

Overview of the Sustainable Development Modern Trends

In the article the features of modern sustainable development are showed. The great attention was paid to its influence on the economy and on the international relations. The most remarkable forums on sustainable development and green economy problems are mentioned. Tools and methods like DECOIN (includes MuSIASEM (Multi-Scale Integrated Analysis Societal Ecosystem Metabolism), BASF, SEEBALANCETM method, The Ecological Footprint (EF), TNS (The Natural Step), An Environmental Management System (EMS), Ecodesign are characterized.

Key words: Sustainable development, tools, green economy.

The Problem Statement and its Importance. Sustainable development has been defined in many different ways. Perhaps the best known definition is that in Our Common Future – «development that meets the needs of the present without compromising the ability of future generations to meet their own needs».

An Analysis of Recent Research Studies. This article provides a short overview of sustainable development and green economy modern trends based on current research by leading scholars in the field. The most famous researchers are K. Blackstock, N. Fiala, V. Bouznik, K. Chapple. The most popular aspects of this question were problems in economy development connecting with sustainable development, evaluating of all the environmental impacts of a product or service, problem of finding the ways for industry to reduce environmental impacts and increase operating efficiency. We are going to combine all knowledge to show the way sustainable development is progressing now.

The Aim of the Article. The goal of sustainable development is securing economic development, social equity and justice, environmental protection. The aim of sustainable development is to balance our economic, environmental and social needs, allowing prosperity for now and future generations. That's why this is very important nowadays. Moreover, we are now in a position whereby we are consuming more resources than ever, and polluting the Earth with waste products. We are going to combine all knowledge about modern trends in sustainable development to show its importance, role and progress.

General Materials and Results of Research. Sustainable development as economic modifier. The global attention to the sustainable development makes influence on the economic development and international ties. Conventional economic progress fails to meet the needs of many millions of people today and compromises the ability of future generations to meet theirs. The new economics, based on ideas of sustainable development, reflects the growing worldwide demand for new ways of economic life. One of the most important ideas is that it will conserve the Earth and its resources, empower people to meet their own needs and the needs of others. Both sustainable development and the new economics recognize the need for change in today's development and today's ways of economic life and thought. In general, the new economics implies more far-reaching changes, than the mainstream perspective and brings a more radical perspective to sustainable development.

The new economics reflects the growing worldwide demand for a new direction of economic development and progress that will be peoplecentred and Earth-centred. The new patterns of economic life and organisation that this will necessarily involve will empower people to meet their own and one another's needs, and to conserve the Earth and its resources, now and for the future. This new way of economic life will be based on new assumptions, theories and values about economic activities and progress [36].

The UN conference on the environment in 1972 was very important, as well as the publication in the same year of *Only One Earth*, *The Limits to Growth* and *Blueprint For Survival*, followed in 1973 by *Small Is Beautiful: Economics As If People Mattered*. During that quartercentury new economics principles have crystallised.

The new economics is based on principles that contrast with the conventional economic approach. Modern conception of sustainable development includes: systematic empowerment of people; systematic conservation of resources and environment; evolution to a one-world model of economic life [1], and from today's international economy to an ecologically sustainable, decentralizing, multi-level one-world economic system; restoration of political and ethical factors to a central place in economic life and thought; respect for qualitative values, not just quantitative values, etc. [37].

These principles are relevant to every area of economic life and thought (farming and food, travel and transport, etc.), and to every level (ranging from personal and household to global) and every feature.

The new economics, influenced by SD is normative, focusing on action to create a better future for people and Earth; is based on a realistic view of human; is about transforming today's economic life and thought; is critical and constructive, based on recognition that effective opposition to conventional economic development and thought is a necessary part of the transformation, but that constructive alternatives must also be proposed.

The realization that actions taken today can have long-term consequences, presents a new challenge to decision makers in assessing the desirability of policies and projects, a challenge summarized as the goal of 'sustainable development'.

World community emphasizes on areas, levels and features of economic life and thought, where change is needed, and they include farming and food; travel and transport; energy; work, livelihoods and social cohesion; local development; technology; businesses and other enterprises and organizations; health; law and order; globalization, trade, investment and aid; money and finance: incomes, taxes, public expenditure, currencies, debt, banking, etc. Features of economic life and thought in which change is needed include: lifestyle choices, organizational goals and policies; methods of measurement and valuation, e.g. accounting; research and theories [35].

