

Public Policy and Model of Sustainable Development in the Republic of Kazakhstan

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Abstract

This article argues that sustainable development should be in the conceptual focus of public authorities in the Republic of Kazakhstan. Sustainability involves three systems: environmental, economic, and social. The challenge of governance, and thus of implemented public policy, is to sustain each of these systems on its own while maintaining an appropriate balance among them. The article defines the concept of sustainability and sustainable development, and its environmental component in particular, in ways that are relevant to public policy; assesses the validity of the concept in terms of the interrelationships and interdependencies among the three systems. By integrating knowledge and study of the environmental system with the traditional competence in the social and economic systems, public authorities may have a model of sustainable development in the Republic of Kazakhstan which helps to be competitive internationally.

Keywords: sustainable development, management, environmental governance, Kazakhstan model, public policy, indicators of sustainable development, development, competitiveness, ecological situation in the Republic of Kazakhstan

1. Introduction

With the increase in world population and the need to meet the needs of humanity reality of natural resources depletion and constantly increasing degradation of the environment necessitates the formation of an environmental management system, as in the global economy, and for each individual country.

The idea of sustainable development, which arose as a result of limited awareness of humankind in natural resource potential for economic growth, as well as the imminent danger of irreversible adverse changes in the environment. It has been widely recognized in the world. Based on the recommendations and principles set forth in the documents of the UN Conference on Environment and Development, many countries have developed national vision and strategy for sustainable development, which include the provision of a balanced solution of socio-economic problems, problems of environmental quality and natural resource potential to meet needs of present and future generations.

Economic situation in the Republic of Kazakhstan is characterized by positive trends, but the achievement of environmental and economic sustainability of regional development is a prerequisite for the conservation successes and reduces the likelihood of social, national, political, and demographic disasters.

The main role in this process is the management of sustainable development in the Republic of Kazakhstan. With the development of market relations the most important factor in this process appears to registration and regulation of the relationship between economic development and environmental protection. In this regard, economic studies as a mandatory part should include ecological and economic analysis of economic activity, based on a systematic interdisciplinary approach that would rely on the definition and identification of the most effective ways to solve environmental problems.

Currently, the economic research on sustainable development issues is represented by sufficiently mature economic valuation of natural resources, the effectiveness of their use, determination of the economic damage caused by environmental pollution. Much attention is paid to the directions and methods of solving environmental problems, the greening of business.

However, despite the abundance of theoretical papers on this topic, they are poorly investigated. In our view, the problem of improving the efficiency of regulatory processes of sustainable development for ensuring their rationalization in the innovation economy needs to be solved. This necessitates the development of a model of sustainable development management.

2. Materials and Methods

In order to estimate the environmental governance in the Republic of Kazakhstan and reveal the model of sustainable development management we have done complex analyses of environmental problems in Kazakhstan according to the statistics of the Agency of Statistics of the Republic of Kazakhstan.

The methodological basis of the work is represented by such methods as analysis and synthesis, statistical analysis, a method of deconstruction, the comparative method, graphical method.

Main part: Today humanity is faced with a huge number of environmental problems, for a favorable output of which it is necessary to analyze the entire system of scientific research on the evolution of human ecosystem relations, the origin of ideological and philosophical foundations of the process of nature and logical-critical rethinking of the extremely unfavorable trends that have emerged to date in the field of consumption of natural resources.

Interaction of social production and the natural environment should be considered on the basis of the three most important factors of economic growth: human resources, man-made means of production, natural resources. Recently environmental factor has limited economic development more and more. A production activity, during which there is an exchange of matter between man and nature, violates the natural course of the production process.

In connection with this approach close examination of intersubstitutability and complementarity of production factors from the standpoint of the final results, the possibility of saving natural resources while maintaining and increasing the final output are required.

In general, the patterns of interaction of natural resources and economic development (production and consumption), and imminent violations, and environmental pollution, human waste production are represented at the Figure 1.

