

The Philosophy of Global Problems in the Context of a New Economic Order

ELLANA MOLCHANOVA¹

ABSTRACT. The main ways of conceptualization of the beginning of a new economic order from Malthus's ideas are researched. The main approaches to the determination of the key moments of formation of new economic order models and the main aspects of disregard of scientists' ideas being fully justified but conflicting with imperatives of our time are analyzed. The main theoretical approaches which showed human influence on the environment and environmental effects of human activity are researched. Models of environmental effects of human activity are considered. Limits of population growth and human activity environmental effects are determined. Main computer models which have become prototypes of the modern econometric models for economic forecast are determined. The first approaches to the multi-discipline research of the main humanity problems are proposed. Ideas of the Rome Club have united the most of scientists of different streams, opinions, scholar schools and different sciences. This allowed to investigate in a wider manner multisided aspects of formation of a new economic order and to substantiate the current necessity of its transformation. The basis of the proposed research is formed by scientific researches of multi-discipline nature of the leading economists, members of the Rome Club. Besides, in the article a parallel is drawn concerning researches of scientists of the Rome Club and representatives of scholar schools of Latin America, Japan and Holland etc. All researches were focused on leveling of incomes per capita in the developed countries and the Third World countries due to the continuous support of low developed countries and optimal re-distribution of the economic structure. All proposed ideas were always criticized by the world community. On the one hand – developed countries, which should allot money for liquidation of disproportional development of the world economy and promote reduction in pollution of the developing countries. All the considered and proposed models come down to the increase in economic development of the developing countries at the expense of a group of developed countries. As well, a concept of “new humanism” is discovered. According to this concept, the main reasons of aggravation of global problems are political, psychological and cultural characteristics of public spirit represented by political negligence, irresponsibility resulting in inefficient political management. An idea of formation of a global government headed by leading countries of the world is visible. However, the said concept returns to the existing paradigm of the new economic order. Support of the current concept will lead to forecasted series of global economic recession with a series of ecological disasters.

KEYWORDS. Limits of growth, economic growth, Rome Club, models, concepts, new economic order, “limits of growth”, “strategy of survival”, “Latin-American development model”, “fresh approach to development”, “reconstruction of international order”, “human objectives”

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¹ **Molchanova Ellana** – PhD in Economics, Associate Professor of International Finance Department of Kyiv National Economic University named after Vadym Hetman. Since February 2013, she has been the Deputy Dean of the Faculty of International Economics and Management. Sphere of scientific interests: global integration, globalization, a new economic order and bitcoins. E-mail: ellanam@ukr.net

Introduction

All economists, while writing their scientific papers, had to be absorbed in a great number of theories of various scholar schools. The most part of these theories were a basis for economic development of countries at a certain stage of historical development. Almost all scientists taking a great interest in researches of their predecessors, continued to develop the main ideas specified in these theories. It resulted in the negligence of other theories and ranking them as secondary ones, which were considered to be not progressive enough or utopian. Most scientists have a similar experience. However, one part of scientists just list main achievements of distinguished scientists and try to determine a part which remained outside their research. The other part is always upon the look. Only a few scientists in this world can propose absolutely new theoretical concepts, models, theories etc. But the basis of these ideas is our understanding of these particular utopian theories. However, presentation of these ideas is not perceived by most scientists belonging to the first group. They operate perfectly with scientific instruments, quote main scientific developments of the leading scientists of the world not forgetting to monitor the principal ideas of their scientific opponents. However, they neglect all possibilities of existence of other streams or schools, or just ignore the fact of their existence. To confirm this hypothesis lets analyze scientific developments of the leading scientists of the world – members of the Rome Club. In the research we will make emphasis on the genesis of conceptualization of a new economic order.

Main Part

In 1968 A. Peccei and O. King invited to Rome 30 European scientists – sociologists, economists and natural sciences experts. It was the first embodiment of interdisciplinarity concerning the integral apprehension of economic process. A document of Dutch astronomer E. Janz “An attempt to create world planning principles from the general systems theory point of view” was presented for their judgment. This document uncovers the understanding of the human society and the environment as a single system. This accent in the study is fully substantiated by the further uncontrolled growth of this system and is a reason of instability. The level of this uncontrolled growth determines high rigidities of the dynamic system, which decreases its flexibility, changeability and adaptability. All instruments and mechanisms of “automatic regulation” of macro processes disappear. A person becomes a regulator influencing on the process. But the person can control this

system only under the conditions of control of the whole complex system of the human society subject to local environment.

Naturally, this report was not perceived by most members of this organization. Scientists didn't agree upon the integrity of this research and chose, as the first draft lecture, a lecture of Turkish philosopher, specialist in cybernetics and planning H. Ozbekhan "Search of a constructive answer to the increasing complexity and uncertainty of world development". His idea is based on the development of one or more models which would show the world development dynamics thus permitting to identify the most important and the most dangerous components of the system and relations between them. The draft turned out to be complicated and required a lot of time for development. That's why it was denied.

It is assumed that researches of the Rome Club were based on the society and environment researches. One of the first practices of global development forecasting is recognized to be a report of the Rome Club prepared in 1971 and called «World2» under the guidance of J. Forrester. Scientists used a computer model based on which they made attempts to forecast further stages of human development. Results of the research showed that maintenance of the natural resources consumption rate will cause a world environmental collapse in 2020-ies.

