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WE LIVE ON A SICK PLANET
- Despair and Hope -

Academy of Romanian Scientists Publishing House

Address: 54 Splaiul Independentei, sector 5, code 050094 Bucharest, Romania

Descrierea CIP a Bibliotecii Naționale a României

BULGARU, MIRCEA

We live on a sick planet : despair and hope / Mircea Bulgaru. -
București : Editura Academiei Oamenilor de Știință din România, 2011

Bibliogr.

Index

ISBN 978-606-92723-7-4

338

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PREFACE

"We live on a sick planet - Despair and hope" is the book title that Prof. Mircea Bulgaru PhD together with his colleagues submit to us within a busy time, full of concerns in the field, through studies and scientific research that circulate theories, theses and ideas in world literature coupled with our original preoccupations that should facilitate original knowledge of the world we live in, *"the complex world that requires new ways of sustainable development based on rational, fair development, etc."*.

This book is a veritable treatise on "Planet Earth" in all its complexity: the earth is seen by the author as a unity in diversity, and the environment presented as a surrounding system. The appearance of man and human society is presented as a subsystem of the global economy and the wealth of nations is presented as support of sustainable development.

As for the earth's natural resources the author deals with them at length:

- Renewable natural resources (cosmic, soil, agricultural resources, forestry, water, biomass, genetic resources);
- Non-renewable natural resources (energy, minerals and uranium etc.).
- Mixed natural resources (seas and oceans).

In another chapter the author deals with accumulated resources (stock of capital investment, banking and financial capital, residential housing, the stock of scientific, cultural, informational capital, etc.).

Regarding human resources, they are treated under two aspects: demographic resources (population explosion, population reproduction, population migration, etc.) and human capital (human capital costs, health costs, education costs, etc.).

Global system resources are treated and motivated in several ways: the crisis of human settlements, ecological crises, poverty, hunger, conflict, corruption as a global scourge, terrorism and human violence, alienation, human degradation, etc.

In a separate chapter, the author refers to "*World of Tomorrow*" with an optimistic plea for a change in the today concept, towards a new way of developing specific to knowledge society of the XXI century.

In his opinion, the twenty-first century will be fraught with risks and pitfalls in all aspects (social economy, technology, epidemiological aspects, military conflicts, natural disasters etc.). All these require a responsible revision of development, with national and international programs capable of ensuring progress and preservation of "*wealth of nations*" under the patronage of the most authoritative United Nations (UN).

In conclusion, Prof. Mircea Bulgaru PhD' work gives the reader an exciting, attractive reading which successfully completes the scholarly concerns about past, present and especially the future of our planet.

Gral (r) prof. Vasile Cîndea PhD

FOREWORD

We live in a sick world, torn by crises and by a degradation of environment. „Man, this little known being" is found at a crossroad and to survive does not know to grip, metaphorically speaking, to „human heaven" (socialist) or to „sweet hell" (capitalist).

The book we provide the reader, is a special book, a book of reflections over this world and man destiny.

The book is somehow the sequel of ideas and theories from other publications of the author and proposes to present based on indisputable data, **lucid knowledge of the world we live in** a complex, contradictory, paradoxical and unjust world and on this base to reflect, think, find and build new bridges to the future, to **another way of development**, leading to **Human Renaissance** with dreams, wishes and dignities and in full harmony with environment.

Another way of development would mean first of all a **NEW model of administration** of PLANET WEALTH, its aware use, under the conditions of a new concept of sustainable development, **reasonable, equitable and human development** leading to **the saving of Terra resources**, diminish the gaps and getting closer under certain limits to the living conditions of populations all over the Planet.

It is necessary a **new system of society approach** when the Planet, namely world economy, is under **cybernetic SYSTEM**, being **ONLY ONE EARTH** characterized by a great unity, diversity and complexity.

Within the world economy new subsystems have been created, such as **global issues and integration issues of nations which impose new theories and new approach solutions at global, regional and national level.**

It is about a **global and systemic approach of world economy**, leading to **coordination of major problems of development at world level, to a new way of thinking and quantification of development for the interest of all the countries in the world**, no matter of their size, their socio-economic system, **based on the principles of human solidarity, equity and dignity.**

That is why the paper was divided into six parts:

Part I, ONLY ONE EARTH, Planet, respectively world economy is analyzed in a systemic approach with a **single WHOLE**, with unity, diversity, structure, dynamics, behavior and environment is integrated organically in global system of World Economy. Actual model of development is a predatory model which diminish the potential of Terra (Wealth of National) under the conditions of a system global crisis.

