та харчові технології

UDC: 636:504.062

Khuzmiev I.K., Doctor of Technical Sciences North Caucasus Mining and Metallurgical Institute, Vladikavkaz Kucheriavy V.P., Doctor of Agricultural Sciences Vinnytsia National Agrarian University, Vinnytsia kucheriavy74@mail.ru

RESOURCES CONSERVATION AS A BASIS OF SUSTAINABLE DEVELOPMENT

Earth provides enough to satisfy every man's needs, But not every man's greed Mahatma Gandhi

The development of new market-oriented reforms that do not contradict legal acts, reformation of the tax system and adjustment of the economic policy should contribute to resolving the problems of the economy in general. It is necessary to provide conditions for the saving all resources, preserving the environment, maintaining adequate living standard for all segments of the population based on social justice and keeping order. All these can be a powerful incentive to make international relations a partnership without undue rivalry and confrontation. All problems can and should be solved peacefully and after careful consideration to satisfy mutual needs and get mutual benefits.

Key words: environment, resources, population, reforms, animals.

Socio-economic situation in the world community is characterized by enormous unequal distribution of wealth and resources among nations and individuals. There is tremendous poverty and lack of opportunities to meet basic human needs against the background of flashy luxury, which causes tension in the interstate and interpersonal relationships. This tension is caused by the imbalance in the distribution of the world energy resources in favor of the developed countries. Globalization and crisis phenomena associated with it appear from modern civilization model, which is based on the unrestrained consumption. In these circumstances, anthropogenic stress on the natural environment has exceeded all

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

limits. As a result, it can degrade and become unusable for further supply of the increasing world population with the resources necessary to sustain human life. Thus, 925 million people are malnourished in the world, including 19 million in the developed countries (News N 195, September 10, 2012), and more than 2 billion people do not have access to clean water.

Euphoria from the economic success in the countries with the developed market economies with a population of about 1,000 million people (golden billion) hides from most people signs of decay and degradation in various spheres of activity and in all countries, ranging from the economy to morality. Modern market ideology of the development with its rigid competition and unrestrained desire for profit and consumption, as a rule, on credit may result in the short term in the end of democracy, complete degradation of the environment of human habitats and chaos that follows this. It is known that the main base of today's industrial and information civilization is energy based on hydrocarbon fuel accumulated in the Earth's crust over billions of years and used nearly by one-third.

"Energy rules the world", that is how it is possible to formulate the essence of the current state of the world politics and understanding that existing energy sources are the basis of present-day life-support system. Further increase in the consumption of traditional energy sources combined with the demographic factor leads to environmental disaster, dehumanization of society, military and political confrontation. This is well illustrated by the latest developments in the world politics.

If you analyze the factors affecting the state of the global energy sector, you will find slow processes of degradation in each of them. The most important of them is reduction of citizens' life quality in many countries, which includes worsening of health, lack of proper nutrition, low level of personal and collective security. It contributes to the development of totalitarian ideologies and terrorism.

All what we are engaged in is a process of multi-criteria optimization. From

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

the point of view of different people and organizations that perform a certain objective function, this process is complicated and unpredictable. Boundary conditions and restrictions may not always be formalized and clearly marked. However, the objectives may be different and contradictory from the positions of various social circles and individuals. Only the objectives of nature are unknown. Without the intervention of people everything works here optimally. All cycles are closed, self-sufficient. There are no wastes and environmental pollution. Everything is reviving again and again and anyone should not interfere with that. But nobody knows neither objectives nor boundary conditions or optimization criteria. We, mere mortals, I think, cannot understand this. But let's get back to the earthly matters.

Existing technologies do not provide a mentioned algorithm being a dead end of the human society evolution. If the whole population of the planet is provided with the North-American living standards, global consumption of resources must be increased at least five times. Therefore, avoiding costly technologies and reevaluation of living standards in favour of resource saving technologies is an urgent task of the economies of all countries. In practice, this means looking for new legal and moral norms and rules to ensure equitable distribution of resources to provide conditions for socio-economic and political sustainability.

First of all, in the developed countries it is necessary to cultivate public opinion that maintains a high moral status of the economical use of resources both in social production and in the household. The priority should be given to the regulatory principles that encourage minimization of costs in all areas. Special attention should be paid to the basic sectors of economy, the most important of which is energy supply, i.e. gas and electricity supply. The role of government agencies is generally not to completely take over management and regulation of these industries, but to create working conditions of the energy market motivating more efficient use of energy resources. The state represented by the relevant executive authorities should

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

regulate only natural monopolies.