The next subject and report was a research of Meadows D. and Randere J. "The Limits of Growth"². This idea is also a new one. For the first time the idea of mankind growth limits was expressed by English economist R.T. Malthus (1766-1834) in his study "An Assay on the Principle of Population as it Effects the Future Improvement of Society" (1798), in which he expresses some of his views on regularities and relationships of economic and demographical processes. It drew stormy, mostly negative, reaction, and was criticized by many scientists, politicians and public persons. In 1799-1802, Malthus, in order to improve his study, visited countries of Europe, and in 1803 prepared the second updated edition of his book.

Book "The Limits of Growth" was the result of investigation conducted by dynamics division of the Sloan School of Management of Massachusetts Institute of Technology in 1970-1973. The analysis was also based on the population growth with identification of reasons and effects of the growth in the long term. A research team took as a basis the theory of system dynamics and computer modeling. The general conclusion of their study is human activity environmental effects throughout the world (consumption of natural resources, emissions, pollution) and further influence to the development of the world in

² Meadows D., Randers J., Limits to Growth. 30 years later. Textbook for High Schools. Moscow. ICC "AcademKniga". 2007. <http://rsabc.ru/userfiles/d.-medouz-y.-randers-d.-medouz-predely-rosta.pdf>

XXI century. The scientists cautioned that in the future efforts and money would have to be directed to prevention of environment deterioration. It doesn't matter which resource will be exhausted first, since investments to natural balance recovery will require much more expenses than it will be possible to spend in fact. The researches considered five main systems interrelated globally (population of the planet; agricultural production; natural resources; industrial production; environment) and proposed 12 scenarios comparing population growth and consumption of natural resources with physical limits of the planet.

The main conclusion of the report consists in the fact that modern trends of world development will inevitably lead to a "world environmental disaster" of a global nature; it will be accompanied by widespread hunger and epidemics caused by overpopulation of the planet, exhaustiveness of natural resources and toxic discharges. Model variants of D. Meadows calculated under the variable start conditions forecasted to mankind a catastrophe too. Interrelation of the variables caused the situation when attempts to improve one parameters of the model caused deterioration of the other parameters. Thus the assumption that natural resources of the planet has not been fully studied and their quantity should be at least doubled, drove a conclusion on the mass extinction of the planet due to the catastrophically increasing environmental pollution.

Authors of the paper freely called themselves Malthusians. They proclaimed the end of "the Golden Age" of mankind and said that the only alternative to "the imminent collapse" would be immediate transition to "the zero growth" or "the global balance". To perform this transition the following actions were proposed³:

- population growth cessation i.e. balancing of population growth and death rates;
- cessation of expansion of production (restriction of capital increase up to its depreciation level);
- decrease of natural resources consumption level up to 0,25 part of the level of consumption in 1970.

The limit is attained when expenses for elimination of human effects on the environment exceed the industrial growth. Dilemma of the mankind – further destruction of environment or decrease of production volumes – has only one variant. Production decline will lead to a decline in other sectors of economy: food production, services sector and other consumption spheres. Growth cessation in these fields will cause a reduction in population. The built up model «World3» showed that all

³ Arutyunov V. Kh., and Svintsits'kyy V. M. *Filosofiya Hlobal'nykh Problem Suchasnosti*. Kiev: KNEU, 2003. <http://www.info-library.com.ua/books-book-144.html>.

limits would cease increase in XXI century, 50 years after publication of the paper.

The cessation of growth may take place very soon (uncontrolled population decrease with a sharp decrease of life standards at the same time) or after a long period of accelerated growth. Even under the most pessimistic scenario of development, the material life standard kept increasing till 2015.

Waiting for apprehension by people of such forecasted assessments instead of economic growth called again a storm of negative comments towards the authors. As a result, a group of scientists of the University of Sussex (England) C. Freeman, G. Cole, D. Cole, J. Clark analyzed the model of D. Meadows as “a model of Last Judgment” and arrived at the following conclusions ⁴:

- excessive mediocrity of the main parameters of the model in respect of principal differences between different countries in the context of population growth rate, depletion of natural resources and food production as well as in the context of their social structure;
- underestimation of social and reverse relationships which can “mitigate” or eliminate possible environmental crises;
- inattention to the statistical nature of real social systems related to the “human” factor.

In response to the criticism towards the first models the Rome Club offered a new project – “Humanity is at the Crossroad. Strategy of Survival” prepared under the leadership of M. Mesarovic and E. Pestel (1974). The aim of this study was to analyze a greater number of factors than in the previous project, capable to simulate development, research the possibilities of crisis localization, and find the ways of prevention of the same. The researchers made an attempt to describe in more details demographic processes taking into account the effects of social and economic factors and unevenness of development of some countries of the world.

In the report an idea of “organic growth” was formulated, according to which each region of the world has to perform its specific function. The world was investigated as a system of interrelated regions. A distinctive feature of their model consists in the detailed consideration of a price mechanism and energy generation increase, analysis of the nature of regional crises and their influence on the development and condition of other regions. It is interesting that unlike their predecessors, the authors of the second report from the very beginning dissociated themselves from the apocalyptic forecasts of “the Last

⁴ Arutyunov V. Kh., and Svintsits'kyy V. M. *Filosofiya Hlobal'nykh Problem Suchasnosti*. Kiev: KNEU, 2003. <http://www.info-library.com.ua/books-book-144.html>.