1. Sustainable development as a spur to an action and working together:

A lot of forums and summits were held (19 February 2013 – Workshop on Industrial Water Use Efficiency; 30 January 2013 – 10th World CEO Sustainability Summit; 17 January 2013 – Workshop on «Industrial Water Use Efficiency towards Sustainable Business»; 19 December 2012 – 4th Management development program on Green Building principles and tools), one of the examples is The first Green Growth and Sustainable Development Forum (GG-SD Forum), which took place on 23 November 2012, was attended by approximately 250 participants, including representatives from ministries of finance, economics, environment, development cooperation, sciences, industry and technology, and foreign affairs, as well as from other international organisations, the private sector and civil society. The participants were from Cambodia, China, Costa Rica, Ethiopia, Indonesia, Kazakhstan, Mongolia, Philippines, Russia, Sierra Leone and South Africa. Rintaro Tamaki (OECD Deputy Secretary-General) highlighted the Forum's goal to provide a dedicated space for multidisciplinary discussions on green-growth and sustainable-development issues as well as for the identification of key knowledge gaps that could usefully be addressed by future work of OECD Committees [36].

The next forums will include the following topics, and they show current problems and trends in solving them. For example, regional planning, city planning, sustainability and the built environment; environmental management; resources management; social and political issues; rural developments; sustainable solutions in developing countries; energy resources; environmental economics (6th International Conference on Sustainable Development and Planning, 27–29 May, 2013, Kos, Greece).

One more conference (SDIMI 2013, 6th International Conference on Sustainable Development in the Minerals Industry, 30 June – 3 July 2013, Milos island, Greece) will address all sustainability issues related to the minerals industry: best practices and sustainable mining practices, life cycle assessment, sustainable land use and raw materials supply issues, mineral resources policy, nature conservation and climate change, sustainability in oil and gas development, technological developments, etc.

The International Conference 2013 on Spatial Planning and Sustainable Development (30 August – 1 September 2013, Beijing, China) topics are: design studies for sustainable development; planning approaches for sustainable development; indicators of sustainable development; planning support system and urban sustainability modelling.

2. Sustainable development as a field to use modern technology in:

The Scottish team are applying the DECOIN toolkit consists of three bio-economic accounting methods (ASA, MuSIASEM and SUMMA) that work at multiple levels over time, to illustrate trajectories of development. MuSIASEM (Multi-Scale Integrated Analysis Societal Ecosystem Metabolism) calculates relationships between extensive variables (stocks) of land and human labour, which create flows of money, energy and materials expressed in intensity ratios [32].

SUMMA (Sustainability Multi-criteria Multi-scale Assessment) is an empirically based set of coefficients that also consider how stocks create, and are created by, flows of money, energy and materials

through the system. These flows are expressed as emergy to illustrate the embodied energy and materials being utilised by the system [39].

The Synergies of Multi-Level Integrated Linkages in Eco-social Systems (SMILE) is an EU project coordinated by Finland Futures Research Centre.

It focuses on the concept of social metabolism that draws attention to how energy, material, money and ideas are utilised by society [19].

The tools are being applied, in various combinations, to six case studies across Finland; Romania; Catalonia; Laos; Italy and Scotland.

3. Tools and methods, which are used to reach the aim of sustainable development:

In order to assess all the environmental impacts of a product or service, the whole production life cycle from cradle to grave must be assessed. This concept is called life cycle thinking. Life Cycle Assessment (LCA) refers to a systematic analysis of the environmental impact of products, processes or services along the entire life cycle involved [14]. This includes all environmental impacts arising during production, use, and disposal of a product [26]. It also includes all processes associated with the product system. The Life Cycle Assessment method can be used as a tool for environment-oriented decision-making, for developing and improving products, for strategic planning, in political decision-making processes and in marketing [25].

