

INSTITUTIONAL QUALITIES OF INCLUSIVE ENVIRONMENTAL MANAGEMENT IN SUSTAINABLE ECONOMIC DEVELOPMENT

Kateryna KOSTETSKA, Nina KHUMAROVA

Institute of Market Problems and Economic and Ecological Research NAS of Ukraine

Yuliia UMANSKA, Nadiia SHMYGOL

Zaporizhzhya National University

Viktor KOVAL

Odessa Institute of Trade and Economics

Kyiv National University of Trade and Economics

Abstract:

The article considers international trends and directions of inclusive growth which is considered as an inclusive economic growth and is measured by heterogeneous growth indicators, as an index of inclusive development. Considering the above, was analysed the existing state of the country's growth considering the environmental, economic, social and technological components as prerequisites for inclusive environmental management. Thus, the main focus of this article is on the formation of prerequisites for inclusive nature management in socio-economic and environmental practices and their subsequent methodological support. So segments of population prosperity means not just material consumption, but social vision formation and the institutional support creation for enables everyone to participate in the socio-economic achievements. The main gaps in the institutional support of the inclusive environmental management process are disclosed: in the social sphere: limited access to economically viable means that meet the real needs of the population in terms of health care, social assistance, basic education and awareness; in the ecological and economic sphere there is no effective and efficient management of providing the population with products that comply with the requirements of eco-certification and eco-labelling, which negatively affects the replenishment of the state budget and the promotion of the rational use of natural resources. Therefore, in order to create a favourable climate and institutional support of inclusive environmental management, in this article, will conduct a thorough analysis of the status of its components and assess the compliance of the existing conditions with current international requirements for inclusiveness. Inclusive growth requires environmental inclusion, which can be achieved through the introduction of new metrics and resource value indicators in regional development projects and programs. In doing so, measures should be developed and recommendations made to improve further planning and control.

Key words: *inclusiveness, index, environmental management, institutional qualities*

INTRODUCTION

The concept of inclusive development is at the forefront of many strategic documents, both international and national: the 2030 Ukraine Sustainable Development Strategy Draft, the 2030 UN Millennium Development Goals, OECD researches continue to focus efforts on combining the environmental component of social development with economic inclusiveness. However, they do not consider the interdependence on environmental management and social development.

These documents contain the prerequisites for the formation of theoretical foundation and methodological basis for inclusive environmental management based on the identified components: economic, social, environmental and technological (water quality; expanding renewable energy infrastructure; creating an environmentally and economically sound system of payments for the special use of natural resources through the development of fiscal levers adapted to international standards). So, the purpose of the article is to summarize and identify the main trends of inclusive growth and methodological basis for

forming economical approaches of inclusive nature management. Today, financing environmental protection is very small, and makes up only 14% of the budget expenditures [1]. The innovative technological state reserve is also in decline and amounts to only EUR 11.9 million, the share of scientific potential in GDP has decreased significantly, almost twice over the past 3 years [1].

Based on environmentally-friendly growth priorities, was identified its core indicators among economic activities, namely agriculture, forestry, fisheries, electricity, gas and also excise duty on alcohol and tobacco, as an indicator affecting public health. These indicators are almost 17% of the income to the state budget, while there are less than 1.5% of the total budget [1]. Therefore, inclusive environmental management should occupy a leading position in planning strategic directions of the state's development, as well as in planning the functions of existing institutions, to comply with the requirements for the use, storage and reproduction of natural resource potential.

Since in modern days all community existence is connected with ecosystem services and natural resources, inclusive environmental management expresses a wider range of components of the country's development, which include health of the population, awareness, innovations, production of ecological products and more. Of course, it requires improvement of existing methodological recommendations and legislation on environmental management to the new requirements of society, planning and introduction of effective economic and financial mechanisms for regulating technological processes for the development and introduction of environmentally-friendly industries and processes. Also, taking into account the business and society of the environmental component requires the improvement of regulatory tools, as well as the consideration that economic instruments have an impact on the society, income and health. Therefore, strategic planning is required at a multilevel level, constant exchange from top to bottom.

ANALYSIS OF RECENT RESEARCHES AND PUBLICATIONS

The origins of inclusive growth are based on an international vision. Only in recent years foreign and Ukrainian authors provided their vision for inclusive growth. However, scientists point out that a shift from extractive management methods to inclusive ones is needed. Thus, international scholars are operating the importance of changing the economic development of the state through a secure ecosystem approach in order to meet the social needs of society and the well-being of the country through inclusive economic development. Also, the economic system is closed, since it takes into account only economic activities, conflicts with the laws of resource conservation and excludes environmental interests. Studies of Chan-Yuan and Keun [2] are also relevant to this issue. They analyze trends of inclusive development in developing countries by finding a balance between economic growth and social well-being.