Judgment". They insist only on the possibility of a series of regional crises avoiding of which requires joint attempts of all mankind.

The main feature of the society of the second part of XX century is considered to be an inherent "crisis syndrome" which is to become a motivation for the transition to the world system which will be in the state of "organic growth". In this state the system will develop as a single organism where every part will play an exclusive role and will use a share of commonwealth corresponding to this role and providing the further development of this share to the benefit of the whole.

The "organic growth" is assured by the structural differentiation of system elements and functional interdependency between these elements and is opposed to the quantitative non-differentiated exponential growth. Specifying the interdependency of crisis situations the authors try to trace how changes in the same parameters in certain regions relates to changes in parameters of other regions. (For example, nutritional standard in regions of Asia and Africa and limitation of material consumption level in Western countries.)

The conclusion made is that the world is transformed from a simple collection of independent parts into a world system i.e. into a combination of interdependent parts. 10 regions interaction with which is conducted through export-import and population migration are distinguished according to economic geographical criteria but taking into account social and cultural characteristics. So, the world is threatened by not a global disaster but a series of regional disasters which will begin much earlier than Forrester and Meadows predicted.

The results of the research of M. Mesarovic and E. Pestel may be summarized as follows:

- *modern crises* (ecological, energy, economic, demographical etc.) *are not a temporary phenomenon*, they reflect a permanent tendency of world development and show that the humanity has stopped near a return point of its history;
- *prevention of these crises is possible* only in the context of other global processes and requires implementation of the "new economic order";
- an alternative to future crises on the way of humanity development may be represented by a "strategy of survival" in form of "organic growth" for the implementation of which "global attempts of all nations", *cooperation for the purpose of survival of the whole human kind* are required.

Almost simultaneously with the model of M. Mesarovic and E. Pestel, two more regional models were developed, which were dedicated to the problems of minimization of the gap between developed countries and developing countries. One of them, called "a fresh approach to

development” was proposed by a group of scientists of the University of Tokyo of the Rome Club group under the leadership of Professor Y. Kaya. She set a goal to analyze possible ways of income leveling per capita in developed countries and in countries of “the Third World” at the expense of continuous support of low developed countries and optimal redistribution of economic structure of all nine regions into which the world was conditionally divided. The model has the possibility to be controlled (formation of global government).

The findings obtained by using this model consist in the following: first, the developed regions have to provide support free of charge to the developing regions (about 1% of their annual gross product); second, this support will be the most efficient only in conjunction with the change of the structure of regional economies. In the developed regions a share of light industry should be decreased and a share of agriculture should be increased in the gross regional product; in the developing countries, the initial rapid growth of a share of agricultural products should be changed by increase of a share of light industry products. Such type of structural changes in economy doesn't allow increasing of the share of light industry products in the developing countries.

Somewhat different approach to the study of problems of the Third World countries was proposed in the lecture “The Latin-American Model of Global Development” “Bariloche model” (1974). It was prepared by a group of scientists headed by Professor A. Erera. The model had a clearly marked normative nature and determined alternative ways of achievement by the Third World countries of satisfactory living conditions. In particular, it was stated that an economic crisis started long ago for those hundreds millions of people of low developed countries who due to the uneven distribution of incomes in the world have to live in extreme poverty, hunger and unsanitary conditions. The model admits the possibility of conscious control of development of individual regions through centralized distribution of capitals.

This study has the following basic distinctions: 1) the emphasis is made on “satisfaction with a living standard” for the developing countries; 2) the world is divided into four regions: Asia, Africa, Latin America and developed countries; 3) an assumption concerning the possibility to control regions by means of centralized redistribution of capitals. But the main conclusion is based on the fact that the crisis predicted in the previous models has already started for most developing countries, which population lives in the conditions of hunger, high children death rate, illiteracy, lack of normal dwelling etc. This crisis is not connected with environmental depletion or excessive growth of

population but is a result of the uneven distribution of wealth and powers between countries.

The possibilities to achieve the "satisfactory living conditions" i.e. a certain level of nutrition, education, availability of dwelling and medical services were examined in two basic scenarios or regional interaction. The first scenario assumed the absence of economic support from the developed countries to other regions. Assessments showed that in this case population of Latin-America region would reach the level of the "satisfactory living conditions" approximately in 40 years, Asia and Africa, even in case of optimal control, would not only fail to reach such level but their living conditions would unceasingly become worse according to all basic living parameters.

The second scenario assumed availability of support from the developed countries to regions of Asia and Africa. According to this scenario, beginning from 1980 this support should increase during ten years from 0,2 % of the annual end product of the region of developed countries up to 2 % and further remain permanent. In this case, "an acceptable solution" for all regions is achieved, and the time of achievement of "satisfactory living conditions" by Asia and Africa will be 57 and 65 years accordingly.

The said above approaches were fully supported by Dutch scientists of the Amsterdam University under the leadership of G. Lineman in 1975. In the model "The Problems of Double Population" they defined four groups of countries, in particular developed countries, countries with market economy, countries with centrally planned economy and developing countries. They stated that only a radical political solution may resolve this problem. Therefore, the basis of the research was formed by assessment of the possibility to provide every person with material preconditions of adequate life even in case of doubling of planet population. Resolution of the problem, in the opinion of G. Lineman's group, consists in binding of the richest countries of the world manufacturing and exporting food stuffs (USA, Canada, Netherlands etc.) to performed the so called *buffer functions*, i.e. to assume responsibility for provision of the world with food stuffs and adjustment of the trade policy even to the damage of their national interests.

