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## Development of Ukraine higher education system for the balanced nature management

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## **Development of Ukraine higher education system for the balanced nature management**

### **Introduction**

Strategy of the State Environmental Policy of Ukraine (2010) identifies the root causes of environmental problems in Ukraine, including: poor environmental management system, inefficient regulation of natural resources use, the lack of clear division of environmental and economic functions in the preparation of management training, which requires an understanding of society as a whole and universities graduates including the priorities of environmental protection and sustainable development benefits. The integration need of environmental policy into the industry standards of professional training, taking into account the environmental component in developing strategies and programs for the development of economic activities, the introduction of environmental management at all institutional levels by sector of destination and ecosystem distribution. So, greening of public activity determines the research problem relevance of management trains specialists in the balanced nature management in Ukraine.

### **1. Analysis of recent research and publications**

Significant achievements have been accumulated in the field of higher environmental education that cover various aspects of professional future environmental studies (Yu. Zlobin, S. Kalynovskyi, A. Kutsenko, M. Nazaruk, M. Pustovoi, E. Pashkov etc.), problems of environmentalists staged training (G. Beliaivskyi, M. Drobnokhod, V. Nekos, N. Ridey, A. Sozinov, S. Stepanenko), theoretical and practical bases (V. Bakumenko, M. Bilynska, A. Vasyliiev, A. Dehtiar, D. Karamyshev, N. Kardanska, B. Lytvak, B. Malynovskyi, N. Meltiuhov, N. Myronova, N. Nyzhnik, G. Odintsova, R. Fathutdy-nov etc.), implementation of sustainable nature management principles of the future ecologists professional training (V. Getman, M. Klymenko, L. Kozhushko, L. Miller, V. Navrotsky, J. Satalkin, T. Safranov, P. Skrypchuk, I. Soloshych, T. Trushyna, M. Shapochka, V. Shevchuk, V. Shmandiy).

## **2. Formulation of article purposes**

The aim of the study was to theoretically substantiate the development of national system of Ukraine higher education for sustainable environmental management. Tasks included: to reveal governance structure of natural resources in Ukraine; to implement system-structural analysis of legal and technical support of education for sustainable natural resources; identify the main approaches to ensuring the effective development of higher education in Ukraine.

## **3. The main material**

Training of environmental management should be aimed at the target professionally-oriented demand at all levels of management and supervision in the country (including the type of nature) of future professionals who ensure minimization of negative external factors that are at the supranational and domestic levels, and responsible actions of professionally active, constructive, ensuring implementation of measures of creation new resources and condition for sustainable development, strengthening its competitive position in the international arena, growth potential socio-economic, ecological improvement within its territory. Therefore, the socio-economic and ecological formation order to prepare future professionals with the environmental management should take into account regional and sectoral environmental problems whose solution is designed to provide target-oriented vocational training, which includes natural features by type.

The structure of governance administration of natural resources in Ukraine has been established and revealed its organizational and functional features in the theoretical analysis: organizational and departmental subordination of sectoral ministries empowered in public environmental management by branches of industry; organizational and administrative functionality services and agencies concerned with the public regulation and control in the environmental management, by type – water, land, minerals-, forest management, flora and fauna use; organizational and controlling supervision of public inspection in the field of state regulation of licensing and registration procedures and expert – licensing, standardization and certification; organizational and inter-agency regulation of impact on state regulation of natural resources under the mechanisms of management; organizational system-oriented development of the national education system to target training of highly qualified specialists in sustainable environmental management. It is established that the reorganized structure of multi-governance helps eliminate duplication of executive powers, reduction in bureaucracy and efficiency of environmental governance, which requires targeted management training for sustainable environmental management.

System-structural analysis of regulatory and legal providing education for sustainable natural resources allowed figuring out that the reduction and consolidation of state programs aimed at implementation the program of the President of Ukraine „Prosperous Society, Competitive Economy, Effective State” (2011)

optimization of their performance in the areas of environmental management, education, fixing responsibility for executive agencies for their organizational coordination and implementation, namely: information (1998), „Drinking Water of Ukraine” for 2006–2020 (2005), protection of rural settlements and farmland from the harmful effects of water up to 2010 and forecast till 2020 (2006), a program of Ukrainian village till 2015, the ecological program of environmental monitoring, scientific-technical and social program „Science in universities” 2008–2017; social program of schools reform for orphans and children deprived of parental care, scientific and technical program development and manufacturing of sensor products for 2008–2012, socio-economic development of the Crimea region until 2017 year (2007), environmental program for radioactive waste management; economic program „Creation of Innovation Infrastructure in Ukraine” for 2009–2013 (2008), social development program of civil defense in 2009–2013 (2009), social program „Youth of Ukraine” for 2009–2015, „Forests of Ukraine” for 2010–2015, scientific and technical program „Nanotechnologies and Nanomaterials” for 2010–2014 (2009), the social and economic development of small towns in 2011–2015, the economic efficiency program and development of alternative fuels for 2010–2015 (2010) and other socio-economic and environmental development of the regions. The significant role of government programs in coordinating regional training systems and the need to include ecological characteristics of regions in their content and structure has been confirmed in the theoretical studies.