This problem is examined using method of actor network theory, which involves a process that includes mutual transformation between science, technology and society. Particular emphasis is put on institutional support of inclusive development, which should ensure balance between production activities and the distribution of income.

The process of managerial decision-making during the formation of an inclusive development strategy is studied in the work of Hampton, Jeyacheya and Long [3]. Attention in this study is paid to the processes in tourism activities, namely: supply chains, economic relations, property, employment and expenses. The authors noted that an inclusive development strategy in the tourism industry is impossible without the inclusion of small business and institutional support of local infrastructure.

The work of Walby [4] is devoted to a search for a compromise and benefit for society between inclusive growth and social equality. The author suggests the inclusion of social equality in all milestones of inclusive growth and emphasizes that human capital should be central. Here, government regulation may consist of investing in a knowledge economy. A vision of economic growth as a product of society, and not just the economy, is offered. Clear directions for achieving inclusive growth in Scotland have been developed by Statham and Gunson [5]. These developments are based on the specialization of the state's economic and social policy on the development of social partnership - the transformation of management and business methods, that is, the establishment of principles of cooperation between the government, employers and employees. According to the authors, it is advisable to form the Scotland's Center for Regional Inclusive Growth as an interactive platform aimed at bringing together government, industry and academic institutions to develop an analytical base and provide materials to regional and local politicians to form a regional vision and tools for achieving inclusive growth.

The international community understands inclusive growth as an overcoming social inequality aimed at achieving sustainable economic development. In our view, it is advisable to consider a broader concept, namely, inclusive environmental management, which should cover all components of the country's development: economic, environmental, social and technological, as a basis for the formation of a new methodology for natural resource economy and its legislative basis.

To find an acceptable compromise of economic, environmental, technological and social components in inclusive environmental management through analysis of international experience and the current state of economic, environmental and social development of the country. To substantiate the need for legislative and social shifts from extractive management to inclusive growth and its normative fixation.

METHODOLOGY

In order to determine the theoretical and methodological basis of the study, analyzed international approaches to determining the incidence of inclusive growth. In the broad sense of the term, inclusive growth means that due to the economic return of as many people as possible, maximum profit is achieved, which in the future belongs to the society. The subject of research is institutional support of inclusive nature management in socio-economic and environmental practice. According to Horn [5], inclusive growth in a tough economic sense means that the added value of the economy must ultimately benefit all populations. The measure may be different, but in the end, macroeconomic growth in purchasing power must be felt by every household. This can be achieved through targeted regional policy that is related to improving the performance of public institutions. In the research [6], inclusive growth aims to reduce unemployment to a minimum and the fullest participation of society in social life with a tie to receiving benefits from this process. In addition, one of the first positions of inclusive growth is technological progress, which creates an environmentally friendly conditions for society.

In this article, the study of inclusive growth was carried out using the methods of theoretical generalization and comparative analysis. The effectiveness of institutional support of inclusive environmental management has been evaluated using scientific abstraction and synthesis methods.

RESULT AND DISCUSSION

Strategic international benchmarks for institutional support

Recent international achievements and recommendations are increasingly incorporating the environmental and social components of the country's growth into their research. In this sense, prosperity for all segments of the population means not just material consumption, but the formation of a social vision and the creation of an institutional support system that enables everyone to participate in the socio-economic achievements of our time. This means combining economic and social policies to enhance their participation in the prosperity of the country, integrate society into political and economic activities to achieve employment for the majority of the population and decent wages. For example, the US EPA Strategic Plan 2018-2022 includes such inclusive growth goals as: cleaner and healthier natural environment; more effective partnership; higher confidence, relevance and effectiveness [7]; Commission Recommendations on Inclusive Growth UK (document Making our economy work for everyone, 2017) includes recommendations for industrial regional strategies building, that will be ensure the productivity and quality of jobs managed by businesses, taking into account the requirements of a sustainable economic and nature development [8]; Republic of Poland in the

document "Creating an Inclusive Environment for Business and Innovation, Poland's Challenge: Accelerate Inclusive Growth, 2015" allocated legislature and executive interaction in order to represent developing of inclusive regional cooperation [9]; The purpose of program "Delivering Inclusive Growth in Scotland, 2019" is achieving sustainable resource use as an environmental perspective for inclusive development [10]; Israel Country Report: "Business Contribution to the Inclusive Growth of Israel, 2019" emphasizes on the diffusion of a new capitalism model of corporate practices to promote more inclusive environmental management growth [11]; In program Republic of China "Promoting sustainable and inclusive growth, jobs creation, productive investment and trade, 2012" oriented on economic diversification on the production of environmentally goods and the provision of environmentally services [12]. So, the institutional support of the process [13, 24] implies:

