

УДК: 338.2

GREEN ECONOMY AS A WAY FOR SOLVING ENVIRONMENTAL PROBLEMS

K. Omelchenko

National University of Food Technologies

Key words:

*Ecology
Extraction
Production
Nonrenewable natural
resources
Scarcity
Economics*

Article history:

Received 24.07.2016
Received in revised form
13.08.2016
Accepted 25.08.2016

Corresponding author:

K. Omelchenko
E-mail:
npnuht@ukr.net

ABSTRACT

The article highlights various economic issues that directly influence the ecological environment in Ukraine and worldwide. It is suggested that either state funding or attracted investment is necessary for solving ecological problems. The strongest threat to the ecosystem has been considered. The importance of green economy has been highlighted and its essence has been defined. The involvement of green economy in solving economic problems and ecological problems has been substantiated. It is stated that the key principles of green economy should be economic rationality and energetic efficiency.

ЗЕЛЕНА ЕКОНОМІКА ЯК ШЛЯХ ВИРІШЕННЯ ЕКОЛОГІЧНИХ ПРОБЛЕМ

К.Ю. Омельченко

Національний університет харчових технологій

У статті висвітлено різні економічні проблеми, що безпосередньо впливають на екологічну ситуацію не тільки України, а й світу. Розглянуто найбільш сильні загрози для екосистеми. Підкреслено вагомість зеленої економіки та визначено її суть. Запропоновано залучення зеленої економіки до вирішення економічних завдань та екологічних проблем. Визначено, що ключовими принципами зеленої економіки є економічна раціональність та енергетична ефективність.

Ключові слова: *екологія, видобуток, виробництво, невідновлювані природні ресурси, дефіцит, економіка.*

Introduction. Our persistent global economic malaise is rooted in ecology. As a consequence of our ever-increasing exploitation since the inception of our industrial revolution, the vast majority of earth's finite and non-replenishing nonrenewable natural resources (NNRs) — fossil fuels, metals, and non-metallic minerals — are becoming increasingly scarce globally.

The result is diminishing real economic output levels, currently for NNR deficient Western nations with high societal support costs, high material living standards, and declining global economic competitiveness, such as the Ukraine, and for the world at large.

Formulation of the problem. The Great Recession marked a transition point in humanity's industrial lifestyle paradigm—going forward, there will not be “enough” globally available, economically viable NNRs to restore our global economic growth trajectory to its pre-recession level on a continuous basis. Under the best case scenario, global economic output will increase at a declining rate, peak, and go into terminal decline within the next few decades.

That is why while human ingenuity and technical innovations that increase economically viable NNR supply levels are experiencing diminishing returns, human ingenuity and technical innovations that increase our NNR demand levels appear to be unlimited. Global requirements for newly mined NNRs of nearly every type continue to increase unabated [1].

Analysis of recent research and publications. Recently, much attention was paid to the study this topic. Results of the study can be found on the Internet, which covered not only political articles on the subject, but the results of the investigations of the scientists.

Statement of key research results. As industrialized and industrializing nations attempt to recover economically from the Great Recession — to reestablish their pre-recession economic output levels and growth trajectories:

- global NNR demand levels will increase;
- which will cause increasingly costly NNR supplies to be exploited, cause NNR price levels to increase, cause NNR demand levels to decrease and which will cause economic output levels to diminish and the economic recovery to abort.

This “start-stop” economic recovery scenario manifested itself in 2015. As global NNR scarcity becomes increasingly pervasive during successive economic recovery attempts, NNR demand destruction will occur at ever-lower “ceilings” or thresholds, and global economic output levels and societal wellbeing levels — population and material living standard levels — will ratchet downward.

Our natural resource utilization behavior, which is heavily oriented toward enormous and ever-increasing quantities of finite, non-replenishing, and increasingly scarce NNRs, and our industrial lifestyle paradigm, which is enabled by our natural resource utilization behavior, are unsustainable — actually physically impossible — going forward.

Furthermore, because the fundamental cause underlying our predicament is ecological — not economic or political — our attempted economic and political “fixes” cannot possibly work. No combination of private and public “investments”, “policies”, and “initiatives” can enable us to extract enough economically viable NNRs to perpetuate our industrial lifestyle paradigm.

It's not a secret environment condition in the world has worsened greatly of late. It's a pity, but Ukraine is not an exception. The problem of ecological pollution has been existed for many years. Water, soils and air are contaminated with toxic wastes. As a result, many people suffer from various serious diseases. The most terrible thing is youngsters and even infants are among them. The cases of children's leukemia and

cancer are met more and more often. A harmful contribution was added by the notorious Chernobyl nuclear accident happened in 1986. Though nowadays the influence of the tragedy is not so essential as it was a decade ago.

Another issue of concern in Ukraine is the question of where to put nuclear waste. This waste is largely the spent fuel of reactors. It is radioactive, and some of its components remain so forever. The waste is held at temporary sites until a solution of the problem can be found. At present the most promising solution of the problem of waste storage is recycling.

Another environmental problem is air pollution. One of its results is acid rain.

It is caused by smoke from factories and transport. Nowadays the emission of smoke is strictly controlled by special governmental agencies.

The activity of various environmental organizations helps to improve the situation. Among the leading environmental organizations in Ukraine are the Greenpeace and the Green Party. But the activities of these organizations do not solve the problems entirely and in the absence of financing some problems simply remain unchanged.

So, what can we do now to improve the environmental situation in terms of economy in Ukraine?