Design for Environment (DfE), or Ecodesign, provides a basis for incorporating environmental considerations into the design and development of products and product systems. Using data from life cycle analyses or assessments (LCAs) [26], companies can investigate the environmental impact of design modifications and product enhancements before implementing them. This approach can be used to determine the most ecologically sound design variants. It is important to consider the entire product life cycle in this context in order to avoid shifting environmental problems from one phase of the life cycle to another [38].

An Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. Basic Elements of an EMS are the following: analyzing its environmental impacts and legal requirements, reviewing the company's environmental goals, setting environmental objectives and targets to reduce environmental impacts and comply with legal requirements, ensuring employees' environmental awareness and competence, etc. [11]. Nowadays three aspects have been chosen by the EMS Committee and approved by senior management: 1) Energy Conservation; 2) Waste Reduction, Reuse, and Recycling; and 3) Green Procurement [18].

The Natural Step (TNS) Framework is a simple science-based tool to help individuals and organisations understand sustainability and build sound programmes [32]. The TNS Framework is a well-developed planning methodology used for assessment, visioning and action. TNS involves a four-phase A-B-C-D Analytical Approach. A = Awareness (involves aligning the business around a common understanding of sustainability and the 'wholesystems' context for the organization); B = Baseline Mapping (What does your business look like today? To see how activities are running counter to sustainability principles); C = Creating a Vision (Imagine what operations will look like in a sustainable society); D = Down to Action (Supporting effective, step-by-step implementation) [38].

TNS in use: Electrolux (Sweden) adopted the TNS Framework after it lost a multi-million-dollar deal because it did not offer a refrigeration system without chlorofluorocarbons (CFCs). The company used TNS Framework principles to phase out CFCs and won back that customer. It has introduced washing machines that use 12 gallons of water instead of 45, and substituted canola oil for petroleum-based oil in its chain saws – all while reducing total energy consumption and hazardous waste.

The Ecological Footprint (EF) is one part of a renewable resource accounting tool that is used to address the underlying issue of sustainable consumption [3]. It measures the extent to which humanity is using nature's resources faster than they can regenerate [13]. But some researches argue that the footprint is really useful, the controversial point is if the footprint arbitrarily assumes both zero greenhouse gas emissions, which may not be ex ante optimal, and national boundaries [12]; EF cannot take into account intensive production, and so comparisons to biocapacity are erroneous [30].

BASF has developed Eco-Efficiency Analysis for comparing, how products differ in environmental impacts and economic costs [31]. Environmental impacts are grouped into six categories. They include the consumption of raw materials, energy consumption, emissions to air, water and soil (including waste), toxicity potential of substances produced and employed, the risk potential and land-use [28].

The SEEBALANCETM method adds a third dimension and integrating social aspects into the analysis. Impacts on five stakeholder groups, employees, future generations, local community, international commu-

nity and consumers, are considered in the assessment. At least 23 indicators are described for impacts on these stakeholders, ranging from employee safety to the amount of imports from developing countries [26]. The task of quantifying all aspects of production is immense and maybe impossible, considering all the uncertainties, but it can ease value discussions in relation to production and help to identify key areas of improvement. SEEBALANCETM method is not in wide scale use, but the Eco-Efficiency Analysis has been completed for over 400 products.

To conclude, I want to show an example, that proves the necessity and efficiency of sustainable development modern trends. In Hitachi Group Environmental Sustainability Report 2010 there was said, that they had achieved all the targets in their Environmental Action Plan for fiscal 2009. Sales of environmentally conscious EcoProducts had been 53 percent of all sales, bettering the 48 percent target. They had reduced the levels of CO₂ emissions from corporate activities by 21 percent in Japan (from fiscal 1990 levels) and by 5 percent outside of Japan (per unit of production, compared with fiscal 2003 levels) [17]. Now they are also improving the effectiveness of global environmental management by holding working-level.

The next thing is The Dow Jones Sustainability Index World (DJSI World), which is a stock index created by U.S.-based Dow Jones and Swiss-based Sustainable Asset Management (SAM) to assess the sustainability of 2,500 companies around the world based on their economic, social and environmental performance. In fiscal 2009, Hitachi was one of the 317 companies (including 32 Japanese) selected as a DJSI World component. They were rated particularly highly for environmental initiatives, outscoring other companies with a high 85 (against an average of 38) [17].