- Education and training: accessibility of education, quality of education, personal capital (intellectual);
- Services and infrastructure: well-established infrastructure for basic and digital services; proper health care;
- Elimination of corruption: cooperation between politics and business; business investment;
- Financial intermediation, economy and investments: Inclusion in the financial system, business mediation by the state, investments;
- Construction and business activities: development of business environment for small entrepreneurs;
- Employment and decent wages: labour productivity, wages and social compensation;
- Fiscal policy and transfers: tax burden, social protection.

Therefore, the institutional environment [14] should include the following components: construction of an integrated infrastructure, its state regulation and financing that will contribute to the socio-economic development of society; creation of legal framework of public law and its investment; innovation in social direction and employment; organization of responsible business and social partnership; improving the image of the state; creation of new forms of industry and services on the basis of inclusive growth with proper regional regulation and support; reorientation of basic education programs to high-quality academic, basic qualification and social education; positioning the environment as a social space for communication with access to green areas for the awareness of citizens on environmental conservation; linking national development strategies to the European basis and the latest digital requirements.

Systematic display of preconditions and components of inclusive environmental management

One of the innovative ways of inclusive development is inclusive environmental management. Consider the current

state of inclusive nature management in Ukraine by the components have identified: economic, environmental, social and technological.

First of all, let us note the positive dynamics, namely, in 2018 the growth of the Ukrainian economy accelerated, real GDP grew to 3.3% at the end of the year – this is the highest percentage in seven years (in 2017, real GDP increased by 2.5%) [1], due to the growth of household consumption that supported significant growth rates of sectors aimed at domestic demand sectors, in particular retail trade, passenger turnover and service sectors. At the same time, agriculture was one of the main drivers of real GDP growth owing to the record harvest of cereals and oilseeds.

The negative aspect is that spending and investing in major sectors of the economy are very small. This is evidenced by the fact that the share of the public sector for 9 months of 2018 in general amounted to only 13.6% [15]. The above data prove that in the majority the budget revenues are non-state sectors of the economy, which influences the negative dynamics of the development of the state industry [16] and inclusive economic growth as a whole.

Also, the environmental state of Ukraine (Fig. 1) [17] requires new approaches to solving urgent problems.

The above data indicates the necessity to create factors uniting the components of inclusive environmental management, in accordance with the existing legislation of Ukraine. Proceeding from the methodological foundations of traditional environmental management [18, 19, 20], based on general economic postulates, which is based on all factors of socio-economic and environmental development, technological content and their legislative regulation.

In our opinion, inclusive environmental management is an opportunity for every member of society to access aesthetic, economic and emotional benefits from natural resources, with the formation of new requirements to the regulatory framework based on accessibility and responsibility for the environment and the rational use of natural resources in order to achieve a new quality of life and goals of the experience economy (Fig. 2).

1. According to the definition, inclusive environmental management should be based on [18, 19, 20]:
2. Technological component: introduction of technologies developed on the basis of the latest scientific knowledge, which by their technological level exceeds the best domestic and foreign analogues and are competitive on the world market for the development of resource-intensive industries through legally justified requirements and standards for the conservation of natural conditions.
3. Economic component: proper fiscal regulation of environmental management and regulatory framework for shifts in social, environmental and technological spheres; Environmental component, which should be focused on achieving the principles of sustainable development: conservation of mineral resources; sustainable development of industry; transport; agriculture; conservation of land, water, forest resources; as well as rational environmental management;
4. Social component: education, health, aesthetic impressions of the resource component; population income, job opportunities.

