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ON DYNAMICS OF THE PLANET LIVING SPACE

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Abstract: The paper aimed at the consideration of the relationships between two major parts of the Planet: its *living space* and *resource area* under the development of scientific and technological progress, and a process of humanity globalization at large. The main outcome of the paper is that the more human society develops the total sum of living spaces is diminished and its living quality is going down. In short, so called scientific and technological progress transforms a living space into resource area. This process means that risks and disasters inevitably accompanied this process only enhances this transformation. The less such relatively safe living spaces remains on the Earth, the conflicts and wars for access to and possessing them are growing. As a result, this process acquires an irreversible character.

Keywords: the Planet, living space, resource area, conflicts, wars

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1. Aspects of the issue

The relationships between the Biosphere and human attempts to master it are one of the most acute problems of our days. It has been analyzed from various angles: the genetal problem of global ecology (Budyko, 1997; Chumakov, 2010); violation of natural ecosystems by human activity and resource wars (Beck, 1999; Chiesa, 2006; Forrester, 1971; Yanitsky,

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2002a, 2005); the restriction which the Biosphere imposed on human activity (Catton and Dunlap, 1980; Chumakov, 2010); the impact of natural and man-made disasters on the Biosphere and its metabolic structures and networks (Fisher-Kowalski, 1997; Fisher-Kowalski and Haberl, 2007; Keen, 2009; Costuchev, 2012); social aspects of the struggle for nature protection (Yanitsky, 2010; Costuchev, 2012); and, of course, there is a lot of literature aimed at meeting the challenge of global warming (Mershant, 1892; Rahmstorf, and Schellnhuber, 2007; Budyko, 1997; Beck, 2010; Beck and Levy, 2013; Yanitsky, 2013). The special attention to the relationships between two paradigms, namely 'living space' and 'resource area' has been given by Finnish sociologist T. Karjalainen, (2001).

2. Posing the problem

The further the more the behavior of the humankind, its institutions, organizations and individuals seems rather strange. After two centuries of wars, thousand armed local and regional conflicts, natural and man-made catastrophes, and endless other traumas caused to nature and the humankind do not want to note that he is sitting on powder keg created by himself.

The humankind and created by him a giant 'machine of sciencepractice' are aimed at getting profit 'here and now' only. The people have mastered a cosmos, opened the structure of human genome, have built the Large Hadron Collider in the heart of Europe. And in general, Homo Scientificus 'wants to discover the essence of every things' as Boris Pasternak, Russian great poet, stated, without any attention to the fact this 'Homo' everyday destroyed local, regional and global metabolic processes (chains) which had been created naturally during the billions centuries of the Biosphere evolution.

The metabolism of the Biosphere is rather complicated and accurately tuned system of relationships and ties contained billions specific filters, membranes and other created by the Biosphere 'devices' created by her for her stable functioning. This naturally-created metabolism permanently violated by socio-technical systems created and ruled by man. This social metabolism is not only less simple in its functional organization, than evolutionary built biospheric metabolism, but the social metabolism is based on entirely other principles: maximization of profit and minimal care for its consequences for natural ecosystems and humanity itself.

3. Modern capitalism and resource wars

Using the advances arms, financial resources and the banner of western democracy, the rich countries conduct a real resource wars against poor and de-modernized countries (Chiesa, 2006). The relatively clean and safe landscapes are rather valuable resource among others. The less the total amount of such landscapes the higher their price. Besides, resource wars for small islands in oceans and sees which have strategic value are *very important geopolitical resource* as well. So nowadays, the living spaces are often transformed in the closed, secret areas which nature ecology has no value at all. It is one more example how living space is transformed into resource area.

4. Networks in nature and society

Nowadays both sociologists and natural scientists have taken a great interest in *network approach* with the aim to better understand the structure and functions of a society. But these networks are not built in the processes of natural metabolism. As Noble laureate in economics K. Errow stated: 'A market (model) is compatible with nothing: neither with democracy, nor with authoritarianism, nor with any other form of political ruling. The market is forces out a society as the structure of human relations'. In other words, the market is an alternative to a society. But even the regulation of social networks, and first of all production networks, is incapable to resolve the main task: how to minimize the violation natural and social networks which allows them to survive. So called scientific and technological progress stimulated by a capitalist mode of production and its derivate, a consumer society, step by step converts the existed living spaces, both necessary for nature and for man itself, into resource areas unfit to normal life of humans and for production of food products. Such transformation is never going peacefully. On the contrary, this process called geopolitics, be it within a particular country or very far from it, is inevitably accompanied by the risks and losses for local population (illnesses, suffering, resettling or emigration or even death). Even under peaceful conditions – I mean preliminary agreements between the domestic or/and foreign authorities – such transformations is never spatially restricted. They always violates the established mode of living of local population, ecosystems functioning and any structures constructed by man himself for peaceful co-existence of man and nature far beyond the new mine, plant or artificial lake.