Summary and Perspectives for Future Research. In conclusion, the pros of sustainable development are social progress and equality, environmental protection, conservation of natural resources and stable economic growth. The life in a healthy, clean and safe environment can be achieved. We learned some basic tools that can help to achieve it. So that it is possible to choose the most efficient and eligible for a region of a whole country.

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Федонюк Олена. Огляд сучасних тенденцій сталого розвитку. У статті розглянуто риси сучасного стану та втілення в життя концепції сталого розвитку. Значну увагу приділено впливу концепції сталого розвитку на економічне життя та міжнародні зв'язки, зокрема. Також розглянуто найзначніші форуми й саміти щодо зеленої економіки та сталого розвитку. Охарактеризовано засоби й методи, зокрема DECOIN (включає MuSIASEM (Multi-Scale Integrated Analysis Societal Ecosystem Metabolism), BASF, SEEBALANCETM метод, The Ecological Footprint (EF), TNS (The Natural Step), An Environmental Management System (EMS), Ecodesign).

Ключові слова: сталий розвиток, засоби, зелена економіка.

Федонюк Елена. Обзор современных тенденций устойчивого развития. В статье рассматриваются особенности современного состояния и осуществления концепции устойчивого развития. Значительное внимание уделено влиянию концепции устойчивого развития на экономическую жизнь и международные связи в частности. Также рассмотрены значимые форумы и саммиты по зеленой экономике и устойчивому развитию. Дается характеристика средства и методов, таких как DECOIN (включает MuSIASEM (Multi-Scale Integrated Analysis Societal Ecosystem Metabolism), BASF, SEEBALANCETM метод, The Ecological Footprint (EF), TNS (The Natural Step), An Environmental Management System (EMS), Ecodesign).

Ключевые слова: устойчивое развитие, средства, зеленая экономика.

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Сравнительный анализ эффективности внешнеэкономической деятельности Брестской области Республики Беларусь и Волынской области Украины

В работе проведён сравнительный анализ состояния внешнеэкономической деятельности районов и городов Брестской области Республики Беларусь и Волынской области Украины. С целью развития регионов и стран в целом предложены направления развития сотрудничества между Брестской и Волынской областями. Также плодотворному развитию двухсторонних связей этих регионов способствуют следующие интеграционные объединения: еврорегион «Буг», деятельность которого способствует взаимовыгодным экономическим отношениям; Программа добрососедства «Беларусь–Польша–Украина», которая способствует устойчивому экономическому и общественному развитию в приграничных областях.

Ключевые слова: экспорт, импорт, внешнеэкономическая деятельность, сальдо, еврорегион.

Постановка научной проблемы и её значения. Внешнеэкономическая деятельность (ВЭД) является важной составляющей национальной экономики, формирующей её структуру, динамику и устойчивость. Основными задачами Республики Беларусь в области внешнеэкономической деятельности являются расширение экспорта, рационализация объёма и структуры импорта, углубление взаимодействия с мировым рынком, осуществление эффективной внешнеторговой политики. Перед Республикой Беларусь стоит проблема выбора эффективного метода государственного регулирования внешнеэкономической деятельности, а также поиска новых зарубежных партнеров.

Работа выполнена в рамках исследования одного из приоритетных направлений фундаментальных и прикладных исследований в Республике Беларусь – внешнеэкономической деятельности, содержащейся в Программе социально-экономического развития Республики Беларусь на 2011–2015 гг.

Анализ исследований этой проблемы. Проблемой эффективного развития внешнеэкономической деятельности стран и регионов занимались ещё такие известные учёные, как А. Смит, В. Леонтьев, М. Портер, Д. Рикардо. Из современников можно выделить научные работы Н. А. Барановского, В. Ю. Керецман, А. А. Сыщука, Я. А. Мартынюка.

Цель данной работы – сравнительный анализ развития внешнеэкономической деятельности Брестской и Волынской областей. **Ключевой задачей** исследования является поиск направлений развития сотрудничества между анализируемыми регионами.

Изложение основного материала и обоснование полученных результатов исследования. Брестская область находится в юго-западной части Республики Беларусь, её площадь – 32,8 тыс. км²,