Conceptual analysis of the technical regulations under interpretative-analytical method allowed to reveal the great importance of international standardization as a means of educational activities (Ukraine – SSTC-P ISO IWA 2:2009 „Guidelines for the application of ISO 9001:2000 in education”, European Union-ISO/IWA 2:2007 „Quality Management System. Guidelines for the application of ISO 9001:2000 in education”, U.S. – ASQ Z1.11-2002 „Guidelines on the use of ANSI/ISO/ASQ Q9001–2000 to education and training institutions”, Australia – HB 90.7-2000 „Guide to ISO 9001:2000 for educational and learning organizations”, Russia – GOST R 52614.2-2006 „Guide to ISO 9001:2000 for educational and learning organizations”) that allows you to expand the system as the object of the components elements to specify their properties in conjunction of these elements, consider the dynamics of determination factors in time, do quest by stage finding the best ways to study the effectiveness of the desired result, enter the required procedures for monitoring purposes and results, including facilitating their correction in different planes. Ultimately, it aims to achieve an appropriate level and the quality and effectiveness of education, where the first two parameters characterize the most meaningful way of goal-setting and performance, and the third – the success of procedural activity-side.

The organizational development of the national system of education for sustainable natural resources as an activity aimed at acquiring qualitatively new form of management training specialists in sustainable natural resources through the development and improvement of professional-oriented content, scientific methods and information management, structural and organizational structure of the target purpose theoretically proved. Requirements for the organizational restructuring of the national system of higher education for sustainable natural resources (identification of needs and expectations of customers and other interested parties, to develop policies and goals of higher education in the field of quality (including environmental quality); inventory processes of educational services and their functional compliance in meeting the goals, establishing and providing the necessary resources (without disturbing the ecological balance of the environment), development of methods for peer review process effectiveness and efficiency of activities, the use of effective results means for preventing nonconformities and eliminating their causes, development and implementation of continuous improvement process of the quality management system in education and environmental management environment) have been determined that require the introduction of new systems targeted training, providing synchronistic theoretical training, scientific research and professional practical training (during training) in the field of future employment, activation of students self-education; multi-level guidance and information for individualized studying (research and production) programs of professional preparation for sustainable environmental management.

Organizational development of the national system of higher education has been determined in general and continuous training of ecologists in particular. It reflects the impact of state regulation of environmental management. Planning of organizational development training with balanced nature in a phased system of education should be coordinated (in the task cohesion) with the target and the functional purpose of structural and institutional regulation of public institutions and associations of local authorities to promote sustainable development.

The effectiveness of development achieved through the using of higher education complex approaches: systemic approach, which establishes the relationship of processes and phenomena in the environment, and social media management hierarchy of stage training; ecosystem, considering teaching career as an open social and educational system in transformation of the professional environment, and environmental spheres; systematic and structural, which implies taking into account the structural and organizational components and connections between them during training and subsequent adaptation; systemic-functional, providing targeted management training specialists in sustainable environmental regulation system for environmental activities and sectors of employment; competence, which leads to the acquisition of environmental competencies of the training in the future, to make independent environmentally sig-

nificant decisions, to be responsible for them, to do professional management activities effectively in accordance with the changing conditions of society and the educational market.

During the scientific research we proved that particular role acquires a synergistic approach that promotes the synthesis of the activities variety in education, sustainable environmental management and professional development; axiological providing conscious assimilation of environmental values and their maintenance in a professional sphere and life; acmeological that directs future specialist for permanent cultivation in the system of continuous training and self-education; ecocentric, which promotes environmental awareness of future environmental experts.

In general integrated application of these approaches furthers realization of noosphere approach that matches the author's understanding of the strategic priorities of higher education national system for sustainable natural resources through the implementation of student self-cognitive activity, creative skills, abilities, provides individual learning trajectory that takes into account the student's choice in choosing the content of workload, timing of its learning, training places (future employment).

## Literature

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## Abstract

The development of a national system of education for sustainable natural resources as a form of social activity has been theoretically proved and aimed at optimizing management training environmental experts by improving its professional oriented content, scientific, methodological and information support, structural and organizational structure for the intended purpose. It was deter-

mined that organizational and functional structure of environmental management as a set of (system) levels in the unity of their functions, powers and organizational relations and provides a holistic effect on the social system and the environment. It was found that the theoretical foundation of management training problem decision of future ecologists for the balanced nature management is a complex combination of approaches: system, ecosystem, system-structural, systemic-functional, competency, synergistic, axiological, acmeological, ecocentric, noosphere.

**Key words:** organizational development, national system of higher education, sustainable environmental.