In the case of local or world wars the territories useless for normal life counts billions square kilometers. But the essence is the same: the straggle for seizer the resources, be it raw materials, valuable section of land or seizing power. After the World War II the affected territory spreads from the Atlantic to the Urals. About 30 years was needed for rehabilitation efforts. And it is in Europe, only. Today, one could observe the same in any part of the world: in Africa, Mid-Asia, south-east Asia as well as inside almost every country including the Russian Federation.

5. Resource wars

In many cases, resource wars make these and adjusted to them areas unsuitable for normal life. It is typical dialectics of recent times: the areas of extracting resource or big industrial constructions like hydropower stations of nuclear plants became excluded from normal living space. And not only excluded: such resource zones are always a source of risk (an accident or disaster).

Time is another important dimension of the phenomenon under consideration. First, living space-resource area conversion is always brings about a disorganization of established social order and therefore slow down an affected community development. Secondly, the process of restoration of normal mode of living is usually takes much more time than for destruction of it. Thirdly, the above conversion is usually, as it is implemented nowadays, is sharply lowering the general intellectual level of affected or remained population. Fucisima-1 aftermath is clearly showed it. And in order to restore it the new resources have been needed which, in turn, takes more time than for the maintenance and/or development of the existed order.

A war for resources, natural or geopolitical, *creates long chains of risks and losses* for a particular man and humanity at large: exclusion of spaces earlier suitable for normal life. This, in turn, enhances the struggle for seizing or/and mastering space still suitable for life. Besides, these resource wars create zones of desertification. Masses of people leaves then in search of relatively suitable for life spaces, as it happened now from North Africa to south Europe. Accordingly, the living space of Europeans becomes the battlefield accompanied with demolition and human losses. This process enhances by the invasion of an alien culture and way of life. The living space of Europeans not only shrinks but became more closed. It is transformed into a set of zones of 'fencing in' protected by the guards and other special means from the undesirable neighbors (ie newcomers). In the result, not only the structure of live-in (habitual) space has shrunk and changed but the way of life both of aborigines and newcomers has changed as well, take a turn to the worse.

From the geopolitical viewpoint, the globe has endless number of risky zones situated between the conflicting states and communities. These are zones which can exist in such state of potential risk for years. The most characteristic example is the numerous Arabic communities and tribes which live due to charity aid of international organizations only. They lost their traditional culture of production nearly in full. The new only one craft: a war-fare.

6. On 'waste culture'

But it is not all. With the transition from agriculture to industrial forms of mass production achievements of natural sciences, the mass production of wastes has become the new force which step by step diminishes the space suitable for human life. The worldwide phenomenon of 'waste culture' has emerged. The 'waste culture' is the form of culture of all-encompassing risk when a waste production (in the broad sense) has become the prevailing form of production of means of production or consumer goods. Under the 'waste production' I mean that the overall process of production of wastes, their accumulation, global migration and storage takes over the processes of creation and consuming goods and substances which are actually needed for maintenance of human life and natural ecosystems. Besides, the 'waste culture' is the culture of individuals and human communities which accustomed to live in a wasted environment and perceive such life as a social norm and a part of established social order. 'Waste culture' is a creeping catastrophe of our society.

Needless to say that production of wastes in any form diminishes the living space. First, the earth has been poisoned by various wastes. For example, the ecosystems of Russian North are nearly totally destroyed by the so called 'North delivery' (supply). Secondly, the turn of water has become from small rivers to world oceans. Thirdly, a man began to store the radioactive wastes deeply under the earth. Then the turn of cosmos has become which is rather difficult to clean. The huge amount of wastes is an inevitable outcome of local conflicts and wars (see post-war Iraq, Afganistan, Pakistan and so forth). I'd like to stress that there is no difference which particular process is a producer of wastes: natural or manmade disasters (remember Catrina hurricane, Chernobyl and Fukusima-1), by-product of various industries, construction of cities or infrastructures as well as an extreme individualism ("Not in my back-yard!"), the dark side of consumerism or the result of civil wars or so called peacemaking operations.