As we can see, all researches were focused on the provision of developing countries with food stuffs at the expense of developed countries. However, before 1973 nobody paid attention to one finding of M. Mesarovic and E. Pestel – formation of a new economic order.

The issue arose because of "The requirement of establishment of a new economic order" – a concept of the developing countries concerning the reconstruction of international economic relations on a fair and

equal basis. This requirement was first put forward on the IV Conference on the top level of non-aligned countries in Algiers in 1973. These requirements were reflected in three documents – “The Declaration on the Establishment of a New Economic Order”, “The Action Plan” and “The Charter of Economic Rights and Duties of States”. These documents were approved by the VI and VII special sessions and XXIX session of the UN General Assembly in 1973–1974⁵.

Only in 1975 the Rome Club instructed J. Tinbergen to prepare a report on the global social and economic problems faced by the humanity (arms race, food, raw material and energy deficit, environmental degradation, a gap between rich and poor countries etc.) It turns out that unevenness of development of countries fully satisfied the former monopolies. Only after the collapse of the colonial world they felt a threat on the part of former vassals: they began to create competitiveness on the world commodity markets the access to which was closed before.

Impression arises that the same “fake” model was initiated by “owners” of the Rome Club. In the third report of the Rome Club J. Tinbergen first gave scientific credence of the new economic order idea (1978), on which hereinafter would be based the establishment of a new international political, legal and cultural order as well. In his opinion, it has to constitute “international order review”. If J. Tinbergen proposed these ideas in 1978, why no scientist reacted to “The Declaration on the Establishment of a New Economic Order”?!

The first idea which arose in his report is “functional sovereignty” (in contrast to national one). This concept is important for the theoretical analysis of those structures which can arise in the result of development of the close relations of different countries subject to preservation of their jurisdictions over their own economic space and allow functional activity of the specialized international bodies in this space (for example, European Commonwealth). This should permit to *create a system of economic relation control by means of international political and economic bodies.*

At the same time J. Tinbergen suggested a concept of “the common heritage of mankind” according to which natural resources should belong to all population of the Earth. And “losses” of their owners are to be compensated at the expense of the equivalent exchange to economic resources. Taking into consideration this aspect he formulated a concept of overcoming of a “gap” between the “rich North” and the “poor South”. The inequality between rich and poor countries becomes intolerable and threatens with a global conflict. Global political changes

⁵ Molchanova E.. Transforming the requirements of the new economic order // International Economic Policy. 18 (2013): 41-61

require creation of own structures – “world state treasury”, “world food administration”. Being Mondialistic according to their nature, this concept factually suggested ideas of creation of global political institutions. A new perfect social organization of mankind was called “humanistic socialism” which was expected to assure equal opportunities for all countries and people according to the universal humanistic values.

The only alternative to political instability in the future is reconstruction of the international order, voluntary adjustment of the pace of development and policies of different countries under the control of “supranational authorities”. For the purpose of development of “a new economic order” the authors of the project analyze all elements of human wellbeing of both material and non-material nature. The results of the analysis are presented in the form of scenarios calculated for 42 years and which provide a decrease in the gap between rich and poor countries due to approximation of mankind to the “humanistic socialism” based on the “universal values”. In addition, the scientist give practical guidelines on the creation of international enterprises and special funds for industrialization, development and improvement of education and *governing in countries of “the Third World”*, voluntary limitation by rich countries of production rates and deduction of a part of their incomes to the benefit of poor countries.

So, under the general idea of construction of a new world order an idea of a world government began to form. When keeping a big gap between the levels of economic development of countries they should have retained the leadership on all markets showing that the world becomes worse and only new government can help.

According to the plan of leaders of the Rome Club, the fourth report would have filled a gap taking place on the first two stages of this organization development, the adequate attention was not paid to the role of science and technology in resolution of global problems. So, the aim of the fourth report consisted in the study of scientific and technological potential of the world and possibilities of its application for resolution of energy, raw material and food problems.

The report of the Rome Club “Beyond the Age of Waste” (1977) published by Austro-Hungarian physicist, a Nobel prize winner, Dennis Gabor is generally dedicated to the problems of planet mineral resources depletion.⁶ D. Gabor proves that survival of the available tendencies in the field of consumption of natural resources in the future will cause a failure of the world fuel and power and raw material balance. To prevent a global fuel and power threat the scientist recommends the

⁶ Kolisnichenko R. contribution to the Club of Rome study hlobalistychnoyi consciousness in the late 70's – early 90-ies of XX century. // Scientific Journal of MP NEA Dragomanova. -11(2011): 15-22

society to understand the necessity of a more active application of the recoverable kinds of raw materials, implementation of the closed production cycles with re-use of recoverable resources, assurance of adequate disposal of wastes, development of energy-saving technologies etc.⁷ One more finding of the authoring team was a limit of economic growth. The limits of economic growth of human activity, problems connected with the use of energy, raw material and food resources are conditioned not so much by the limited scientific and technology potential as by the social institutions existing now on the international and national levels. Practical reorientation in human activity may be achieved, in their opinion, only if adequate social condition for human life is created and a new “mature society” able to provide the improvement of “life quality” of all residents of the planet and intelligent human treatment of nature not disharmonizing the world is built.

