

## MAIN DIRECTIONS OF FORMING STATE STRATEGY OF SUSTAINABLE REGIONAL DEVELOPMENT IN UKRAINE: REALITIES AND PERSPECTIVES

Currently, Ukraine is facing the strategic task of economic modernization on the basis of transition to the innovative way of social and economic development. According to experience of developed countries, raising this problem is connected with "environmental" dilemma: to implement environmental technologies at the "end of pipe" or on its "beginning"<sup>1</sup>. It should be noted that the second type of technologies is the most effective in the long-term period but also more expensive and significantly hinders economic growth. Efficiency of its implementation largely depends on the methods used to manage and control this process. One of the most popular methods of state regulation of sustainable development is a strategic planning system that balances economic, environmental and social goals of long-term community development.

Correlation between economic development and environmental safety has been studied by both national and international scientists. Problems of production greening were covered by R. Costanza, W.E. Rees, S. Harichkov [1-3], forming strategy and creating conditions for transition to sustainable development – by T. Panayotou, O. Polovyan, O. Veklich, O. Garkushenko [4-7], increasing economic efficiency of natural resources usage – O. Balatsky, L. Melnyk, O. Popova [8-9].

However, there is still no single approach to the definition, creation and development of an integrated strategy for sustainable development

based on a holistic vision. Therefore the aim of the work is to identify key principles, directions and features of a strategy for sustainable development of the regions of Ukraine.

Sustainable development presupposes co-evolutionary interaction between economic, social and ecological subsystems. Managing this process relies on the use of methods and techniques of change management (management of evolution), which is based on the theory of synergetics, self-organization and evolutionary economics. For these theories it is typical to consider qualitatively new modes of behavior of complex managed structures – bifurcations, attractors, multiple optimal solutions etc., that is caused by possibility of emergence of space-time dissipative structures<sup>2</sup>.

Methodical basis for sustainable development management are:

evolutionary management (change management) on the basis of a hierarchically controlled dynamic system;

environmental innovation management, which is the first step aimed to co-evolutionary development of society and nature;

approach of process innovation that allows to organize the generation and realization of required resource saving technological solutions;

regulatory and legal framework of transfer of knowledge and technology that allows to consolidate environmental imperative of sustainable development.

<sup>1</sup> "End of pipe" – neutralization of pollution at the last stage of the production cycle.

"Beginning of pipe" – the introduction of environmental technologies at all stages of the production cycle.

<sup>2</sup> Dissipative structures are the sets that draw attractors that can generate efficient intersystem connections. As a result, coherent, coordinated movement occurs in the managed system.

Evolutionary management suggests that, while planning and implementing economic development based on innovation, it is possible to manage evolution of society. Society that is evolving faster wins in the historic race. Evolutionary management tries to combine continuous training and development of human capital within biogeocoenose that is occupied by territorial community. This type of management is required to make gradual changes in reflective way by using the procedure of selection and variability, that is the basis for further changes. It synthesizes the advantages of decentralized coordination types (based on the adaptive properties) and the benefits of long-term planning.

Conceptually, the achievement of sustainable development is only possible with the use of tools for strategic planning, which involves determining long-term scenarios and consequences of management actions on the managed system. The effectiveness of development of strategic goals of sustainable development is largely dependent on the use of active methods of interactive planning. The result is recommended (possible) targets for the regulator of the lower level. Appropriate directions to implement objectives of sustainable development are developed with appropriate forms of interaction and scenario approach based on economic and mathematical modeling, interactive planning, logical incrementalism. These directions are the basis for developing appropriate targeted programs, strategies for the development of individual regions and businesses, voluntary agreements between business and the state etc.

Sustainable development does not apply to processes with the end: each generation puts their own goals, taking into account environmental constraints and needs and their own idea of social justice [10]. In this process, it is necessary to make correlation between top-down planning and bottom-up incrementalism<sup>1</sup>.

The following key issues of change management in social processes should be considered:

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<sup>1</sup> In strategic management incrementalism is the approach of phased problem solving and represents a process that aims to get the result through adopting a plurality of small decisions taken during a long period of time [11].