7. Metabolism in nature and society

'Dezertification' is going on in various milieus and in different directions. But gradually, different types of wastes meet and stimulate each other, joining and transforming in the processes of socio-ecological metabolism (Fisher-Kowalski, 1997) and in the end amalgamates together in a certain destroying symbiosis. The producers of wastes and the carriers of 'waste culture' equally might be the reach and poor, the politicians and lay people, the state officials and civil society members as well as the social institutions. Therefore, a 'waste' is not something out-door product like the mountains of wastes in Russian suburb forests and fields. 'The waste' is a first of all the type of culture inherent to a society in the stage of speeding-up devolution.

But it is not all yet. An uncertainty is the all-encompassing risk. But the most dangerous it is unpredictability and uncertainty of changing of quality of life in zones which one consider long before as well suitable to life and production. The reason is the processes of socio-ecological metabolism. They may lunch in one place as safe or relatively safe during its way in air, water and even underground coming in interaction with other substances capable to transform into deadly dangerous for all alive. In other words, socio-ecological metabolism transforms the whole planet into a zone of all-embracing risk and uncertainty.

Here we came to the principled point which I consider as the paradigm shift. Gradually, the nature transformed by man became the subject which not only restrict a man's living space but begin to transform the existing social order. It is true paradigm shift because up to now a man has tamed nature. As a matter of fact, the beginning of global warming is the best example of this shift. The scientists discusses on how soon and how much. But it is the fact that the severe end of winter in the western part of Europe is the result of the Golfstream cooling.

Up to now, the most visible cases of this shift have been the postdisaster periods when a social activity has nearly been totally subjected to 'commands' of abnormal natural or man-made processes (wildfires, tornado, hurricane, plant explosion, etc.). The coming era of global warming shows the qualitatively different step of the process under consideration. It is rather difficult to predict its outcome. In my view, it will be the combination of small and big clashes between emigrants and aborigines, and the search for mutual help and attempts to diminish greenhouse effect. The most difficult problem to resolve is to truly implement the above paradigmatic shift, ie to radically reconsider the pillars of modern capitalism.

8. Conclusion

For centuries, a man has gradually changing the Biosphere. But being changed the Biosphere compelled him to change the principles and conditions of his/her own life and the socium as a whole (the 'boomerang effect', according to U. Beck). Fighting with nature we simultaneously more and more subjected to it. In other words, humankind created the great innovations in science and practice, *continue to behave as biological species*. As a result, one could observe shrinking the total sum of living space, never mind is it the outcome of realization of wrong constructions or introduction of flora or/and fauna alien to local ecosystems, or natural disaster or man-made accident. One more reason is a construction (for example, a dam or overflow weir) violated the socio-ecological metabolism formed during previous centuries in a particular region (basin) or of the Biosphere as a whole.

Among major causes which gradually but inevitably shrinks a living space are: a capitalist mode of production and its result the global warming; resource wars; tandem of consumerism and waste culture; natural and man-made accidents and disasters; and finally allpenetrating socio-ecological metabolism. Separately or altogether they transform a living space in a kind of 'shagreen leather'.

Today, the general trends of global community are as following: risks became is actually encompassing. It means that there are no absolute socially and ecologically safe places; for the reason of excessive density of technical infrastructures of various kind and the phenomenon of social-ecological metabolism there are only more or less dangerous places are existed. This metabolism generated by natural disasters or technical accidents further diminishes an area of relatively safe living space and enhance its uncertainty. Besides, a diversity of flora and fauna steadily diminishes.

The only one exit from this situation is a 'friendly globalization' based on a mode of governance as key principle of organizing and maintenance of social order. I mean the coordinated activity in relation of placing (or distribution) and relationships between resource areas and places suitable for living. It means in turn an urgent need in radical reconsideration of basic principles of existing capitalism. Unfortunately, the humankind is moving in the opposite direction. Every unit (state, urban or rural community, kinship) attempting to seize maximum resources and to shut himself off from others. This politics is mortal even in a short-term perspective.

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