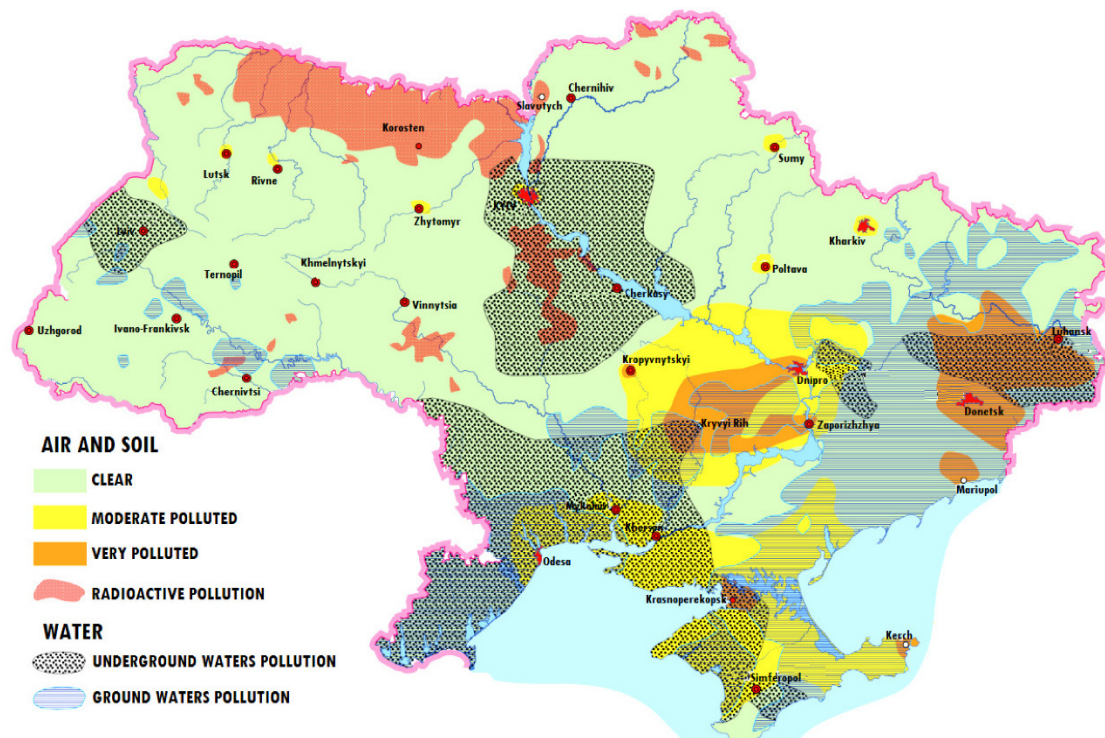


Fig. 1 Environmental state of Ukraine

Source: based on [17].

At the same time, the main direction of inclusive environmental management is a compromise between the instruments of influencing society and the economy with fiscal policy and technological innovation, and spending policies on environmental management [23, 24].

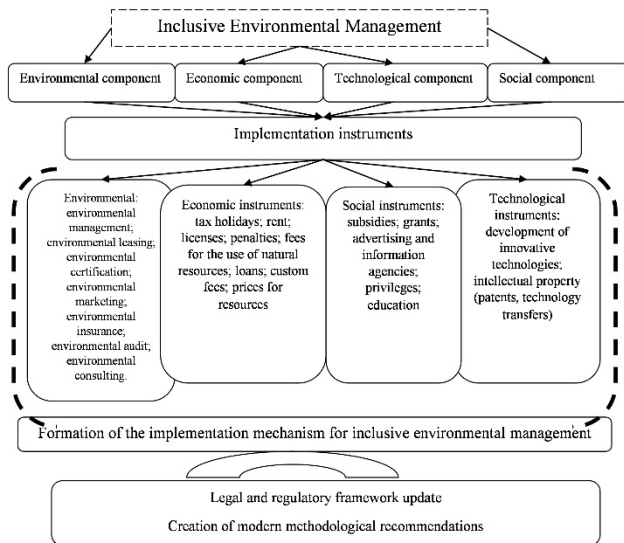


Fig. 2 Structure of inclusive environmental management

Methodology for assessing inclusive environmental management in Ukraine

The formation of inclusive environmental management requires effective institutional support. Today, there are already many institutes for regulating the main supports of strategic documents in practice. However, outdated functions, directions and mechanisms of regulation of the process of introducing inclusive environmental management are ineffective [25]. A striking example of this situation is the economic reflection of our chosen components: social, environmental, technological and economic. The existing regulatory and methodological basis is outdated and cannot be used for calculations in inclusive environmental management. International organizations, as mentioned in the beginning of the article, propose to calculate inclusive development according to various indices. However, all index approaches have different components for calculation and do not cover the range of definitions we set [26, 27]. In article is proposed an algorithm for conducting an economic assessment of inclusive environmental management (Fig. 3).