It should be noted that western civilization has built a model of living arrangement that confronts every person and community the goal of unrestrained, sometimes mindless consumption. Needs unnecessary to sustain life often arise from among people. And no one can answer the question: Why do we need it? Things that were good yesterday are rejected today. Items appropriate for consumption go to dump or used as a second-hand by those who do not know that these things are not suitable for other people living in another dimension. Western, so-called civilized, model of behavior and satisfaction of life necessities is based on the unrestrained, uncontrolled consumption and often glamorous behavior that is not clear to many people. It requires withdrawal from the natural environment of various natural materials, that are not created by man, and turning them into trash that is hostile to the outside world and all living things, including humans. This trash, which is not included in any natural cycles, is not utilized by nature. It makes the world around us uninhabitable. There are still untouched, undestroyed places suitable for natural life. But their number is decreasing. Life of some individuals and groups has turned into a pursuit of time values: a man needs more and more. More money, more yachts, more clothes, more cars and so on. It is not clear: What for? There is a loss of spirituality and faith. If we do not take urgent measures, very soon we will have to decide whether to be or not to be? But who cares about it. Most people are busy trying to earn money to the detriment of their health, mental and physical, to gain access to unnecessary waste. It is important to remember and not to forget that when we leave this world sooner or later we cannot take anything with us.

These trends can be stopped only through reconsideration of the attitude to energy consumption and development of corporate approach to solving energy problem by all countries and people of the world. One of the solutions to this problem is the intensive use of environmentally friendly energy-saving technologies in the industry, agriculture,

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

infrastructure and public utility sector in order to reduce costs per unit of production and voluntary reduction of consumption to a reasonable level. It is also important to develop unified international standards and approaches to minimize costs of the necessary natural resources to sustain humanity on the basis of moral criteria, tolerance and solidarity. This will provide conditions for sustainable development.

Only this provides present and future generations with normalized amount of life-supporting resources while conserving the environment and ensuring equal access for all consumers regardless of their social status and income per capita being the basis for maintaining social and political stability in the world.

It should be noted that environmental protection as a method of improving life quality has been based on treatment rather than prevention. In order to promote conservation of resources and care for nature, it is necessary shift the tax burden on over-consumption, the use of non-renewable resources. It is clear that many of the problems often arise not from a lack of resources, but their wasteful use and passive attitude of people to their destiny and society in general.

Energy security as part of security of any region is determined by the ability to provide energy of the defined quality and at affordable prices sustainably to consumers. To ensure energy security a number of factors must be taken into account, the most important of which are demographic, ecological and geopolitical.

To begin with, you need, at least locally, to understand and formulate the purpose of development of the system in which you have to determine optimum, in our opinion, way of development. Let's answer the question: what, where, due to what, in what time, by means of what and how we need to fulfill a designated target. The task is difficult, since it is not always possible to understand and comprehend the questions, all the more to find and formulate answers and solutions. The world around us is not clear, probable and even hostile. You must answer the question: Can mankind reduce consumption of energy and material resources in all areas, starting

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

with the household? Apparently "yes", as the energy resource saving, in which the costs are compensated by the cost of saved resources, is one of the most appropriate areas of energy sector development in the medium-term prospects. Therefore, the development of new ways and technical means of saving material resources of energy and the use of renewable, non-polluting sources of it has become an urgent task of mankind's survival until the end of the new century. Measures are needed to curb the consumption of hydrocarbon fuel and promote the use of alternative energy sources and the development of thermonuclear power and hydrogen energy, which will also help to reduce greenhouse gas emission.

To encourage conservation of resources it is necessary to transfer tax burden on consumption, the use of non-renewable energy resources, and at the same time it is necessary to encourage creative scope of application of labor resources increasing taxation in socially unproductive business activity such as credit-financial and speculative. It is necessary to introduce higher tariffs for excess use of any resources, i. e. it is necessary to force to pay those who take from nature and society in favor of those who contribute to social development and conservation of the natural environment, while balancing the interests of the market, nature and society. The idea of taking care of natural resources and limitation of consumption was formulated by the authors of the Bible "Man comes naked and leaves naked", and medieval scholar monk Thomas a Kempis wrote "Behold, food and drink and clothing, and all the other needs appertaining to the support of the body, are burdensome to the devout spirit. Grant that I may use such things with moderation, and that I am not entangled with inordinate affection for them. To cast away all these things is not lawful, because nature must be sustained, but to require superfluities and things which merely minister delight, the holy law has forbidden; for otherwise the flesh would wax insolent against the spirit. In all these things, I beseech thee, let thy hand guide and teach me, that I in no way exceed" (Thomas a Kempis "The Imitation of Christ", verse 291).