1) contradictions. Contradictions related to the objectives, methods and ways of their solution often arise during dealing with complex social problems. It should be noted that each of the alternative solutions have both positive and negative aspects. The uncertainty of outcomes in the long run is of particular note;

2) distribution of control. In pluricentric societies control is distributed between different members of society, with their own ideas, interests, resources, that may conflict with each other;

3) identification of short-term steps. The way short-term solutions help to achieve long-term goals is of great importance;

4) danger of “lock”. There is a danger that once the selected solution will not be the optimal solution in the long run. This is compounded by the fact that the choice of one solution and its active use in the process of change while ignoring other options will lead in the future to the domination of selected solution over others. The list of options may become the solution of this problem;

5) political shortsightedness.

The key element of the strategy of sustainable development is the greening of economy, which includes the transformation of economic subsystem by regulating economic development in the direction of reducing the eco-destructive impact on development conditions of environmental and biotic subsystems. Greening requires a reorientation of the economy on eco-sustainable goals at the macro level [12].

The issue of sustainable development is especially important for Ukraine because of the high level of technogenic burden on its environment. The main factors of ecological crisis in Ukraine are primarily industrial complexes – the leading consumers of raw materials, energy, water, air, land and at the same time the most powerful source of almost all kinds of pollution. During 2012 the atmosphere has received 6.8 mln tons of pollutants (64% are from stationary sources). The volume of toxic substances is 11.3 t per 1 km<sup>2</sup> of the country and 150 kg per one person.

It should be noted that indicators of technogenic burden on the atmosphere differ at the regional level. In particular, in the Donetsk region emissions per 1 km exceed the average lev-

el in 5.7 times and per person – 2.6 times, Dnipropetrovsk region – respectively 3.3 and 2.4 times, Lugansk region – 1.8 and 1.6 times, Ivano-Frankivsk region – 1.6 and 1.2 times.

According to the State Agency of Land Resources of Ukraine in 2012 1.2 thousand hectares of land were damaged. In general, at the end of 2012, the area of damaged land was 144.5 hectares (0.24% of the total land area of Ukraine), exhausted – 45.8 hectares (0.08%).

According to the State Agency of Water Resources of Ukraine in 2012 10.5 bln cubic meters of water were taken from natural water bodies (54.3% – for production). During 2012 8.1 bln cubic meters of water were dropped in reservoirs, of which almost 19% fell into the water in a polluted state (3.6% – without any treatment).

In 2012, the volume of waste generation was 450.7 mln tons. Wastes of fourth danger level make up 99.7%, wastes of third danger level – 0.22%. wastes of the first and second danger level make up respectively 3.2 thousand and 357.5 thousand tons.

As of January 1, 2013 there were accumulated 14.9 bln tons of waste in specially designated places and on the territory of enterprises. 96% of country's waste are stored on the territory of five regions, particularly in Dnipropetrovsk (9548 mln tons), Donetsk (2887 Mt), Zaporizhia (154 mln tons), Kirovograd (270 mln tons) and Lugansk (1470 mln tons) regions<sup>1</sup>.

Thus, the analysis of the current environmental situation in Ukraine indicates that the load on the components of the environment is significant. This is caused by large resource-intensiveness of national economy with a predominance of polluting, outdated technologies. The specificity of the gross national product indicates the raw material oriented industries. Long-term comprehensive exploitation of natural resources has led to a loss of the ability of ecosystem to heal itself, that is accompanied by deterioration and depletion of mineral properties of the main biosphere components, increasing the negative impact on public health, deteriorating working conditions and overall quality of life.

The grouping of regions of Ukraine is made in terms of economic and environmental conditions using cluster analysis. As the result the following groups are received: 1) Autonomous Republic of Crimea, Mykolaiv Region; 2) Vinnytsia, Volyn, Zhytomyr, Kirovograd, Rivne, Sumy, Ternopil, Kherson, Khmelnitsky, Cherkasy, Chernivtsi and Chernihiv regions; 3) Dnipropetrovsk and Donetsk regions; 4) Transcarpathian, Ivano-Frankivsk, Kyiv, Lviv, Poltava regions; 5) Zaporizhia region; 6) Lugansk, Odessa and Kharkiv regions. The mean values of the groups, constructed on standardized values, are shown in Fig. 1.