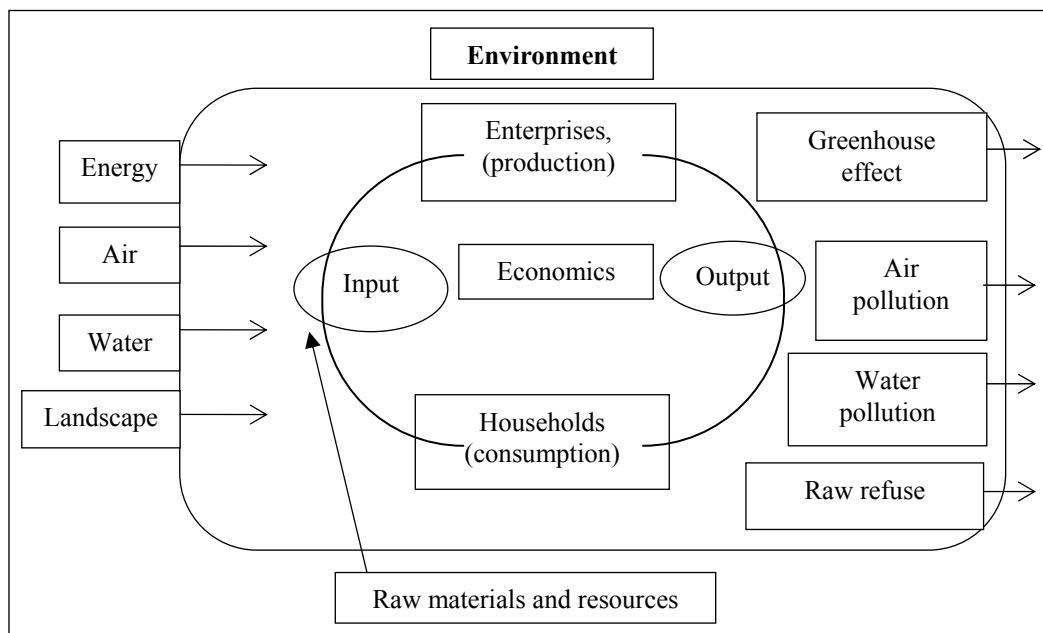


Figure 1. Model of interaction among environment, resources and economics

One of the types of natural capital consumption is a qualitative depletion of the natural resource, as the carrying capacity of the environment. This process is degradation as a result of excessive human impact on nature, its basic ecosystem functions, which include the ability of the biosphere to absorb the various negative effects of pollution and to a certain extent without significant change in their basic properties.

Qualitative depletion of natural capital is observed in all regions of the country. This is due to the fact that the industry, which is the main source of harmful emissions that pollute the environment, represented in all regions to a greater or lesser extent. Thus, more damage is done to the economy in the most industrialized areas of the country. In the scientific literature, the traditional ecological and economic thinking is described by the model of the "black box" (a "black box" refers to the economy). The input to the "black box" is represented by natural resources, as well as the output is the final products which are taken and all kinds of pollution and distortion of the environment, waste and so on.

According to traditional logic with a shortage of output it is obvious that we need to supply large amounts of natural resources to the input. Moreover, the operation inside the "black box" is out of the question. The struggle with pollution, waste management, natural resource degradation at the output of the "black box" is a struggle with the consequences of man-made economic development.

It seems that for the solution of environmental problems in the formation of a new type of economic development based on the rational functioning of the sphere of nature, one should assess and adjust the performance of the economic structures and environmental products i.e. modify a "black box" itself. It is necessary to understand the reasons for the enormous environmental capacity of the economy and to deal with them and not with the consequences.

Before 1970-1980 the focus of economic theory and practice was on two growth factors: labor and capital. Natural resources were assumed to be inexhaustible, and their level of consumption in relation to the possibility of recovery and stocks was not considered among the parameters that determine the development. And the consequences of economic development in the form of various kinds of pollution, environmental degradation and resource remained out of the question. The reverse effect of feedbacks between environmental degradation and economic development, the workforce and the quality of life of the population have not been studied as well. Such economic system in which there is unlimited territory, resources, and so on was called the front economics.

Model of the front of the economics, which ignores the environmental consequences, is quite common for the two technological ways-pre-industrial with its natural farming and industrial with its market economic system.

The post-industrial market-regulated economy elects the concept of economic development taking into account a protection of environment. Within this framework, there were created public structures in more than one hundred countries around the world that protect nature. The concept of environmental protection as well as the concept of the front economics is based on the anthropocentric approach-the need for environmental protection is based on the premise that environmental degradation harms the human and holds back economic development. Therefore, the actual resolution of the conflict between economic development and environmental conservation in the framework of this concept is not possible, as evidenced by the avalanche-like growth of environmental problems in the world.

The solution has been offered a long time ago-a transition of the global economy from a modern man-made type of economic development to sustainable, environmentally balanced development.

The basic idea of sustainable development is quite simple-to ensure harmony in the relationship of society and the environment, economy and ecology, techniques and nature. The practical realization of this idea will require profound changes in socio-economic development in the global, national and regional levels.