For the resolution of hunger problems (over 1 mil. people are under the poverty threshold) researches from D. Gabor team proposed four fundamental interdependent approaches⁸:

- 1) restraint of demand for food stuffs by means of intensification of control of population growth rate;
- 2) increase of production of all kinds of products;
- 3) redistribution of incomes for the benefit of developing countries;
- 4) decrease of products loss at all technological levels of manufacture.

The problem of use of natural resources, provision of mankind with raw materials and energy has been transformed into a problem of their efficient use, in other words, of optimal inclusion into the production process. In this case, first of all it is proposed a wide application of the alternative sources of energy, waste-free technologies, and total processing of raw materials with further manufacturing of industrial products. However, the first place should be occupied by an objective of perspective use of non-recoverable resources of raw materials and a scientific search of their substitutes.

Today, there is no deficit in futurological models of mankind development, their systematization permits to reduce the latter to the four most developed and theoretically grounded forecasts: realistically surveying, analytical, normative, forecast-warning (table 1).

In 1979, Hungarian philosopher Ervin Laszlo in its papers “Global Goals and World Solidarity” and “Goals for Mankind”, following the thesis on the human factor priority in global problem resolution, described a concept of “new humanism”. According to this concept,

⁷ Bestuzhev-Lada I. “Social forecasting. Lectures”. M.: Russian Pedagogical Society, 2002. http://polbu.ru/bestuzhev_sfcasting/ch07_all.html.

⁸ Cultural Textbook / K: Kyiv National Economic University, 2001. <http://www.info-library.com.ua/books-text-65.html>

the main reasons of aggravation of global problems are political, psychological and cultural characteristics of public spirit represented by political negligence, irresponsibility resulting in inefficient political management⁹.

According to E. Laszlo, to assure mankind survival it is important to rebuild the mind of the world community, to determine common values, ideals, objectives, rules of conduct and to state policy according to new standards of humanism, to integrate population of the planet, to achieve the world solidarity, to form a global ethnos. The interests of certain countries and nations should be submitted to the scientifically justified objectives and interests of universal development to be realized by mankind.

Table 1 The Genesis of Creation of Projects and Models Which Influenced on the Conceptualization of a New Economic Order

Project or model name	Author	Time and place of development	Brief description
1	2	3	4
“An Essay on the Principle of Population as it effects the Future Improvement of Society”	R.T. Malthus	1798, 1803	Mankind growth limits: views on regularities and relationships of economic and demographic processes. In 1799-1802, Malthus, to improve his study visited countries of Europe, and in 1803 prepared the second updated edition of his book.
“An attempt to create world planning principles from the general systems theory point of view”	E.Janz	Holland, 1968	The understanding of the human society and the environment as a single system. All instruments and mechanisms of “automatic regulation” of macro processes disappear. A person becomes a regulator influencing on the process. But the person can control this system only under the conditions of control of the whole complex system of the human society subject to local environment.
“Search of a constructive answer to an increasing complexity and uncertainty of world development”	H. Ozbekhan	Turkey, 1970	His idea is based on the development of one or more models which would show the world development dynamics thus permitting to identify the most important and the most dangerous components of the system and relations between them.
“World2”	J. Forrester	1971	Scientists used a computer model based on which they made attempts to forecast further stages of human development. Results of the research showed that maintained of the natural resources consumption rate will cause a world environmental disaster in 2020-ies.

⁹ Abramyan E.A. “Civilization in the XXI century. Analysis of the situation in the world and prospects for the future”. Глобальные кризисы. Четвёртое издание. М.: Тeryka, 2009. 324 p.

Project or model name	Author	Time and place of development	Brief description
1	2	3	4
“The Limits of Growth”	D. Meadows, J. Randere	USA, 1973	The researches considered five main systems interrelated globally (population of the planet; agricultural production; natural resources; industrial production; environment) and proposed 12 scenarios comparing population growth and consumption of natural resources with physical limits of the planet. «World3» model is built.
“A fresh approach to development” (PK)	Y. Kaya	Japan, 1973	Models dedicated to the problems of minimization of the gap between developed countries and developing countries. The aim is to analyze possible ways of income leveling per capita in developed countries and in countries of “the Third World” at the expense of continuous support of low developed countries and optimal redistribution of economic structure of all nine regions in which the world was conditionally divided.
“The Latin-American Model of Global Development” (Berliche Fund)	A. Erera	Argentina, 1974	The model had a clearly marked normative nature and determined alternative ways of achievement by the Third World countries of satisfactory living conditions. In particular, it was stated that an economic crisis started long ago for those hundreds millions of people of low developed countries who due to the uneven distribution of incomes in the world have to live in extreme poverty, hunger and unsanitary conditions. The model admits the possibility of conscious control of development of individual regions through centralized distribution of capitals.
“Humanity is at the Crossroad. Strategy of Survival”	M. Mesarovic and E. Pestel	USA- FRG, 1974	The aim of this study was to analyze a greater number of factors than in the previous project, capable to simulate development, research the possibilities of crisis localization, find the ways of prevention of the same. The researches made an attempt to describe in more details demographic processes taking into account the effects of social and economic factors and unevenness of development of some countries of the world. 10 regions interaction with which is conducted through export-import and population migration are distinguished according to economic geographical criteria but taking into account social and cultural characteristics. So, the world is threatened by not a global disaster but a series of regional disasters which will begin much earlier than Forrester and Meadows predicted.
“The Problems of Double Population” (PK)	G. Lineman	Holland, Amsterdam University, 1975	There was considered the conditions in developed countries with market economy, countries with centrally planned economy and developing countries. The aim of the study is assessment of the possibility to provide every person with material preconditions of adequate life even in case of doubling of planet population. Resolution of the problem, in the opinion of G. Lineman’s group, consists in binding of the richest countries of the world manufacturing and exporting food stuffs (USA, Canada, Netherlands etc.) to performed the so called buffer functions, i.e. to assume responsibility for provision of the world with food stuffs and adjustment of the trade policy even to the damage of their national interests.