So, the groups significantly differ from each other. The elements of the first group show small values for all indicators except waste generation. The representatives of the third group (industrial regions) are characterized by large values of parameters, in contrast to the second group, that consists of the regions with traditionally favorable ecological situation, but with a less-developed heavy industry. Zaporizhia region refers to a particular group due to the specific character of the selected indicators. The large part of industrial sector, availability of nuclear power engineering has led to the large volume of wastes and material costs.

Two types of rating are built for the overall assessment of the economic and ecological situation in the regions of Ukraine. The rating "A" (Table 1) defines the level of production greening in regions. It is built on the basis of the following indicators: materials consumption, generation and accumulation of wastes, draining of polluted wastewater per 1 UAH of industry, local public expenditures on environmental protection per 1 UAH of industry. According to the rating "A" the level of production greening is sufficiently low across the whole country. Differences in its regional values are caused by differences in levels of concentration of industrial production.

The rating "B" (Table 2) defines the level of ecological load on the population of the region. It is based on the following indicators: emissions of pollutants, carbon dioxide emissions, generation and accumulation of wastes, draining of polluted wastewater per 1 person.

<sup>1</sup> All calculations are carried out according to the Statistical Yearbook of Ukraine for 2012 [13]

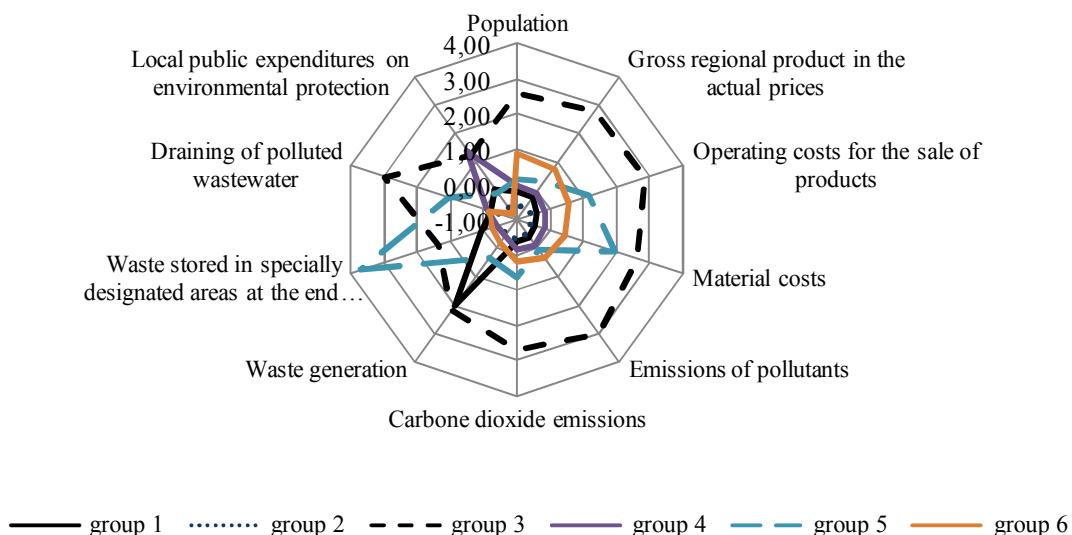


Fig. 1. The mean values of obtained groups in 2012

Table 1

The rating (A) of regions of Ukraine in terms of greening of production

| No | Region          | Integral Index |
|----|-----------------|----------------|
| 1  | Kharkiv         | 1.365          |
| 2  | Dnipropetrovsk  | 1.446          |
| 3  | Odessa          | 1.493          |
| 4  | Volyn           | 1.773          |
| 5  | Donetsk         | 1.811          |
| 6  | Kyiv            | 1.867          |
| 7  | Transcarpathian | 1.878          |
| 8  | Lviv            | 2.002          |
| 9  | Poltava         | 2.106          |
| 10 | Chernivtsi      | 2.209          |
| 11 | Rivne           | 2.223          |
| 12 | Khmelnitsky     | 2.256          |
| 13 | Zhytomyr        | 2.319          |
| 14 | Lugansk         | 2.490          |
| 15 | AR of Crimea    | 2.827          |
| 16 | Kirovohrad      | 2.840          |
| 17 | Chernihiv       | 2.841          |
| 18 | Cherkasy        | 2.973          |
| 19 | Ivano-Frankivsk | 3.024          |
| 20 | Mykolaiv        | 3.043          |
| 21 | Vinnytsia       | 3.108          |
| 22 | Ternopil        | 3.276          |
| 23 | Zaporizhia      | 3.421          |
| 24 | Sumy            | 3.458          |
| 25 | Kherson         | 4.368          |