Part II, deals with **natural resources of the Planet**, recycling resources, cosmic resources and soil resources, agricultural resources, forestry resources, water resources, biomass and genetic resources, with potential, structure dynamics, quality. There are presented recycling natural resources, energy resources (petroleum, gas, ores), their limit and worn out trend.

Part III, aims at **Accumulated resources of the Planet** as a result of human activity, level, structure and behavior. They are expressed as stock of capital and

investments, bank financial capital, residential stock and dwelling fund, cultural patrimony and stock of science and information capital.

Part IV, Human resources, approached under two aspects as demographic resources regarding the whole population, as evolution, reproduction, structure, zonal distribution and migration, and as human capital, cost and their value and structure.

Part V, Cancer diseases of world system, understood as global issues, ecologic crisis and of human settlements, poverty and hunger, peace and war, corruption and world terrorism, human being estrangement and degradation.

Part VI, aims at Tomorrow world under change, a new way of development, new demographic pressures over Terra and their implications over life on the earth.

We wish to draw attention of the reader that on our conception, globalization and integration trend of world economy, does not mean world government, elimination of borders, uniformization of development system, elimination of all restrictions for person migration and goods circulation and for some authority elementary rights of small and middle states. On the contrary, globalization means **to think at world level the general concept of Development**, to elaborate an overwhelming **Strategy of Development Orientation**, to stimulate the cooperation between nations and territories and to **act locally at the level of states**, to keep loyal competition under concrete conditions, specific for the nations towards political, economic, social, education and moral growth of each member of big or small nation, democratization of international relations and to keep the **Unity, Diversity and Preservation of Terra resources**.

This paper relies on an impressive volume of information, prevalent statistical from the most authorized sources, of UNO and of other international bodies, information carefully interpreted by the author. Nevertheless, there should not be omitted any **traps which can hide a non-correlative analysis**, non-differentiated, fragmented and unilateral analysis of statistical data and outside historical context of economic, political and social phenomena and processes. That is why, we consider that nothing can be more dangerous for economic analysis than to take over mechanically statistical data without a critical analysis and extrapolate them without judgment totally different situations also in other historical conditions of time and space. **Lab experiments are not in the economy as in exact sciences**. Thus, extrapolations of some performances from industrialized world to under developed world, from one stage to another, from one continent to another and even from one country to another cannot be completely valid. We try to argue in this paper, that **there are no ideal universal valid models which should be copied and generally actual model of development is a predatory, savage, cancerous model, estranging man from his natural bed, as well as from his relatives, in the rush for an earning and several times for an earning without work**. Under these conditions, it can be told that human society is today in front of a fundamental dilemma between „To be or not to be“, to use Shakespeare's phrase.

Therefore,, *this model should be changed and looked for a new alternative of development, to be more and more for the human benefit*. Certainly, in this respect, there are no universal valid receipts, there are no ideal models of capital or socialist type, to be copied or even adapted without judgment to some countries. **We argue in this paper the**

need to pass to another way of development, following to combine positive elements from the two systems capitalist and socialist and to model gradually the conditions specific to the zones and countries, in the human benefit, of human condition, a new base, a script of its own existence, of its own destiny.

I would like to warn the reader that we should not receive ready all the conclusions of this paper as some receipts. Complexity of problems, specific character for some of them, needs prudence, while reader with his life experience and his philosophy can complete the ideas of this book with his own options and beliefs, can reject them, but only based on serious arguments.

Although there are approached very serious issues, regarding mankind development, ideas from this book, are not apocalyptic, do not forecast the end of the world at the beginning of this century and millennium, fundamental problem of this paper is to be another serious warning that humanity should become aware of the risk of actual evolution predatory model and should take viable energy measures to build on new basis a script of his own existence, of his own destiny.

It is possible, that under the conditions of actual model of development, of physical, spiritual and moral pollution, the plant should have become uglier and less hospitable for mankind. But this should not lead to despair and agony, but on the contrary, to hope, a prudent optimism practiced to guide us to act, to have a world credible forecast, to solidarity and trust in science and human creative forces. Rhetorically we could ask such a question: **How ugly and savage would be today the planet without men.** But we should not forget any moment the savage aggression of men over environment, when **Nature could also do „JUMPS"** and poet saying: *„I am very afraid/ we could be thrown to another planet/ through ...an oversight!"*

As conclusion, I wish to express my thanks to Mr. univ. prof. Ph D Vasile Căndeă, President A.R.S. for competent appreciations and observations from the preface of this paper. I also thank my colleague, Mr. univ. prof. Ph D Marius Băcescu, President of Section for economic, juridical and sociological sciences, for his steady interest in this paper to be issued in time and under good conditions.