THE PHILOSOPHY OF GLOBAL PROBLEMS IN THE CONTEXT OF A NEW ECONOMIC ORDER

Project or model name	Author	Time and place of development	Brief description
1	2	3	4
“Reconstruction of the International Order” (PK)	J. Tinbergen	Holland, 1976	In authors' opinion, the state of mankind is characterized by considerable inequality between incomes of rich and poor countries. The inequality between rich and poor countries becomes intolerable and threatens with a global conflict. The only alternative to political instability in the future is reconstruction of the international order, voluntary adjustment of the pace of development and policies of different countries under the control of “supranational authorities”. For the purpose of development of “a new economic order” the authors of the project analyze all elements of human wellbeing of both material and non-material nature.
“The Future of the World Economy” (UN)	V. Leontiev	USA, 1976	The aim of the project was in the study of environmental aspects of the world economy future, definition of an optimal strategy which would promote maintenance of the environmental balance required for mankind survival. The model has an inter-regional nature and is divided into 15 regional blocks each of which consists of 45 sectors of economic activity. It takes into account principal questions of environmental policy: biosphere polluting substances are conditionally divided into eight sub-groups and five kind of activities aimed at biosphere purification were taken into consideration. The created model was used for the development of eight alternative forecasts of economic, environmental and demographical state of the planet in 1980, 1990, 2000.
“Beyond the Age of Waste” (RC)	D. Gabor, U. Colombo	Italy – Canada, 1976	The study is generally dedicated to the problems of planet mineral resources depletion. D. Gabor proves that survival of the available tendencies in the field of consumption of natural resources in the future will cause a failure of the world fuel and power and raw material balance.
“Goals for Mankind” (RC) “Global Goals and World Solidarity”	E.Laszlo	USA, 1977, 1979	A concept of “new humanism” is discovered. According to this concept, the main reasons of aggravation of global problems are political, psychological and cultural characteristics of public spirit represented by political negligence, irresponsibility resulting in inefficient political management.
“Europe 2000” (European Cultural Funs)	P. Hall	England, 1977	
“Until Full Employment and Price Stability” (Organization for Economic Cooperation and Development – OECD)	P. Macreкен	France, 1977	Is dedicated to the study of the experience and perspectives of the leading countries with market economy. It has a normative character, i.e. it is based on the assumption that leadership of these countries should be preserved in the future. A demonstration feature of the report is an open denial of ideas of “the Keynesian Revolution” and recognition of the impossibility of the stable economy growth under the permanent inflation condition. In this connection, special attention is paid to the development and substantiation of an “optimal compromise” between unemployment and inflation, which should be a basis for overcoming of the modern crisis tendencies. The scientists introduced a special index of threatening state in economy – “discomfort index” – which includes unemployment rate and inflation index.

Project or model name	Author	Time and place of development	Brief description
1	2	3	4
“Energy and Countdown” (RC)	T.Montbrial	USA, FRG, 1978	
“Global Macregional Model” (RC)	O.Onishi	Japan, 1978	
“Meeting with the Future” (OECD)	G. Lesurn	France, 1978	
“No Limits for Study” (RC)	J. Botkin, M.Elmangra, M.Malicia	USA, Morocco, Romania,	
“South – North: Strategy of Survival” (Commission on International Development)	V. Brandt, E. Hit, U. Palme et al.	FRG, England, Sweden and other countries, 1980	
“The World Challenge” (International Futurological Group)	J.J. Servan-Schreiber et al.	France, 1980	
“The Third World: Three quarter of the World” (RC)	M.Garnier	France, 1980	
“Dialog about Richness and Prosperity” (RC)	O.Giarini	Italy, 1980	
“Pointers to the Future” (RC)	B. Havrilishin	Switzerland, 1980	
“World – 2000” (US Environmental Quality Council)	Administration of the President of USA J. Carter	USA, 1980	
“Global Future: time to act” (US Environmental Quality Council)	Administration of the President of USA R.Reagan	USA, 1981	
«Do our utmost: positive pointer to the future” (American Association of RC)	J. Richardson	USA, 1982	
“Heia” (IT Center of AS of USSR)	M.M.Moiseiev	USSR, 1982	

Project or model name	Author	Time and place of development	Brief description
1	2	3	4
“At the Sources of the Future” (UNESCO)	A.M’Bow	France, 1982	
“For better and for worse: microelectronics and society” (RC)	A.King	FRG, 1982	The theory of “technetronic” and “postindustrial” society. A complex assessment of the influence of modern microelectronics on everyday life of people, economic and socio-cultural processes. The “rose-colored future” of mankind is a result of the methodology of so called technological determinism.
“FORECAST” Model (Joint Chiefs of Staff)	P. Strauh, J. Guerta	USA, 1985	
“Perspectives” (World Society of Future Problems)	E.Cornish	USA, annual forecast	
“Life in the Future”	A.Azimov	USA, 1985	
“Beyond the Growth: Global Collapse or Sustainable Future”.	D. Meadows	1992, 202	The researches decided to review final scenarios of World3 model and confirmed once again the reliability of their assumptions. The most important findings were made not only on the basis of graphic models but on the understanding of the dynamics of global system behaviour which is determined by three key factors.