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

Unrestrained growth of consumption, which dominates in the countries of socalled "golden billion", has caused irresponsible attitude of most people to the natural environment as something everlasting. The question is: How to act to protect the planet from this absurd behavior? We know that if the entire population of the planet is provided with the North American level of consumption, in the foreseeable future the environment will deteriorate and turn into a general life-threatening waste dump under a total lack of life-supporting resources. Therefore it is necessary to formulate and introduce the idea of careful and economical attitude to the environment to ensure conditions of sustainability.

To maintain sustainable development of human civilization it is necessary to realize this in terms of the whole planet and solve the problem of separation of the planet's inhabitants by the level of access to life-supporting resources with a decrease in the level of consumption for individual groups of citizens. The concept of sustainable development combines three spheres: social, economic and environmental.

The concept of sustainability occurs when the system (natural, anthropogenic) comes from one state to other and it is characterized by the ability to maintain its specific properties over time and withstand external effects without changing these properties, or adapting to them.

Social sphere (socium - community, people) is aimed at sustaining stability of the social and cultural systems, including a peaceful resolution of various conflicts between people and separate states. Economic sphere is the sphere of use and redistribution of limited natural resources to sustain life of the planet's population by means of energy and material-saving technology while minimizing wastes in the process of production, delivery, use and utilization. Environmental sphere involves ensuring of preservation of all natural systems of the environment (living or nonliving).

At the end of the twentieth century different socio-political organizations,

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

governments of many countries and representatives of different segments of the population began to understand this. In 1987 the UN World Commission on Environment and Development (Brundtland Commission) concluded, "Humanity is able to make development sustainable". In commission's report "Our Common Future" it is defined that "sustainable development is the development that meets the needs of the present, but does not compromise the ability of future generations to meet their own needs. It includes two key concepts: a) needs, in particular, the needs required for the existence of the poorest people, who should be a subject to paramount priority; b) limitations caused by the state of technology and organization of society imposed on the ability of the environment to meet present and future needs".

The concept of sustainable development is based on the constructive specification of the rights and responsibilities in relation to natural resources and their equitable distribution. Only this leads to supply of the present and future generations with normalized amount of vital resources while preserving human environment. This should be a basis of any development program.

Therefore, in our opinion, the term 'sustainable development' can be defined in the following way: "Sustainable development is satisfaction of the needs of present and future generations with normalized number of life-supporting resources for all consumers, regardless of their social status and per capita income sufficient to maintain a healthy lifestyle and working capacity while reducing the risks of environmental degeneration as a basis for maintaining ecological, socio-economic and political sustainability in the international community (Khuzmiev).

Thus, the development of new market-oriented reforms that do not contradict legal acts, reformation of the tax system and adjustment of the economic policy should contribute to resolving the problems of the economy in general. It is necessary to provide conditions for the saving all resources, preserving the environment, maintaining adequate living standard for all segments of the population based on

Аграрна наука	Годівля тварин та	Випуск 1 (90)
та харчові технології	технологія кормів	2015

social justice and keeping order. All these can be a powerful incentive to make international relations a partnership without undue rivalry and confrontation. All problems can and should be solved peacefully and after careful consideration to satisfy mutual needs and get mutual benefits.

References

- 1. Chefurka P. World Energy and Population Outlook from 2007 to 2100.
- 2. Khuzmiev I.K. The Concept of Sustainable Development, National Projects / I.K. Khuzmiev. 2012. № 10. P. 44-55. [Online] Available from: http://www.paulchefurka.ca/WEAP/WEAP.html. October 2007
- 3. Meadows D.H. Beyond the Growth / D. Meadows, L. Meadows, J. Randere. M.: Progress, 1994. 654 p.
- 4. Wikipedia.

Хузмиев И.К., доктор технических наук Северо-Кавказский горно-металлургический институт, г. Владикавказ **Кучерявый В.П.**, доктор с.-х. наук Винницкий национальный аграрный университет, г. Винница kucheriavy74@mail.ru

СБЕРЕЖЕНИЕ РЕСУРСОВ – ОСНОВА УСТОЙЧИВОГО РАЗВИТИЯ

Разработка новых, не противоречащих рыночным реформам нормативноправовых актов, реформирование системы налогообложения, корректировка экономической политики, должны способствовать разрешению проблем развития экономики в целом. Необходимо создать условия для экономии всех ресурсов, сохранения окружающей среды, обеспечения достойного уровня жизни всех слоев населения с учетом социальной справедливости и поддержания порядка. Сказанное может стать мощным стимулом для перехода международных отношений к подлинно партнерским отношениям, без излишнего соперничества и конфронтации. Все проблемы можно и нужно решать спокойно и взвешено к взаимному удовлетворению и пользе.

Ключевые слова: окружающая среда, ресурсы, население, реформы, животные.

Рецензент: Власенко В.В., доктор біологічних наук, професор, Вінницький національний аграрний університет