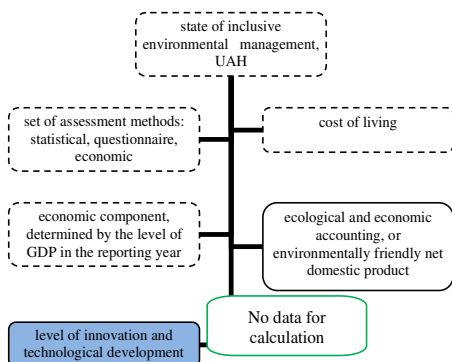


Fig. 3 An algorithm for economic evaluation of inclusive environmental management

According to the above algorithm, the state of inclusive environmental management in Ukraine in 2017-2018 can be determined in monetary terms, according to the data of the State Statistics Service of Ukraine [1].

Economic component, according to the annual growth rate due to the fact that environmental management is closely linked to economic activity and can be calculated through the real GDP indicator by the formula (1):

$$GR = \frac{Y_1 - Y_0}{Y_0} 100\% \tag{1}$$

where:

Y_1 and Y_0 are, respectively, real GDP in current and base years.

$$GR_{2017} = \frac{2985-1079}{1079} 100\% = 176.64\%$$

$$GR_{2018} = \frac{3083-1079}{1079} 100\% = 185.73\%$$

$$EDP = (NDP - DPNA) - DGNA \tag{2}$$

where:

NDP is net domestic product;

DPNA is the evaluation of depletion of natural resources;

DGNA is the evaluation of environmental damage.

$$EDP_{2017} = (90.7 - 9.2) - 6.7 = 74.8 \text{ mln EUR}$$

$$EDP_{2018} = (98.8 - 10.7) - 6.7 = 81.4 \text{ mln EUR}$$

The social indicator will be estimated by using the cost-of-living method of Revutsky by the formula (3) [30]:

$$EECL = SL1 \cdot B1 \cdot N + SL2 \cdot B2 \cdot N + SL3 \cdot B3 \cdot N + SL4 \cdot B4 \cdot N \tag{3}$$

where:

EECL is the economic equivalent of the cost of living;

SL – subsistence level for one person in a certain category;

B – time during which these costs will be incurred;

N – number of months.

The average life expectancy in Ukraine is 71 years, the retirement age is 60 years; age of beginning of work – 18 years; life expectancy at retirement – 11 years.

The subsistence level per person, as at 01.01.2018: children under 6 years (SL1) – 54.48 EUR; children aged 6-18 years (SL2) – 67.46 EUR; able-bodied persons (SL3) – 74.28 EUR; persons with disabilities (SL4) – 58.53 EUR.

The subsistence minimum per person, as at 01.01.2019: children under 6 years (SL1) – 63.74 EUR; children aged 6-18 years (SL2) – 79.46 EUR; able-bodied persons (SL3) – 45.30 EUR; persons with disabilities (SL4) – 58.64 EUR.

Thus, the social component of inclusive development has the following indicator:

$$EECL_{2017} = 56.30 \text{ mln EUR.}$$

$$EECL_{2018} = 60.03 \text{ mln EUR.}$$

Therefore, the state of inclusive environmental management in Ukraine has the following form (Fig. 4).

The above data concludes that the monetary equivalent of inclusive environmental management has increased in comparison with 2017-2018, but there is no data on the technological component.

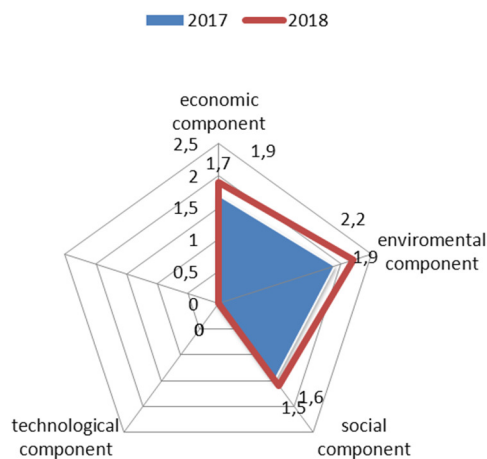


Fig. 4 State of inclusive environmental management in Ukraine

With the existing methodological recommendations is impossible to make a calculation that would really reflect the state of growth in Ukraine as a whole, as well as to determine the total index of inclusive environmental management in the country, in particular [31].

Therefore, there is an urgent need to restructure the existing methodological and legislative basis in this field through the prism of quality institutional support. First of all, this restructuring includes creation of an optimal political atmosphere, that is, improving the set of existing rules and policies aimed at preserving environmental resources at the national level, by identifying the best areas for investment and financing by determining the responsibilities of state and regional institutions, non-profit and business structures; the formation of effective coordination mechanisms and planning processes.