Source: prepared by the author based on Lecture data. Com [http://lektcii.com/4-13302.html]

He includes to these objectives: 1) cessation of arms race, wars and conflicts, no violence, assurance of international security; 2) resolution of the food problem throughout the world, creation of a world system which will permit to satisfy food needs of all people on the planet; 3) global control over the use of energy resources and raw materials, technologies, development of rational and environment-friendly management of nature; 4) global development focused on the increase of life quality, fair distribution of material and cultural values¹⁰.

“The Future of the World Economy” project (1976) is prepared by a UN expert team under the leadership of V. Leontiev (USA). The aim of the project was in the study of environmental aspects of the world economy future, definition of an optimal strategy which would promote maintenance of the environmental balance required for mankind survival. The model has an inter-regional nature and is divided into 15 regional blocks each of which consists of 45 sectors of economic activity. It takes into account principal questions of environmental policy:

¹⁰ Andruschenko TV The "new world": critical and analytical analysis of the global futures concepts / TV Andruschenko // Gilea. -44 (2011): 602-609.

biosphere polluting substances are conditionally divided into eight sub-groups and five kind of activities aimed at biosphere purification, were taken into consideration.

The authors have developed a scientifically substantiated approach to the determination of parameters and structural coefficients of regions. Most of demographical and economic parameters are defined based on UN official statistics and a number of international and regional organizations. For lack of reliable statistical data on the regional level, the parameters were assessed by using the interstate regressive analysis. Specific ecological parameters were determined based on a wide application of "intuitive" expert opinions, special forecasting methods and supporting researches. The created model was used for the development of eight alternative forecasts of economic, environmental and demographical state of the planet in 1980, 1990, 2000.

In the result of analysis and study of scenarios the authors arrived at a conclusion that economic growth limits and implementation of an optimal strategy in the "human being – nature" system is a factor of not a physical but political and social nature.

Lecture "Until Full Employment and Price Stability" is prepared by a group of experts of the organization of Economic Cooperation and Development headed by Professor of Michigan University P. Macreken (USA) and dedicated to the study of experience and perspectives of the leading countries with market economy. It has a normative character, i.e. it is based on the assumption that leadership of these countries should be preserved in the future. A demonstration feature of the report is an open denial of ideas of "the Keynesian Revolution" and recognition of the impossibility of the stable economy growth under the permanent inflation condition. In this connection, special attention is paid to the development and substantiation of an "optimal compromise" between unemployment and inflation, which should be a basis for overcoming of the modern crisis tendencies. The scientists introduced a special index of threatening state in economy – "discomfort index" – which includes unemployment rate and inflation index.

The scientists under the leadership of D. Meadows, inspired by the success of their first book, continued to work with the model and after twenty years, in 1992, the study "Beyond the Growth: Global Collapse or Sustainable Future"¹¹. After 10 years the researchers again decided to review final scenarios of World3 model and confirmed once again the reliability of their assumptions. The number of population in 2000 was 6 bln. as compared to 3,9 bln. in 1972 – it turned to be the same as calculated by means of World3 model. Moreover, the scenario of world

¹¹ "Zmist Metodolohiyi Analizu Systemnoyi Dynamiky Za Dzh.Forresterom." Studies.In.Ua. http://studies.in.ua/mpd_seminar/1312-metodologiya-sistemnoyi-dinamki-dzhforrester.html.

food production increase (from 1,8 bln. in 1972 to 3 bln. in 2000) virtually matched with actual figures. The most important findings were made not only on the basis of graphic models but on the understanding of the dynamics of global system behaviour which is determined by three key factors¹²:

- existence of a limit;
- constant striving for development;
- delay between approximation to the limit and society reaction to it.

Any system which is characterized by these three factors will go, in a certain period of time, beyond the limits and be destroyed.

Accordingly, it is very easy to achieve sustainable development: mankind has to increase consumption levels in developing countries while decreasing the burden on environment on the planet at large. As well, one shouldn't forget about the development of technologies, change of human behaviour, long-term planning.

In their opinion, there is another choice – transit to the “organic growth” which is differentiated according to regions and globally integrated subject to geographical, socio-economic, socio-cultural peculiarities of the different regions of the world rather than on the basis of a narrow understanding of national interests. Therefore, the balance between regions of the world can be achieved and mankind will develop as an organic unit.

All these theories remain on paper.

Today only one side of resolution of the global environmental problem due to joint settlement was proposed. There is dependence between the temperature and greenhouse gas emission. That is the greenhouse gas emission in the human activity process – firing of excavated fuels (oil, gas, coal) – that in the result of greenhouse effect cause increase of the average temperature on the planet. As a result, island states such as Maldives in the Indian Ocean or Tuvalu in the Pacific Ocean will be flooded. In Bangladesh and on the coast of the Indian Ocean large territories will come to be under water. Some cities such as Calcutta will be destroyed; London, New York and Shanghai will have to spend billions of dollars for protection against floods.