In the scientific literature, there are several dozens of definitions of sustainable development. The most commonly accepted definition is provided in the report of the World Commission on Environment and Development, chaired by the Prime Minister of Norway, Mr. Brundtland: "Sustainable development-is development that meets the needs of the present, but does not compromise the ability of future generations to meet their own needs". However, this definition does not suit us with its vagueness and fuzziness.

Some authors consider the concept of sustainable development as a concept of eco-efficiency, i.e. improving the welfare of society is seen only when the steady ability of natural systems to produce resources and absorb wastes generated by mankind. In this case, sustainable development is understood as "development that impacts on the environment within the economic capacity of the biosphere".

However, the environmental component is necessary, but not the only factor in sustainable development. In our opinion, in the basis of the concept of sustainable development should be the idea of a coordinated management of all three interrelated areas: ecology, economy and social sphere. Without dynamic balancing of these areas there can be neither sustainable economic development nor the optimal use of natural resources, or social stability. And this coordinating role should be played by public authorities with the help of public policy.

Currently, there are three concepts which in different ways interpret the idea of sustainable development: weak, strong and rigid stability.

Thus, under the sustainable development of society, we understand:

Firstly, a stable social and economic development without destroying its socio-economic and natural basis and ensures the continuity of the progress of society;

Secondly, the development of a society which is based on sustainable, ecologically sound environmental management, providing a high quality of life for people in the chain of generations;

Thirdly, the transition from the modern industrial and consumer society to noosphere civilization. We are talking about the need to move from the destructive environment of economic development to preserving sculpt and reproducing it.

Considering sustainable development management in the Republic of Kazakhstan (according to the Strategic plan of Ministry of environment and water resources in the Republic of Kazakhstan for 2014-2018) the country clearly identifies its strategic priorities in the sphere of environmental governance.

There are main priorities in natural resources usage in Kazakhstan:

- 1) Air pollution, including the "greenhouse effect";
- 2) Desertification;
- 3) Rational use of water resources;
- 4) Accumulation and disposal of solid waste;
- 5) Switching to renewable energy sources.

These priorities define the vector of further development in the Republic of Kazakhstan in the ecological sphere and the model of sustainable development.

Model of sustainable development management consists of several elements: subjects of management, objects of management, and key measurable indicators in certain areas (economic, ecology and social sphere), strategic documents and programs of development, strategy of public authorities on achieving sustainable development.

Table 1. Structure and dynamics of the costs for 2008-2012 years

	2008		2009		2010		2011		2012	
	billion tenge	%	billion tenge	%	billion tenge	%	billion tenge	%	billion tenge	%
Total amount of costs on environmental protection	91.30	100	102.30	100	99.70	100	185.60	100	196.46	100
On protection and rational use of water resources	24.92	27.30	26.29	25.7	31.90	32	41.76	22.50	45.50	23.16
On protection of air pollution	31.59	34.60	33.76	33.0	24.33	24.40	53.45	28.80	57.15	29.09
On protection of earth from wastes	33.05	36.20	38.46	37.6	40.48	40.60	48.07	25.90	43.25	22.02
On re-cultivation of earth other	1.73	1.90	3.79	3.7	2.99	3	33.22	17.90	37.86	19.27
Costs of major repairs of fixed assets for the protection of the environment, including	11.40	100	8.50	100	15.8	100	7.60	10	8.12	100
On repair of buildings and mechanisms on air pollution	7.90	69.30	4.75	55.90	8.88	56.20	2.92	38.40	2.84	34.97
On protection and rational use of water resources	2.86	25.10	2.24	26.30	5.02	31.80	2.85	37.50	1.34	47.13
Other	0.64	5.60	1.51	17.80	1.90	12	1.83	24.10	0.24	17.90

Resource: The main indicators of environmental protection in the Republic of Kazakhstan. Date Views 17.09.2014 stat.gov.kz

Implementation of the state strategy of sustainable development as one of the most important component entails a mechanism for its financial support. One of the priorities in this case is the calculation and comparison of the dynamics of the total state expenditures on environmental protection and rational use of natural resources, the determination of their actual physical volume in individual years in comparable prices in the Republic of Kazakhstan. This applies to both capital environmental investments of all kinds, as well as ongoing costs of enterprises and organizations, as well as spending budgets at all levels of government.

In general, over the period from 2008 to 2012, a trend of increase in costs on environmental protection with a slight decline in 2010 is clearer. This situation is shown graphically at the Figure 2.