We also thank the Academy of Romanian Scientists' publishing house and especially engineer Mihail Căruțașu for his effort. However, due to a lack of funds, this book was finally published in normal conditions.

Author

PART I ONLY ONE EARTH

Planet, unit and diversity

Environment, cybernetic system

Society, subsystem of World Economy

Predatory development of Terra

National Wealth, support of sustainability

Crisis, global crisis of system

Chapter 1

PLANET, UNIT AND DIVERSITY

A lucid analysis of world economy, of dynamics structure, of its behavior and defining the role and human being coming on this earth, cannot be understood but starting from the **great Unit and Diversity** of Planet and from its laws and legislations.

Today, it is already talked about **ONLY ONE EARTH**, where we are all metaphorically speaking „in only one boat”. It means that natural, cosmic and economic and social phenomena and processes should be studied not isolately, separately, but in systemic vision as a whole of interdependences, some of them direct others indirect and even hidden. In the complex and contradictory, sometimes paradoxical analysis, of world economy it should be taken into account first of all the cybernetic approach having in view the **great Diversity in the great Unit of Terra**, complex processes and direct and reversed connexions and their implications over the existence of life on the earth.

In this regard, world economy includes a multitude of entities (nations, territories) representing the irreversible network of interdependence where take place complex processes of economic, ecological, financial, social, moral, security development facing Humanity today.

Therefore, the World we live in is characterized by a huge Diversity integrated in a great Unit, where develops the activity for all the **STATES OF THE WORLD**¹. That is why, within a very complex analysis, first of all we should take into account the physical situation of the earth as size (area, volume and mass), circumference, duration of rotation movement and revolution, distance to the sun, as well as its axle inclination. All these characteristics and natural relations influence and sometimes determine its life and behavior on the earth.

Table 1 *Earth (Terra) general characteristics*

• Area [thou Km]		%
Total	510.101	100,0
- land area	149.042	29,2
- ocean and sea area	361.059	70,8
• Volume [thou Km]	1.082.841	
• Mass [thou bill. tons]	5.973	
• Diameter [thou meters]		
- equator	12.756,3	
- North Pole South Pole	12.713,6	
- average ray	6.367,5	
• Circumference [thou meters]		
- equator	40.075,2	
• Duration of rotal movement round its axle:	234.56'4"	

¹ See the paper *World States, small enciclopedy* edition V, foreword Mircea Malița, publishing house Rombay.

- **Duration of revolution movement**
- round the sun: 365 days, 6 h 9' 9,7"
- **Speed of revolution movement** 29,8 Km/s
- **Inclination of its axle:** 23°27'

It is not necessary to demonstrate the influence of Terra over life of the earth first of all by geographical and climatic conditions, as well as by economic, ecological and social ones. At the same time, it is mankind influence over his economic activities on the earth, over ecological balance.

Geographical and climatic map of the world is different by zone, emisphere, continents and even by country and territory. There is a great biological diversity of plants and animals estimated to about 14 billions. Up to now, scientists have identified about 1.7million species recognized currently, of which 850.000 belong to animal kingdom and 270.000 to vegetal kingdom.

Size of continents and of countries differs a lot by Terra geographical configuration. Thus, Terra total area of 135.781 thou. km² is differently distributed. Of those five existent continents over 70% of territory is held by America (31.0%), Asia (20.3%) and Africa (19.2%).

At the same time, world **political Map** is diverse and is continuously changing. In actual period, there are over 200 independent states of all the continents, as well as over 50 dependent territories. They are situated in different geographical zones having various sizes and structures, political regimes as well as varied cultures and traditions.

World **demographic Map** is also much different, by continent and country. For instance, in 2007 total population on the Terra amounting to 6.625,0 million inhabitants was distributed on the continents, as follows:

		%
• Asia	4.010,0	60,5
• Africa	943,0	14,2
• North America	335,0	5,1
• South America	569,0	8,6
• Europe	733,0	11,1
• Oceania	35,0	0,5

Size of population by country, reproduction, migration, size and network of human settlements in the villages and towns, is also characterized by a great diversity.

Notable differences are also as regards **distribution by continent** and country of recycling **natural resources** (agricultural lands, forestry lands and waters) mpm-recycling natural lands (energy resources and ores etc.).