Table 2

*The rating (B) of regions of Ukraine in terms of ecological security of the population*

| №  | Region          | Integral Index |
|----|-----------------|----------------|
| 1  | Chernivtsi      | 0.079          |
| 2  | Volyn           | 0.085          |
| 3  | Ternopil        | 0.154          |
| 4  | Zhytomyr        | 0.159          |
| 5  | Transcarpathian | 0.160          |
| 6  | Khmelnitsky     | 0.175          |
| 7  | Rivne           | 0.179          |
| 8  | Chernihiv       | 0.399          |
| 9  | Kirovohrad      | 0.403          |
| 10 | Odessa          | 0.407          |
| 11 | Cherkasy        | 0.445          |
| 12 | Vinnysia        | 0.507          |
| 13 | Kharkiv         | 0.648          |
| 14 | Poltava         | 0.657          |
| 15 | Kherson         | 0.765          |
| 16 | Sumy            | 0.875          |
| 17 | Kyiv            | 0.962          |
| 18 | Lviv            | 0.994          |
| 19 | Ivano-Frankivsk | 1.102          |
| 20 | AR of Crimea    | 1.200          |
| 21 | Mykolaiv        | 1.460          |
| 22 | Lugansk         | 1.512          |
| 23 | Dniproprovsk    | 2.729          |
| 24 | Zaporizhia      | 3.136          |
| 25 | Donetsk         | 3.417          |

According to the rating "B" the first place is taken by the Chernivtsi region, the last one – by the Donetsk region. This situation is explained by the level of concentration of production and pollution. It must be clearly understood that the positive situation in some regions is caused by the lack of polluting industries, but not the efficiency of environmental activities.

Thus, the analysis confirms the existence of significant anthropogenic impact on the environment of Ukraine, which appreciably differs by regions. This, in its turn, confirms the need to develop a state strategy for sustainable regional development in Ukraine.

It should be noted that there was developed the State Environmental Policy Strategy of Ukraine till 2020 [14]. Its purpose is to stabilize and improve the state of the environment in Ukraine through the integration of environmental policy into socio-economic development of Ukraine to ensure ecologically safe environment for life and health of population and implement ecologically sustainable system of nature man-

agement and preservation of natural ecosystems. According to this document, the National Environmental Policy of Ukraine is aimed at a number of strategic objectives (Table 3).

The strategy of State Environmental Policy of Ukraine includes steps of its implementation and instruments of this policy, such as: intersectoral partnership; environmental examination; environmental audit; environmental management system, environmental labeling; environmental insurance; technical regulation; standardization and registration in the field of environmental protection, environmental management and ensuring environmental safety; education and scientific support for the formation and implementation of national environmental policy; economic and financial mechanisms; environmental monitoring and control in the field of environmental protection and environmental security; international cooperation in the field of environmental protection and environmental safety.