According to estimates of the US government, if the sea level becomes 1 meter higher the Administration will have to spend 156 billion dollars for protection against floods. Great Britain, in case of flood, can lose its agricultural lands in the East of England and this loss will be a bitter blow to its food security. In addition, the Minister of Foreign Affairs of Great Britain David Miliband warns that global warming threatens with international conflicts for potable water and

¹² Meadows D., Randers J., Limits to Growth. 30 years later. Textbook for High Schools. Moscow. ICC "AcademKniga". 2007. <http://rsabc.ru/userfiles/d.-medouz-y.-randers-d.-medouz-predely-rosta.pdf>

agricultural lands. 100 mln. Asians, 14 mln. Europeans and 8 mln. Africans and South Americans will become refugees. Antarctica will face with great changes: the ozone hole which prevented warming on this continent will sink over resulting in ice melting and extinction of plants and animals.

According to scientists, a crucial moment in ocean elevation will be a point when inadequate melting of polar cap ice begins and the planet accumulates more and more warmth from the Sun.

Therefore, we saw the first real embodiment of theoretical forecasts of 1970-ies. It has not become a new approach to settlement of the crisis which arose: 20 countries (Afghanistan, Bangladesh, Barbados, Butane, Vanuatu, Vietnam, east Timor, Ghana, Kenya, Kiribati, Costa Rica, Madagascar, Maldives, Nepal, Ruanda, St. Lucia, Tanzania, Tuvalu, Philippines and Ethiopia) were grouped in one block V20 as to combating these changes. These are the countries with average and low income, small size, standing on the way of development, with desert and bad lands, mountains, islands and countries without outlet to the sea, with population about 700 mln. The aim of the block V20 is creation of a joint financial fund with state and private capital which would be used for covering of expenses related to elimination of the consequences of natural disasters. A new interstate union was established in October, 2015.

From 1st to 11th of June, 2015 a conference of UN Climate Change Framework Convention took place in Bonn. Members of the environmental negotiation from over 190 countries of the world met in Germany to prepare a final text of a new international climatic agreement. The previous text of the agreement was prepared and agreed during prior meetings in the end of 2014 – the beginning of 2015 and was adopted in Paris on December 12, 2015 in substitution of Kyoto Protocol.

195 countries of the world approved on the summit in Paris a climate change countermeasure agreement which would control temperature increase within 2eC. It's the first agreement in the world which binds all countries to reduce carbon emissions. The agreed text states that threats from climate change are much higher than it was thought before.

The agreement shall come into effect from 2020.

The actions provided by the final draft include:

- to achieve greenhouse gas emission as soon as possible and to achieve in the second half of the century the balance between generation and absorption of greenhouse gases;
- to maintain temperature increase in the world at the level not less than 2°C, and to take efforts to limit it by 1,5°C;
- to review the progress achieved every five years;

- till 2020, to allot annually 100 bln. dollars to developing countries for the climatic purposes.

Finally, the last clause of the agreement includes ideas of the Rome Club and researches of Latin-American and Dutch scientists concerning provision of support to developing countries. Though, the goals are slightly changed. However this supports again the theses that the world community will never admit an idea of reformation of a new economic order until a range of events affecting their point of view takes place.

Conclusion

The idea of forecasting of the further economic development of countries is not a new one. The theoretical approaches to the modern global problems were launched far in 1798 by Malthus in treatise "An Assay on the Principle of Population as it affects the Future Improvement of Society". It took almost 200 years to understand the consequences of human activity. Only in 1968 there was created the Rome Club, an association of economists, demographers, ecologists, sociologists, politicians, businessmen who began to research and develop models of the future development of civilization: "The Limits of Growth" (leader – American scientist D Maedows, USA), "The Strategy of Survival" (M. Messarovic, USA, and E. Pestel, FRG) "The Latin-American Model of Development" (A. Areira, Argentina), "A Fresh Approach to Development" (Y. Kaya, Japan), "Reconstruction of the World Order" (J. Tinbergen), "The Goals for a Human being" (E. Laszlo, USA) etc.

All these models take into account and foresee the threats related to further life urbanization. They take into account the following parameters: population, economic growth, food production, depletion of unrecoverable resources, environmental pollution. This organization operation resulted in book "The Demographical Bomb", from which it followed that even then several hundreds million people were doomed to starvation death. According to materials of the lecture of the Rome Club and findings of scientists of Massachusetts Technological Institute in USA made in 1972, industrial growth would be suspended till 2000 because of depletion of easily accessible natural resources, and about 2020 a collapse of the whole industrial system can occur. Therefore, containment of population growth on the planet is the most important global problem of the present time because of the rapid almost uncontrolled depletion of all natural resources, environmental degradation in the context of climate change and aggravation of tension in socio-economic international relations which can result in environmental disaster in the near future. But no nation can stop the

population growth. So, we return again to the model: the rich help to the poor. What is the price of this help?! How does the proposed model of a new economic order differ from the ideas of 1970-ies?! Why does the world community perceive the ideas of scientists of the past century only in the end of 2015 and doesn't want to form a new model at all.

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