At the same time, if we take into account **economic map of the world** we shall notice economic and social considerable differences as regards development level (GDP per capita), level of agricultural and industrial production, living standard, food and non-food consumption of population, health and culture etc.

There is also a **map of natural disasters** of floods and earthquakes, a geography of conflicts and world drought. This world in continuous movement unifies, fragments and is looking for a cultural identity regarding characteristics of language, belief, tradition and on the other side it is integrated in certain Unions according to economic, political and national security interest. Under these conditions, there are continuously modified the political systems of society leadership, as well as apparition of a considerable number of governmental and non-governmental bodies, economic, social, ecological, political, military, financial-cultural organization and United Nations Organization (UNO). There were enlarged and intensified the communication lines, transport, tourism, phone, radio and TV, Internet, it was reduced the time by ultra modern communication means, by those 3000 languages and 20000 dialects existent on the planet at present.

In actual period, **Planet is left in drift and is characterized by a geography of poverty and hunger, severe damage of natural environment and mankind estrangement, increasing phenomena endangering world order and peace and even mankind survival on this earth.**

Under this conditions, the planet, respectively **world economy in order to assure the balance cannot be examined but as a WHOLE**, within a great diversity and leadership according to the laws of general cybernetics. Thus, the Planet/Environment is constituted as the widest system characterizing Terra potential and life quality on the earth.

Chapter 2

ENVIRONMENT, CYBERNETIC SYSTEM

In actual stage of society evolution, knowledge of world economy behavior, cannot be conceived out of environment approach, as system, structure and dynamics, connexions and its involvements over life on the earth.

General structure of the system

Environment can be considered as the widest and the most complex system characterizing Terra general potential, of life quality on the earth and of human condition. Environment issues related to ecosphere administration should organically integrate real models of development, in the interest of all the countries. That is why it is imposed from the beginning knowing its particularities and legislations and self regulation and regulation principles which in cybernetic language, assures the balance and survival.

Therefore, environment in this situation is divided into two big subsystems:

I. Natural subsystem includes those four components:

a) *atmosphere*, namely stratum above Terra at 29 Km height, of which troposphere includes a distance of 11-13 Km directly or indirectly related to human activities;

b) *lithosphere*, respectively land area ($1/4$ of planet total area). This earth contains:
i) continental platform of small depth up to 180 m under sea level and occupying about 6% of land area; ii) mountains with heights between 7.000-8.000 m; iii) plains, mostly covered with drift sediments;

c) *hydrosphere*, respectively waters found in all the pores of nature, rivers, seas and oceans, underground water, shallow waters and atmosphere waters. Waters 97.2% of hydrosphere includes oceans and seas. Water circuit in nature with continuous refresh of humidity sources from the atmosphere, from soil and subsoil, from plants and animals is one of the great wonders of our planet. Water circuit in nature is as blood in human body. This water circuit in nature takes place by natural laws, which are not totally known by mankind.

Thus, there are known surface waters movements of sea waters: oscillatory (waves-combers), or translation, movement of huge ocean currents focused on warm waters movement to polar lands and by compensation cold waters moving to tropical zones, extremely complex phenomena influencing the climate on the earth; as tides, representing a real time clock.

d) *biosphere*, includes a high biodiversity of spontaneous vegetation (flora) and contains over 500.000 types of plants and fauna (animal world) amounting to about 1.500.000 animals and birds known up to now.

II. *Subsystem created by man (antropic)*

This is the subsystem characterizing massive intervention of man in natural systems and creation of deep imbalances in ecosystems with the most severe implications over life on the earth. We introduced in this subsystem: a) *habitat*, namely human settlements, especially urbanization, pollution of big cities, megalopolis with high implications over environment; b) *economic development*, industrialization by creation of big economic objectives, intensive development of agriculture, development of capital construction, modern transport means; c) *stock of sciences and special technologies*; d) *special objectives*, including military objectives, industrial of nuclear weapons etc.

System behavior

Environment functions by all the principles of complex cybernetic systems, with complex structures, input-output factors, reversed connexions, balance, entropic situation, self regulation and regulation systems.

As cybernetic system, environment has certain particularities revealing very important aspects of some interdependence relations, some of natural systems, those modified and created artificially by man. Generally, environment could be characterized as follows:

a) Environment is the most complex system and comprehensive including all the systems of general potential of national economies: economic, natural, social, political, juridical and psychological ones;