Table 3

*Strategic goals and objectives of the National Environmental Policy of Ukraine*

| Strategic goals of the National Environmental Policy                              | Strategic objectives of the National Environmental Policy  |
|---|--|
| 1   | 2  |
| 1. Increasing the level of public environmental awareness                         | <ul style="list-style-type: none"> <li>- creating national information system of environmental protection;</li> <li>- increasing the share of environmental information and public service announcements with environmental orientation that are regularly distributed by the media (till 2015 – by 15%, till 2020 – by 30% from the level of 2010);</li> <li>- creating till 2015 a nationwide automated information system for ensuring access to environmental information, till 2020 – system of environmental information management, in accordance with EU standards;</li> <li>- developing till 2012 and implementing till 2020 program to support projects of environmental organizations and bringing the volume of funding: in 2015 – to the level of at least 2% of the total expenditures of the State Fund for Environmental Protection of Ukraine, in 2020 – to the level of at least 3% of expenditures;</li> <li>- creating till 2015 system of environmental education;</li> <li>- providing state support to creation and development of settlements, that use energy and resources saving technologies of house building, and comprehensive implementation of such technologies till 2015</li> </ul>  |
| 2. Improving environmental situation and increasing level of environmental safety | <ul style="list-style-type: none"> <li>- protecting the air by reducing emissions of pollutants; defining target indicators of content of hazardous substances in the air; optimizing the structure of energy sector of the national economy by increasing the use of energy sources with low carbon dioxide emissions;</li> <li>- protecting water resources through implementation of basin-based integrated management, reconstructing existing and creating new municipal wastewater treatment plants;</li> <li>- protecting land resources through reducing arable land; providing till 2015 full consideration of environmental requirements in the process of land allocation for placing objects of various fields of industry and solving issues related to withdrawal (redemption), changing the purpose of land plots; development and implementation of agricultural landscapes management system on the basis of sustainable development till 2020;</li> <li>- protecting forests through increasing the area of afforestation of territory up to 17% of the state territory till 2020;</li> <li>- protecting geological environment through implementation of environmentally friendly technologies of mining till 2020; ensuring land recultivation on the area of at least 4.3 thousand hectares; ensuring the fullest possible use of extracted minerals, minimizing waste during their production and processing;</li> <li>- improving safety of waste management; increasing the volume of procurement, disposal and use of waste as secondary raw materials by 1.5 times till 2020; ensuring final disposal of accumulated unusable pesticides till 2020; creating system of medical waste management till 2015</li> </ul> |
| 3. Achieving safe for human health state of environment                           | <ul style="list-style-type: none"> <li>- creating system of automatic monitoring and strengthening environmental monitoring of air quality till 2015;</li> <li>- ensuring the full compliance with regulatory requirements for centralized drinking water supply sources till 2015;</li> <li>- introducing environmental labeling of products and food till 2020;</li> <li>- developing state system of environmental monitoring through its modernization, strengthening the coordination of activities of monitoring subjects, improving data management systems as a basis for decision-making</li> </ul>   |

*Ending of Table 3*

| 1  | 2  |
|--|--|
| <p>4. Environmental policy integration and improvement of integrated environmental management system</p> | <ul style="list-style-type: none"> <li>- implementing environmental management systems and preparing national target programs of industry greening, that provide technical re-equipment, the introduction of energy-efficient and resource-saving technologies, low-waste, waste-free and environmentally friendly manufacturing processes;</li> <li>- developing and implementing system of incentives for businesses that implement environmental management, principles of corporate social responsibility, apply environmental audit, certification of production, its quality in accordance with international environmental standards, improve environmental performance in line with established international environmental standards</li> </ul> |

So, implementation of this strategy will help to increase the environmental awareness of citizens of Ukraine, improve the environment to a safe for human life level, permanently reduce the level of dependence between economic development and the deterioration of the environment, create a system of sustainable environmental management, provide transition to a system of integrated environmental management in all sectors of the economy, reform the tax system to reinforce the importance of environmental taxation, improve the state system of environmental monitoring and system of information support of decision-making process.

However, this strategy does not take into account the specifics of development and technological burden in individual regions of Ukraine. In addition, it seeks only to solve environmental issues and is not associated with the strategy of socio-economic development. This is contrary to the essence of sustainable development and holistic approach to solving economic and environmental problems.

Removal of the first deficiency must be made within the State Regional Development Strategy, which was approved on November 21, 2013 at the meeting of the Cabinet of Ministers of Ukraine [15]. This paper identifies three main objectives of the state regional policy:

1. Increasing competitiveness of regions (support of regional competitiveness is determined as the main element of development policy of Ukraine).

2. Territorial socio-economic integration and spatial development (ensuring the unity of whole national territory, leveling disparities in regional development to ensure adequate quality of life, regardless of geographic location).

3. Effective state management in the field of regional development (it is necessary to create a framework for implementation of effective regional policy, mechanisms and instruments of state administration, regional development, which would meet the requirements of time and problems facing the region).