Given the above, the priority areas of institutional reform are:

1. Improving existing legislation considering international recommendations:

- revision of the environmental liability system;
- introduction of effective economic sanctions;
- creation of a public database on the existing natural potential, which should include data on the extraction, production, and use of resources;
- resolving issues of conflicting interests of government, society and business environment;

2. Amendments to the tax legislation:

- setting clear standards for taxation of operations with the objects of ownership of natural resources and objects;
- adjusting the guidelines for the calculation of environmental and economic indicators of the environment, taking into account the parameters of inclusiveness;

3. Developing a state doctrine of inclusive environmental management with introduction of changes to the existing legislative field and extension of the rights of the society in the part of access to the information contained in the databases of state authorities.

The introduction of these changes will allow to introduce the practice of testing the proposed legislative and regulatory initiatives by the society and business structures, as well as testing the research institutions for the analysis of

the effectiveness of innovations, calculations on the harmonious adaptation of the country to the inclusive environmental management in general and economic development in particular [25].

CONCLUSIONS

The strategic priorities of the international community allow us to consider natural resources and quantitative indicators of their use as constituents of inclusive environmental management, encompassing the full range of economic, technological, social and environmental components.

Based on an analysis of international approaches, that inclusive growth should not be seen as an end in itself, but as a means of achieving inclusion and shared prosperity; creating a quality social environment, developing a secure infrastructure.

However, the analysis shows that today there is no clearly regulated vision of inclusive environmental management at all, and even more so considering the economic, technological, social and environmental components. Also, the legislative framework does not spell out the conceptual apparatus of inclusive growth, inclusive environmental management, and the methodological and tax system does not take into account enough criteria for their development. Focus attention on that there is no effective institutional support for the development of this aspect, as well as the reorientation of the economic development of the country as a whole.

At the same time, the limited methodological basis is a major barrier to inclusive growth, aimed at compromising the components of inclusive environmental management. International organizations propose to calculate inclusive development according to various indices. However, all index approaches have different components for calculation and do not cover the range of definitions we set. The approbation of the calculation of the state of inclusive environmental management according to our proposed algorithm and the existing methodological approaches made it possible to establish that it is necessary to build the normative basis of the existing methodological recommendations towards diversification from the state to the regional level.

Changing the approach will allow the creation of new regulations on the state of natural resources in the region, the health of the population, which depends on the industry in the region, small businesses, etc., in order to further map and create an information network for government structures in general and the society in particular. This will provide an opportunity to build the strategic development of the country by focusing on the strengths of the regions and investing in their weaknesses. Thus, the priority should be to regulate and streamline approaches to assessing the state of natural resources in monetary terms and building a model for assessing inclusive environmental management at the regional level. Inclusive nature management can enhance regional economic transformation while ensuring optimal use and more sustainable resource allocation to ensure better environmental quality.