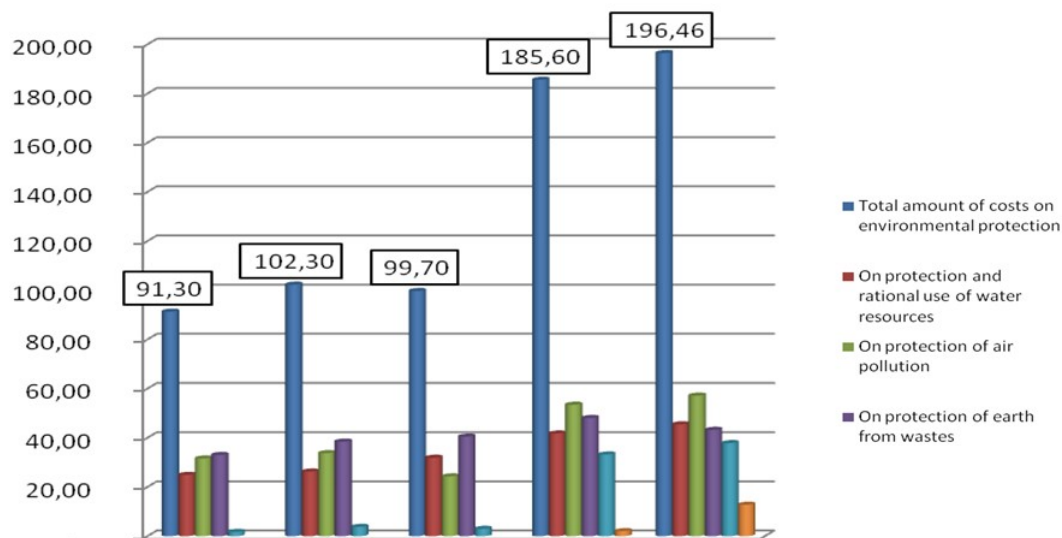


Figure 2. Dynamics of the costs on major environmental activities, in bln. tenge

Moreover, we can notice a sharp increase in the amounts of money spent on environmental protection in 2011, an increase of 86.2%. This phenomenon is due to the increasing emphasis on environmental issues from the government of Kazakhstan, as well as the development and implementation of the provisions of the "green economy";

However, in this period there are changes in the structure and the costs of protecting the environment. So the largest share of the costs on protection and rational use of water resources (32%) and on the protection of land from pollution from waste production (40.6%) was noticed in 2010, while the share for land reclamation has increased dramatically in 2011 and 2012 (17.9 and 19.27% respectively);

Table 2. Structure of the national budget expenditures on environmental protection in 2013

Administrator of a program	Sum, in thousands tenge	Share, in %
Ministry of agriculture in the Republic of Kazakhstan	176 426 140	90.60
Ministry of economic development and trade in the Republic of Kazakhstan	1 333 119	0.68
Ministry of environmental protection in the republic of Kazakhstan	5 202 036	2.67
Agency on earth resources management in the Republic of Kazakhstan	616 870	3.17
The Agency for Construction, Housing and Communal Services in the Republic of Kazakhstan	5 134 070	2.64
Office of the President of Kazakhstan	477 677	0.25
Total	194 741 512	100

Resource: Environmental protection and sustainable development of the Karaganda region in 2014. Date Views 17.09.2014 stat.gov.kz

It should be noted that the cost of repairs of fixed assets involved in the field of environmental protection correlated with general changes in the cost of funding for environmental projects. For example, in 2008 we noticed the largest share of expenditures on air protection (34.6%) and however, most of the funds allocated for major repairs (69.3%) spent on the repair and construction of facilities for the protection of the atmosphere.

Identifying the structure of expenditures on environmental protection in 2013 in the context of program administrators, with an indication of the amounts allocated to its share in the structure we can follow the following trend (see Table 2).

Table 2 shows that the Ministry of Agriculture according to the studied functional group of expenditures receives 90.6%. With the lowest share of the costs provided for the Ministry of Environmental Protection-2.67% or 5.2 billion tenge.

Also it can be seen that the Ministry of Economic Development and Trade in the Republic of Kazakhstan on issues of environmental protection receives 1,333,119 thousand tenge or 0.68% under the "Target current transfers to regional budgets, budgets of the cities of Astana and Almaty to implement measures of social support for professionals ". In this case, in general it is uncertain about these expenditures practicability, especially the feasibility of these costs and even the specific focus of these expenditures.

And along with this, the Ministry of environmental protection in the Republic of Kazakhstan received on their primary tasks 5,202,036 thousand tenge or 2.67%. Among them 2,088,138 thousand tenge are provided for the realization of the program "Service to preserve, restore and improve the environment, to ensure the transition of the Republic of Kazakhstan to sustainable development", which in comparison with the cost of planning, regulation, management in the sphere of agriculture and natural resource (12,647,633 thousand tenge) seems very small.