Analysis of this regulatory document from the standpoint of sustainable development has allowed to reveal significant shortcomings. In spite of its sufficiently clear socio-economic orientation it completely ignores the issue of environmental development of the country and problems caused by anthropogenic impact on the environment. So, this document does not solve the above-mentioned problem of sustainable regional development. Thus, Ukraine has no state strategy based on a holistic approach to solving the environmental problems of economic development. Existing documents highlight some aspects of sustainable development, but they are not complex.

Development strategy of European countries «Europe 2020: A European strategy for smart, sustainable and inclusive growth» may be an example of solving this problem.

Europe 2020 puts forward three mutually reinforcing priorities:

1. Smart growth: developing an economy based on knowledge and innovation.

2. Sustainable growth: promoting a more resource efficient, greener and more competitive economy.

3. Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

Within the selected directions of development Europe has set itself the following objectives:

the employment rate of the population aged 20-64 should increase from the current 69% to at least 75%, including through the greater involvement of women, older workers and the better integration of migrants in the work force;

investing 3% of GDP in R&D;

reducing greenhouse gas emissions by at least 20% compared to 1990 levels or by 30%, if the conditions are right; increasing the share of renewable energy sources in final energy consumption to 20%; and a 20% increase in energy efficiency;

a target on educational attainment which tackles the problem of early school leavers by reducing the drop out rate to 10% from the current 15%, whilst increasing the share of the population aged 30-34 having completed tertiary education from 31% to at least 40% in 2020;

the number of Europeans living below the national poverty lines should be reduced by 25%, lifting over 20 mln people out of poverty [17].

Member States should adopt the strategy "Europe 2020" to their particular situation. The European Commission proposes them to transform EU objectives into their national strategies. Objectives reflect the essence of smart, sustainable and inclusive growth, but they are not exhaustive. In this regard, the Commission identifies 7 directions of primary importance:

1. "Innovation Union" to improve framework conditions and access to finance for research and innovation so as to ensure that innovative ideas can be turned into products and services that create growth and jobs.

2. "Youth on the move" to enhance the performance of education systems and to facilitate the entry of young people to the labour market.

3. "A digital agenda for Europe" to speed up the roll-out of high-speed internet and reap the benefits of a digital single market for households and firms.

4. "Resource efficient Europe" to help decouple economic growth from the use of resources, support the shift towards a low carbon economy, increase the use of renewable energy sources, modernize our transport sector and promote energy efficiency.

5. "An industrial policy for the globalization era" to improve the business environment, notably for small and medium enterprises (SME), and to support the development of a strong and sustainable industrial base able to compete globally.

6. "An agenda for new skills and jobs" to modernize labour markets and empower people by developing their skills throughout the life-cycle with a view to increase labour participation and better match labour supply and demand, including through labour mobility.

7. "European platform against poverty" to ensure social and territorial cohesion such that the benefits of growth and jobs are widely shared and people experiencing poverty and social exclusion are enabled to live in dignity and take an active part in society.

These targets are interrelated. For instance, better educational levels help employability and progress in increasing the employment rate helps to reduce poverty. A greater capacity for research and development as well as innovation across all sectors of the economy, combined with increased resource efficiency will improve competitiveness and foster job creation. Investing in cleaner, low carbon technologies will help environment, contribute to fighting climate change and create new business and employment opportunities.

Sustainable growth in the context of European development strategy means building a resource efficient, sustainable and competitive economy, exploiting Europe's leadership in the race to develop new processes and technologies, including green technologies.

In the environmental sector, the European Commission distinguishes two main directions: "Resource efficient Europe" and "An industrial policy for the globalisation era".

*Flagship Initiative: "Resource efficient Europe"*

The aim is to support the shift towards a resource efficient and low-carbon economy that is efficient in the way it uses all resources. The aim is to decouple economic growth from resource and energy use, reduce CO<sub>2</sub> emissions, enhance competitiveness and promote greater energy security.

