient use of natural resources, strategic sustainable management of territories, resources and economic sectors);
- **Social** - education in the sphere of human rights, health, safety, conflict resolution, ethnology, anthropology).

Education for Sustainable development is guided by the principle of equilibrium and the principle of precautionary action. The first principle provides for the use of natural resources at global and local scales without losses of biological diversity while creating conditions for their renewability. The principle of precautionary action provides that when an activity increases the threat of harm to human health or the environment, precautionary measures should be taken, even if scientific uncertainties still exist in some cause and effect relationships. This new educational approach has to be so effective that the principles of sustainable development become an integral part of every person's life. Traditionally four main instruments are recognized for implementation of ESD (*Pidlisnyuk et al., 2005: 58*):

- **Dialog:** creating understanding and constant dialog between authority, business organizations, and other important stakeholders groups;
- **Education:** development and creation of new knowledge, skills and habits for encouraging sustainability practice in business, economy, each-day life;
- **Information:** providing the public with broad access to information about varieties of questions regarding SD, state of the environment along with information about achievements in the a way to sustainability;
- **Marketing:** changing of human behavior supporting sustainable development decisions, having all knowledge and data.

From another perspective, effective education for Sustainable Development depends upon a combination of the following factors: legitimacy through the curriculum; new ways of learning; competence of staff; institutional development; partnerships and finances. In order for universities to play an important role in promotion and implementation of ESD, the following steps have to be taken:

- Carrying out a general university reform. This goal embraces the following five main issues: incorporation of sustainable development aspects into existed university courses and research, their reorientation towards sustainability; creation of new courses oriented on different aspects of sustainable development; creation special Master's and PhD programs in sustainable development; strengthening regional aspects in educational curricula and their relation with sustainable development; initiating research in and education for sustainable development;
- Changing management of universities toward sustainability;
- Strengthening international cooperation and exchange.

In implementing this new focus, university professors have to move outside the traditional format of teaching through lectures and seminars. Strong scientific background has to be combined with presentations delivered by practitioners from business, producers as well as political and governmental leaders. The revised

sustainability sound curricula have to balance the traditional scientific approach with input from case studies and social sciences, including elements of ethics and sociology. In training professionals, teachers and lectures have to raise ecological awareness, emphasize principles of sustainability and present good practices. Students should be encouraged to ask appropriate questions and trying to find an adequate answers rather than simply acquiring a body of knowledge. The goal should be to enable students to engage in an informal conversation and discussion with expertise about the different aspects of environment and sustainability and to help them to develop the confidence and skills to add to it and to challenge it, when appropriate (*Gough and Scott, 2006: 273-290*).

To achieve success in the incorporation of sustainable development principles into the education system, collaboration has to exist between educational and training systems, communities, other stakeholder groups, such as governmental officials, non-governmental organizations, and consumers. Another challenge is to make sustainability attractive not only to certain target educational groups, but to the society as a whole. In the global context, the problems posed by climate change is a leading example of where ESD could be applied to daily life, as climate change affects everyone and ESD offered an essential way to shape knowledge and attitudes, and hence could help us to address these problems.

CONCLUDING REMARKS

It is truly evident that the sustainable development has become a core of teaching programs within the modern university's education. At the same time universities need strong methodological support and good international communication in terms of research and development. From the governmental point of view the creation of a national strategy for ESD is among the major tasks for the years to come in many countries of East and Central Europe. In Ukrainian context, an important question is: "Is it possible to develop ESD in a country with a rather unstable economic situation"? The balanced sustainable development for country

and the ensuring of sufficiently high quality of people's life can be possible only through education which should acquire support at all levels, preserve its historic achievements and yet be permanently in a quest for progress. In relation to sustainability, this quest is urgent. Rapid and substantial changes have to be achieved in order to support education to play its crucial role in the development of more sustainable economic and social systems. The Ukrainian education system just only begins to address this task and there remains a lot to be done.

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