According to the program "Observations of the state of the environment" Ministry of environmental protection in the Republic of Kazakhstan spends only 939,680 thousand tenge or 0.48% whereas on the realization of the program "Cleaning the environment from anthropogenic pollution" -275,225 thousand tenge or 0.14%, which in the presence of many industries seems to be quite inadequate measure.

Agency on earth resources management in the Republic of Kazakhstan allocated 6,168,570 thousand tenge or 3.17% for the following programs:

- 1) Services for creation of conditions for effective use and protection of land, geodetic and cartographic support, contributing to economic development and the strengthening of national security-932 540 thousand tenge. Again feedback and the impact of these costs are not actually observed;
- 2) Capital expenditures of Agency on earth resources management in the Republic of Kazakhstan are 102 397 thousand tenge in 2013;
- 3) Formation of the data of the State Land Cadastre-2,800,492 thousand tenge;
- 4) Provision of topographic surveying and mapping products and storage-2,333,141 thousand tenge. This item of expenditures to some extent duplicates the costs for services for the creation of conditions for effective use and protection of land, geodetic and cartographic support. In this case, the same cannot be observed in specific areas of the costs and the results from them.

Thus, it is seen that the expenditures on "Agriculture, forestry, fisheries, protected areas, protection of the environment and wildlife, land relations" in the Republic of Kazakhstan in fact cannot be recognized as effective, but as satisfactory.

3. Conclusion

To conclude, Kazakhstan model of sustainable development management should be based on well-structured Strategic programme of development with clear indicators and indexes which can be measurable and evaluated over time including the expenditures on the certain activities for achieving sustainable development. Sustainable development in the Republic of Kazakhstan is founded on ecological, economic and social components. Ecological one is one of the main and vulnerable in the Republic of Kazakhstan as we have many ecological problems.

And in this case the coordinated role of public administration within specialized public policy will help to ensure the stable economic growth, social welfare and improve the environmental situation in the Republic of Kazakhstan.

It will be more efficient for the work of public authorities to deal with clear methods to determine and evaluate the sustainability of development in economic, ecological and social sphere. In order to ensure sustainable development of the country,

We should improve the standards of living and environmental conditions in the Republic of Kazakhstan, reducing regions differentiation. It is proposed to develop and implement a new public policy for sustainable development.

To strengthen the policy for achieving sustainable development in the Republic of Kazakhstan, it is proposed to take the following economic impact measures: firstly, to develop the policy of subsidies for companies that are in difficult socio-economic and environmental conditions; secondly, ensure compensation for additional costs incurred by entities in locating their businesses in areas with difficult natural conditions; thirdly, establish high prices for environmentally friendly products; fourthly, give sanctions to companies that pollute the environment, especially in the most disadvantaged areas.

Moreover, some basic changes in institutional sphere of the economic development are required. There should be the following measures implemented in the public policy: 1) improvement of the environmental system of management and monitoring, implementation of sound separation between central and local public authorities; 2) development of the institution of state ownership of natural resources; 3) development of accounting and economic valuation of natural resources, environmental licensing and other economic instrument for the use of natural resources; 4) gradual reformation of the tax system, aimed at increasing the share of resource revenue payments to the budget; 5) development of systems to monitor condition of natural resources and execute control over the use and protection of natural resources according to existing Strategic Plan of the Ministry of environmental protection and water resources in the Republic of Kazakhstan; 6) implement resource-saving technologies, increased recycling.

Based on these priorities it will be possible to maintain equilibrium among environmental, social and economic spheres.

References

- Bobylev, S. N., & Stecenko, A. V. (2012). Economic evaluation of natural resources and services. *Vestnik of Moscow University*, 1(6), 108-117.
- Domanin, A. B. (2010). Economics and environmental management at the turn of the century. *Vestnik of Moscow University*, 3(6), 54-60.
- Environmental protection and sustainable development of the Karaganda region in 2014*. Retrieved September 17, 2014, from <http://stat.gov.kz>
- Kulman, A. (2012). Under the general reduction of N.I. Chrustaleva, 2012. *Economic mechanisms* (p. 192). Moscow: Publishing group "Progress", "Universe".
- Our common future. Report of International Commission on environment and development. (1989). *Progress* (p. 376).
- The main indicators of environmental protection in the Republic of Kazakhstan*. Retrieved September 17, 2014, from <http://stat.gov.kz>
- The Strategic plan of the Ministry of environment and water resources in the Republic of Kazakhstan for 2014-2018 years*. Retrieved September 17, 2014, from <http://eco.gov.kz>

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