At EU level, the Commission will work:

to mobilise EU financial instruments (e.g. rural development, structural funds, R&D framework programme) as part of a consistent funding strategy, that pulls together EU and national public and private funding;

to enhance a framework for the use of market-based instruments (e.g. emissions trading, revision of energy taxation, state-aid framework, encouraging wider use of green public procurement);

to present proposals to modernise and decarbonise the transport sector thereby contributing to increased competitiveness. This can be done through a mix of measures e.g. infrastructure measures such as early deployment of grid infrastructures of electrical mobility, intelligent traffic management, better logistics, pursuing the reduction of CO<sub>2</sub> emissions for road vehicles, for the aviation and maritime sectors including the launch of a major European “green” car initiative which will help to promote new technologies including electric and hybrid cars through a mix of research, setting of common standards and developing the necessary infrastructure support;

to accelerate the implementation of strategic projects with high European added value to address critical bottlenecks, in particular cross border sections and inter modal nodes (cities, ports, logistic platforms);

to complete the internal energy market and implement the strategic energy technologies plan, promoting renewable sources of energy in the single market would also be a priority;

to present an initiative to upgrade Europe's networks, including Trans European Energy Networks, towards a European supergrid, “smart grids” and interconnections in particular of renewable energy sources to the grid. This includes to promote infrastructure projects of major strategic importance to the EU in the Baltic, Balkan, Mediterranean and Eurasian regions;

to adopt and implement a revised Energy Efficiency Action Plan and promote a substantial programme in resource efficiency (supporting small and medium enterprises as well as households) by making use of structural and other funds to leverage new financing through existing highly successful models of innovative investment schemes; this should promote

changes in consumption and production patterns;

to establish a vision of structural and technological changes required to move to a low carbon, resource efficient and climate resilient economy by 2050 which will allow the EU to achieve its emissions reduction and biodiversity targets; this includes disaster prevention and response, harnessing the contribution of cohesion, agricultural, rural development, and maritime policies to address climate change, in particular through adaptation measures based on more efficient use of resources, which will also contribute to improving global food security.

At national level, Member States will need:

to phase out environmentally harmful subsidies, limiting exceptions to people with social needs;

to deploy market-based instruments such as fiscal incentives and procurement to adapt production and consumption methods;

to develop smart, upgraded and fully interconnected transport and energy infrastructures and make full use of ICT;

to ensure a coordinated implementation of infrastructure projects, within the EU Core network, that critically contribute to the effectiveness of the overall EU transport system;

to focus on the urban dimension of transport where much of the congestion and emissions are generated;

to use regulation, building performance standards and market-based instruments such as taxation, subsidies and procurement to reduce energy and resource use and use structural funds to invest in energy efficiency in public buildings and in more efficient recycling.

*Flagship Initiative: "An industrial policy for the globalisation era"*

Industry and especially small and medium enterprises have been hit hard by the economic crisis and all sectors are facing the challenges of globalisation and adjusting their production processes and products to a low-carbon economy. The impact of these challenges will differ from sector to sector, some sectors might have to “reinvent” themselves but for others these challenges will present new business opportunities. The Commission will work closely with stakeholders in different sectors (business, trade

unions, academics, NGOs, consumer organisations) and will draw up a framework for a modern industrial policy, to support entrepreneurship, to guide and help industry to become fit to meet these challenges, to promote the competitiveness of Europe's primary, manufacturing and service industries and help them seize the opportunities of globalisation and of the green economy. The framework will address all elements of the increasingly international value chain from access to raw materials to after-sales service.

At EU level, the Commission will work:

to establish an industrial policy creating the best environment to maintain and develop a strong, competitive and diversified industrial base in Europe as well as supporting the transition of manufacturing sectors to greater energy and resource efficiency;

to develop a horizontal approach to industrial policy combining different policy instruments (e.g. "smart" regulation, modernised public procurement, competition rules and standard setting);

to improve the business environment, especially for SMEs, including through reducing the transaction costs of doing business in Europe, the promotion of clusters and improving affordable access to finance;

to promote the restructuring of sectors in difficulty towards future oriented activities, including through quick redeployment of skills to emerging high growth sectors and markets and support from the EU's state aids regime and/or the Globalisation Adjustment Fund;

to promote technologies and production methods that reduce natural resource use, and increase investment in the EU's existing natural assets;

to promote the internationalisation of SMEs;

to ensure that transport and logistics networks enable industry throughout the Union to have effective access to the Single Market and the international market beyond;

to develop an effective space policy to provide the tools to address some of the key global challenges and in particular to deliver Galileo and GMES;

to enhance the competitiveness of the European tourism sector;

to review regulations to support the transition of service and manufacturing sectors to greater resource efficiency, including more effective recycling; to improve the way in which European standard setting works to leverage European and international standards for the long-term competitiveness of European industry. This will include promoting the commercialisation and take-up of key enabling technologies;

to renew the EU strategy to promote Corporate Social Responsibility as a key element in ensuring long term employee and consumer trust.