Alternative energy sources can produce power without wearing out the source. Sustainable sources are continually renewed. In addition to using sustainable energy forms, people need to practice energy conservation, reduce waste and improve energy efficiency. This will decrease the impact of our energy use on the environment in order to have a future with a clean earth, and to have power whenever we need it. It can be: solar and wind energy, Wave Power, hydropower, tidal power, geothermal energy, biomass energy, hydrogen energy. But in these areas is necessary to pour investment or attract public funds to finance such programs [2].

Transborder cooperation. Today in a transborder cooperation it is possible to select such basic ecological conflicts, actual for mutual relations between the EU countries and Ukraine: water ecological conflicts: section of aquatoriums of Danube river and Black sea, water use and water taking; forest ecological conflicts: non-regulative felling of the forests; ecological conflicts of resource use: exterminating sharing of Black see shelf, determination of its owner; ecological conflicts of nature use pollution: pollution of water resources, atmosphere and land resources which can spread on transborder territories.

As instruments of the effective use of transborder resources can be:

a) participating of society in making decision about directions of the resources use and equal access to information about usage and management of resources, information exchange;

b) creation of coordinating Council and their joint work on a resources management;

c) general monitoring and estimation of resources;

d) creation of common legislative base for adjusting of the resources use or approaching Ukrainian normative legislative base to European [3].

Also global warming and climate change are aspects of our environment that cannot be easily or quickly discounted. Many factions still strongly feel that the changes our Earth is seeing are the result of a natural climatic adjustment. Regardless

of one's perspective the effects of global warming are a quantifiable set of environmental results that are in addition to any normal changes in climate. That is why the effects of global warming have catastrophic potential. Global warming may well be the straw that breaks the camel's back. It could turn out to be the difference between a category three hurricane and a category four. Global warming as caused by greenhouse gas emissions can lead us to a definite imbalance of nature.

We have many other environmental problems. But the use of the green economy can solve some difficulties in a given subject.

Green economy is a new model of economic development based on knowledge of ecological economics that aims at addressing the interdependence of human economies and natural ecosystems and the adverse impact of human economic activities on climate change and global warming [5].

"Green economics" is loosely defined as any theory of economics by which an economy is considered to be component of the ecosystem in which it resides. A holistic approach to the subject is typical, such that economic ideas are commingled with any number of other subjects, depending on the particular theorist. Proponents of postmodernism, the ecology movement, peace movement, Green politics, green anarchism and anti-globalization movement have used the term to describe very different ideas, all external to some equally ill-defined "mainstream" economics.

Green economy got its name in contrast to the existing "black" economic model based on fossil fuels, such as coal, petroleum, and natural gas. The idea of green economy is popular in the developed countries, the number of its supporters is growing rapidly.

Greening the economy refers to the process of reconfiguring businesses and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using less natural resources, creating less waste and reducing social disparities.

Conclusions

Our transition to a sustainable lifestyle paradigm, within which a drastically reduced subset of our current global population will experience pre-industrial, subsistence level material living standards, is both inevitable and imminent.

And, because we are culturally incapable of implementing a voluntary transition to sustainability, our transition will occur catastrophically, through self-inflicted global societal collapse. As a species that has been conditioned since the inception of our industrial revolution to expect "continuously more and more", we will not accept gracefully our new reality of "continuously less and less". Efforts of all nations should be combined to protect nature and environment.

That is why the key principles of the green economy should be rationality and energetic efficiency. Researchers in the field of green economy state that the main efforts should be concentrated in five critical areas:

- 1) raising the energy efficiency of old and new buildings;
- 2) transitioning to renewable energies including wind, solar, geothermal and biomass;
- 3) increasing reliance on sustainable transport including hybrid vehicles, high speed rail and bus rapid transit systems;

- 4) bolstering the planet's ecological infrastructure, including freshwaters, forests, soils and coral reefs;
- 5) supporting sustainable agriculture, including organic production.

References

1. *Chris Clugston* The Relationship Between Ecology And Economics [Electronic resource]. — Access mode: <http://www.countercurrents.org/clugston230811.htm>.
2. *Alias Naser Ibraheem* Alternative energy to insure sustainable development [Electronic resource]. — Access mode: http://iscs.fem.sumdu.edu.ua/data/ISCS_Materials_2010.pdf.
3. *Derevyanko Y.* Environmental economics problems of transborder cooperation [Electronic resource]. — Access mode: http://iscs.fem.sumdu.edu.ua/data/ISCS_Materials_2010.pdf.
4. *Garbarchuk V.* From green economy to the green society [Electronic resource]. — Access mode: http://iscs.fem.sumdu.edu.ua/data/ISCS_Materials_2010.pdf.
5. Green economy [Electronic resource]. — Access mode: https://en.wikipedia.org/wiki/Green_economy.
6. *Nwankwo Ignatius Uche.* Social dimensions of genetics and their implications for uptake of genetically modified foods and new food technologies in society / Nwankwo Ignatius Uche // Ukrainian Food Journal. — 2015. — V. 4. — I. 1. — P. 145—154.

ЗЕЛЕНАЯ ЭКОНОМИКА КАК ПУТЬ РЕШЕНИЯ ЭКОЛОГИЧЕСКИХ ПРОБЛЕМ

К.Ю. Омельченко

Национальный университет пищевых технологий

В статье освещены различные экономические проблемы и выдвинуто предположение, что для их решения необходимо государственное финансирование или привлечение инвестиций. Рассмотрены самые сильные угрозы для экосистемы. Предложено использовать зеленую экономику для решения экономических задач и экологических проблем. Определено, что ключевыми принципами зеленой экономики должны быть экономическая рациональность и энергетическая эффективность.

Ключевые слова: *экология, добыча, производство, невозобновляемые природные ресурсы, дефицит, экономика.*