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# **Ecology, environmental protection and balanced environmental management: education – science – production – 2021**

dedicated to the 35<sup>th</sup> anniversary of Chernobyl accident

**ABSTRACTS**  
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## СЕКЦІЯ 1. ЗБАЛАНСОВАНЕ ПРИРОДОКОРИСТУВАННЯ ТА МЕНЕДЖМЕНТ ДОВКІЛЛЯ

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### SUSTAINABILITY PROBLEMS WITH ECOLOGICALLY BALANCED PRODUCTION GROWTH

Global problems, which are faced in the world, are interconnected: an economic and a financial crisis, an influence on the environment, an exhaustion of natural resources and a transition to green economy, based on the capacity of ecosystems.

Production activity, which destroys nature, stimulates an incremental interest in problems of the environment. Modern economic growth depends on possibilities of ecosystems to restore resources and absorb waste. Therefore, as Ukraine moves towards a green economy, ecological sustainability and economic growth/development must be balanced.

Sustainability is a process in which the use of resources, channeling of investments, technological development and institutional changes are in balance and strengthen modern and future potentials to satisfy human's needs.

Sustainability can be achieved by controlling production processes that use non-renewable natural resources and cause anthropogenic pollution. To solve this problem, an integrated approach is proposed that combines a qualitative and an analytical apparatus to achieve a new conceptual perspective to understand sustainability.

There should be so-called compensational processes when stocks of renewable sources of energy increase as production drains stocks of non-renewable natural resources. Moreover, that result will be possible even when taking into account the fact that output does not decrease, which contrasts with widespread perception of slowing down production to achieve sustainability [1].

Against the background of these patterns, it is necessary to identify several directions in production activities for the consistent achievement of sustainability goals.

1. The scale of industrial production must be coordinated with the level of constantly changing reserves of natural resources.

2. The growth of industrial production that meets sustainable patterns is primarily due to efficiency and environmental friendliness.

3. A strict restriction is introduced on the use of non-renewable natural resources, taking into account their reserves, and renewable analogues.

4. The use of renewable natural resources should be introduced everywhere and on an ongoing basis, taking into account the speed of their renewal.

5. Production wastes, given the current impossibility of processing them, should not exceed the assimilation capacity of the environment.

These principles support key foundations of solving the main problem of shifting to a green economy which is the ability to satisfy real needs leaving the same opportunities for future generations. Ignoring these principles can be disastrous in the near future. Conscientious consumers and conscientious businesses must act with confidence making efforts to implement necessary changes for maintaining sustainable development [2]. Moreover, to achieve this goal, political decisions must be supported by precise definitions of both natural capital and sustainability, which are partially proposed in this work. At the same time, it is important to take into account the control over the birth rate of population, fair distribution of income and social goods.

Sustainability contributes to an effective shift to the green economy, which balances priorities of ecological safety and economic growth. In the context of this transition, three key areas need to be developed:

1. Modernization and deregulation of the energy market to maximize the use of market mechanisms.

2. IT development and digitization to match supply and demand better.

3. Implementation of innovative products and services for market development.

By continuously developing sustainable intensive production, we can create workplaces and ensure economic growth, use natural resources carefully and control main global ecological problems. The transition requires new decision-making, political will and strategic investments.

#### *References:*

1. Augusto Marcos Carvalho de Sena A theoretical essay on sustainability and environmentally balanced output growth: natural capital, constrained depletion of resources and pollution generation. URL: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1807-76922009000300004](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1807-76922009000300004) (Last accessed: 24.03.2021).

2. Ivashura A., Borysenko O., Logvinkov S. Environmental safety in the context of ecological and economic models of territorial development. *Екологічна безпека - сучасні напрямки та перспективи вищої освіти: Матеріали I Міжнародної інтернет-конференції*, м. Харків, 25 лютого 2021 р. Харків: ХНУ імені В.Н. Каразіна, 2021. С. 147-148.

#### **Ivashura A.A., Borysenko O.M., Logvinkov S.M. SUSTAINABILITY PROBLEMS WITH ECOLOGICALLY BALANCED PRODUCTION GROWTH**

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A clear way of assessing sustainability is proposed, principles and criteria of production activity for development of ecologically balanced production within a green economy are indicated.