REFERENCES

- [1] “Data of the State Statistics Service of Ukraine”. Internet: <http://ukrstat.gov.ua>, Feb. 15, 2019 [Jun. 18, 2019].
- [2] W. Chan-Yuan., L. Keun. (2018, Jul.). “Projecting the Arena of Inclusion: The Case of South Korea in Pursuing a Phased Inclusive Growth Process”. *Review of Policy Research*. [On-line]. 35(4), pp. 590-616. Available: <https://onlinelibrary.wiley.com/doi/abs/10.1111/ropr.12286> [Sep. 5, 2019].
- [3] M. Hampton., J. Jeyacheya. (2018, Mar.). “Can Tourism Promote Inclusive Growth? Supply Chains, Ownership and Employment in Ha Long Bay, Vietnam”. *Review of Policy Research*. 54(2), pp. 359-376.
- [4] S. Walby. (2018, Spring). “The concept of inclusive economic growth”, *Journal: Soundings*. [On-line]. vol. 68, pp. 138-154. Available: <https://www.questia.com/magazine/1P4-2031701363/the-concept-of-inclusive-economic-growth> [Aug. 15, 2019].
- [5] G. Horn. “Neue wege zu inklusivem wachstum – impuls fur die soziale martschaft von morgen”. Internet: <http://www.progressives-zentrum.org>, Oct. 18, 2017 [Sep. 15, 2019].
- [6] M. Gath., D. Schwickert. “Warum ein inclusive wachstum das ziel fur die soziale marktwirtschaft von morgen sein muss” Internet: <https://inklusives-wachstum.de/warum-ein-inklusives-wachstum-das-ziel-fuer-die-soziale-marktwirtschaft-von-morgen-sein-muss/>, Dec. 21, 2017 [Sep. 15, 2019].
- [7] “Working Together FY 2018-2022 U.S. EPA Strategic Plan”. Internet: <https://www.epa.gov/sites/production/files/2018-02/documents/fy-2018-2022-epa-strategic-plan.pdf>, Feb., 2018 [Sept. 5, 2019].
- [8] “Inclusive Growth Commission. Making our economy work for everyone” Internet: <https://www.thersa.org/discover/publications-and-articles/reports/final-report-of-the-inclusive-growth-commission>, Mar., 2017 [Aug. 19, 2019].
- [9] “The World Bank. Poland: Accelerating growth with inclusion” Internet: <http://pubdocs.worldbank.org/en/874711456248331640/Poland-Accelerating-Growth-with-Inclusion.pdf>, Feb., 2015 [May. 7, 2019].
- [10] R. Statham, R. Gunson. (2019) “*Delivering inclusive growth in Scotland*” [On-line]. Available: <https://povertyinequality.scot/wp-content/uploads/2019/06/Poverty-and-Inequality-Inclusive-Growth-final-report.pdf>. [Sep. 22, 2019].
- [11] A. Brown (2019) “*Business Contributions to Inclusive Growth: Lessons from Israel*” [On-line]. Available: <https://www.triplepundit.com/story/2019/business-contributions-inclusive-growth-lessons-israel/83976/>. [Jul. 24, 2019].
- [12] M. Benmehidi (2012) “*Statement on behalf of the Group of 77 and China: Promoting sustained, inclusive and equitable growth, job creation? Productive investment and trade*” [On-line]. Available: <http://www.g77.org/statement/get-statement.php?id=120312b>. [Sep., 18, 2019].
- [13] A. Garcia., S. Manuela Barisic., H. Brinkmann., D. Ponattu. *The inclusive growth and development report*. Deutschland: Bertelsmann Stiftung, Gütersloh, 2017, pp. 19-25.
- [14] V. Koval, G. Duginets, O. Plekhanova, A. Antonov, M. Petrova. (2019, Jun.). “On the supranational and national level of global value chain management”, *Entrepreneurship and Sustainability Issues*. [On-line]. vol. 6, no. 4, pp. 1922-1937. Available: <http://doi.org/10.9770/jesi.2019.6.4>. [Aug. 18, 2019].
- [15] “Share of the public sector in the economy for the 9 months of 2018”. Internet: <http://www.me.gov.ua/Documents/List?lang=uk-UA&tag=UpravlinniaDerzhavnim-SektoromEkonomikils>, Jan. 20.2019 [Apr. 20, 2019].
- [16] V. Koval, I. Mikhno, G. Hajduga, K. Gaska. (2019, Jun.). “Economic efficiency of biogas generation from food product waste”, *E3S Web of Conferences*. [On-line]. vol. 100 (00039). Available: <https://doi.org/10.1051/e3sconf/201910000039> [Sep. 19, 2019].
- [17] Ecological map of Ukraine. Internet: <http://mobilnist.kpi.ua/en/practical-info/#>, Jun. 25, 2018 [Aug. 17, 2019].
- [18] A. Jarvis, A. Varma, J. Ram. (2011). “*Assessing green jobs potential in developing countries: A practitioner’s guide*”. [On-line]. Available: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_153458.pdf. [May 15, 2019]
- [19] J. Davies. (2018, Sept.). “The State of the Sustainability Profession”. *Green Biz*. [On-line]. Available: <https://www.greenbiz.com/article/state-sustainability-profession-2018> [Aug. 15, 2019].
- [20] L. Cherchyk, M. Shershun, N. Khumarova, T. Mykytyn, A. Cherchyk. (2017, Apr.). “Assessment of forest enterprises’ performance: integrating economic security and ecological impact”. *Entrepreneurship and Sustainability*. [On-line]. vol. 6, no. 4, pp. 1784-1797. Available: [https://doi.org/10.9770/jesi.2019.6.4\(17\)](https://doi.org/10.9770/jesi.2019.6.4(17)). [Jul. 18, 2019].
- [21] “Methodology of the British Research Centre”. Internet: <https://neweconomics.org/>, Jan., 2018 [Apr. 5, 2019].
- [22] O. Yankovyi, Ya. Goncharov, V. Koval, T. Lositska. (2019) “Optimization of the capital-labor ratio on the basis of production functions in the economic model of production”. *Natsional'nyi Hirnychiy Universytet. Naukovyi Visnyk*, 4, pp. 206-212. Available: <https://doi.org/10.29202/nvngu/2019-4/18>
- [23] M. Yeshchenko, V. Koval, O. Tsvirko, (2019). “Economic policy priorities of the income regulation.” *Espacios*, vol. 40, no. 38, pp. 11.
- [24] M. Partidario, R. Gomes. (2013, Jan.). “Ecosystem services inclusive strategic environmental assessment”, *Environmental Impact Assessment Review*. [On-line]. vol. 40, pp. 36-46. Available: <https://doi.org/10.1016/j.eiar.2013.01.001>. [May. 3, 2019].
- [25] A. Siddiqi, R. Collins. (2017, Feb.). “Sociotechnical systems and sustainability: current and future perspectives for inclusive development”, *Current Opinion in Environmental Sustainability*. [On-line]. vol. 24, pp. 7-13. Available: <https://doi.org/10.1016/j.cosust.2017.01.006>. [Sep. 23, 2019].
- [26] X. Luo, D. Muleta, Z. Hu, H. Tang, Z. Zhao, S. Shen, B. Lee. (2017, Feb.). “Inclusive development and agricultural adaptation to climate change”, *Current Opinion in Environmental Sustainability*. [On-line]. vol. 24, pp. 78-83. Available: <https://doi.org/10.1016/j.cosust.2017.02.004>. [Aug. 7, 2019].
- [27] M. Virah-Sawmy. (2015, Jun.) “Growing inclusive business models in the extractive industries: Demonstrating a smart concept to scale up positive social impacts”, *The Extractive Industries and Society*. [On-line]. vol. 2, no. 4, pp. 676-679. Available: <https://doi.org/10.1016/j.exis.2015.07.003>. [Feb. 17, 2019].