At national level, Member States will need:

to improve the business environment especially for innovative SMEs, including through public sector procurement to support innovation incentives;

to improve the conditions for enforcing intellectual property;

to reduce administrative burden on companies, and improve the quality of business legislation;

to work closely with stakeholders in different sectors (business, trade unions, academics, NGOs, consumer organisations) to identify bottlenecks and develop a shared analysis on how to maintain a strong industrial and knowledge base and put the EU in a position to lead global sustainable development.

Thus, the analysis of the strategy "Europe 2020" confirms its holistic platform, complexity and focus on the coordination of social, economic and environmental objectives of society development. The document clearly identify both general priorities and specific goals and objectives facing both to the whole European Union and to each individual region.

Analysis of above mentioned documents shows that the integration of environmental policy into sectoral policies, obligatory consideration of the environmental component during preparation of development strategies, plans and programs, introduction of environmental management at enterprises, the greening of economic activity is the way to modern sectoral environmental policy, implemented in Western and Central Europe.

However, in Ukraine the process of integrating environmental policy is at the initial

stage. It is necessary to develop the State strategy of sustainable development, which should be based on the following principles:

1) complexity and security: economic development programs should take into account the full range of possible environmental threats, risks and their economic, social and environmental consequences;

2) scientific validity: strategic decision-making in all areas should be based on research and practical developments in the field of sustainable development;

3) preclusiveness: preventing damage, that includes economically effective prevention of the negative impact on the environment;

4) innovativeness: the priority of innovative technologies and equipment, focused on creating environmentally friendly products;

5) avoidance of waste: complex use of natural resources with maximum approach to cleaner production of economic goods, organization of industrial cycles by analogy with natural ecosystems on the basis of avoidance of waste, recycling and cooperation;

6) balance between economic, social and environmental needs: maintenance of volume of natural resources use and pollutants within the regenerative and assimilative capacity of ecosystems;

7) social justice: guaranteeing the equality of citizens before the law, equal opportunities to achieve financial, environmental and social welfare;

8) motivation: creating the process of formation of organizational, social and economic conditions that are constantly updated due to the occurrence of pulses, existing motives and intentions set and achieve strategic objectives;

9) internalization of externalities: compensation for harm, damaging components of the environment and public health, that is made by entities (physical or legal), whose activities led to a negative impact on the environment;

10) transparency of management: consideration of public opinion during determination of economic and environmental regional policy.

Priority directions for sustainable regional development should be directed to:

implementation of cluster oriented industrial policy strategy to improve the competitive-

ness and productivity of the cluster members through innovation and synergy;

intensification of innovation and investment model of industrial upgrading in order to increase production greening, import substitution, technological renovation of fixed assets and provision of energy efficiency;

construction of industry structure that meets the latest international requirements and national priorities of socio-economic development – technology intensity, research intensity and competitiveness;

introduction of special regimes to promote domestic production and export of home industrial products using the latest technologies with deep processing of natural resources, high added value and output of final consumption products;

strengthening of fiscal discipline, optimization of budget costs and improvement of efficiency of budget planning while financing programs of industrial development based on criteria of environmental safety;

greening of the tax system, shift of emphasis in taxation from final results on resource costs;

implementation of structural reforms aimed at reorienting the production from raw materials to the finished process cycles;

strengthening of responsibility for inefficient use of all resources;

extension of waste recycling technologies;

educational reform towards improving the quality of knowledge, development of eco-oriented ethics;

formation of new social and personal psychology of employers and workers, focusing on compliance with the requirements of sustainable development;

implementation of the range of financial and economic measures that promote industrial transition to sustainable development principles.

Thus, the practical implementation of the proposed recommendations for a sustainable regional development will promote a process of changing qualitative characteristics of socio-economic systems within environmental constraints to provide opportunities to meet the needs of future generations.

Further research can be directed towards building economic and mathematical model,

which allows to obtain different scenarios for sustainable development of regions.

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