- [28] D. Teklemariam, H. Azadi, J. Nyssen, M. Haile, F. Witlox. (2015, Sep.) "Transnational land deals: Towards an inclusive land governance framework", *Land Use Policy*. [On-line]. vol. 42, pp. 781-789. Available: <https://doi.org/10.1016/j.landusepol.2014.09.021>. [Aug. 7, 2019].
- [29] D. Maxwell, R. Van der Vorst, (2003, Nov.). "Developing sustainable products and services", *Journal of Cleaner Production*. [On-line]. vol. 11, no. 8, pp. 883-895 Available: [https://doi:10.1016/S0959-6526\(02\)00164-6](https://doi:10.1016/S0959-6526(02)00164-6). [May. 2, 2019].
- [30] L. Revutsky. (2019, Jan.). "The income value of a person from retirement to the end of life". *Audit-it.ru*. [On-line]. Available: <https://www.audit-it.ru/articles/appraisal/a108/977105.html> [May. 13, 2019].
- [31] B. Nunez, D. Bennett. (2010, Jun). "Green operations initiatives in the automotive industry", *Benchmarking: An International Journal*. [On-line]. vol. 17, no. 3, pp. 396-420. Available: <https://doi.org/10.1108/14635771011049362>. [Feb. 22, 2019].

Kateryna Kostetska

ORCID ID: 0000-0003-4864-6129

Institute of Market Problems and Economic
and Ecological Research NAS of Ukraine
Department of Economic Management
of Natural Resources
Francuzskiy bylvar, 29, 65044 Odessa, Ukraine

Nina Khumarova

ORCID ID: 0000-0001-5255-8004

Institute of Market Problems and Economic
and Ecological Research NAS of Ukraine
Department of Economic Management
of Natural Resources
Francuzskiy bylvar, 29, 65044 Odessa, Ukraine

Yuliia Umanska

ORCID ID: 0000-0002-4491-8644

Zaporizhzhya National University
Department of Accounting and Taxation
Zhukovskogo Street 66, 69600 Zaporizhzhya, Ukraine

Nadiia Shmygol

ORCID ID: 0000-0001-5932-6580

Zaporizhzhya National University
Department of Accounting and Taxation
Zhukovskogo Street 66, 69600 Zaporizhzhya, Ukraine

Viktor Koval

ORCID ID: 0000-0003-2562-4373

Odessa Institute of Trade and Economics
Kyiv National University of Trade and Economics
Department of Accounting, Economics and Management
Inglezi str. 6, 65070 Odessa, Ukraine
e-mail: victor-koval@ukr.net