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TRIGGERS OF GEOPOLITICAL DESTABILIZATION IN THE CONDITIONS OF CLIMATE-ECOLOGICAL TRANSFORMATIONS OF THE XXI CENTURY

Attention is drawn to the fact that in the context of "extreme climatic and ecological situation" (large-scale natural cataclysms, natural disasters, famine, freshwater lack crisis, mass migration, epidemics, etc.) the main source of socio-political tension and international destabilization is the struggle for "basic resources" (food, water, medical supplies, livable areas, etc.). The obvious antinomy and asymmetry of modern politics in the environmental issue, combined with the increase in the level of political comprehension of the people, will inevitably lead to an explosion of socio-political tension. As a result, riots, protests, revolutions, wars will become symptomatic markers of the 21st century. The Water Wars, The Hunger Wars, and the Living Space Wars will be powerful generators of deep destabilization in individual regions of the world, causing socio-political crises, military conflicts, humanitarian disasters, and large-scale migration processes, and also determining the format of the internal and foreign policy of the states in the near future. Global integration and prioritization of the environmental issue is the only way to escape the global social tragedy of the "Global Environmental War for Survival" for Modern Civilization.

Keywords: climate change, environmental transformations, climate and environmental problems, local and global risks, socio-political protests, socio-political crises, political tension, national security and international stability, "water crisis", "food deficit", mass migration, environmental refugees and climate migrants, "climate-ecological wars".

Relying mainly on the base of research material of modern humanities – J. Alexander, B. Barker, Z. Bauman, W. Baumol, U. Beck, J. Baudrillard, L. Brown, I. Wallerstein, T. Veblen, F. Guattari, J. Gibson, A. Giddens, S. Gokings, R. Hall, A. Gore, J. Deleuze, F. Jameson, D. Deutsch, I. Duron, W. Klaus, N. Klein, E. Colbert, L. Caldwell, P. Colomy, E. Laclau, K. Levy-LeBouillet, J.-F. Liotard, G. Mcston, J. Markoff, E. Masuda, A. Mirakyan, A. Mol, Sh. Mufe, J. Naisbitt, A. Nekless, L. Nicholson, W. Ots, S. Postel, J. Randerns, Z. von Siriasi-Ventrap, G. Scott, G. Sparganer, N. Stern, D. Stockols, J. Turner, E. Toffler, J. Urry, F. Ferrarotti, N. Frezer, G. Friedman, M. Foucault, R. Fuchs, Y. Noi Harari, J. Howe, N. Chomsky, J. Huber, N. Stern and others, – it is possible to identify the main generators of geopolitical and geo-economic tension in the 21st century: military-political conflicts, activity of terrorist organizations, political and financial-economic crises, uncontrollability of migration processes, social inequality increasing, unemployment, poverty, etc. However, the scale and progression of global climatic and ecological transformations in the form of temperature anomalies, the routine of natural disasters such as hurricanes, floods, droughts, forest fires, pollution of reservoirs and soils, increasing of areas unsuitable for living, food and drinking water shortages are recognized as regional and global triggers of geopolitical destabilization in today's world space. Thus, according to the annual report of The Global Risks Report, the most potential risks for 2019 were identified: 1) *extreme weather events*, 2) *refusal to take decisive measures against climate change*, 3) *large-scale natural disasters (earthquakes, tsunamis, volcanic eruptions, geomagnetic storms, etc.)*, 4) *mass cases of fraud and data theft*, 5) *large-scale cyberattacks*, 6) *environmental degradation due to man-made disasters and natural disasters*, 7) *large-scale forced migration*, 8) *significant loss of biological diversity and environmental systems violation*; 9) *drinking water crisis*; 10) *collapse of large-scale assets*¹; – as we can see, 7 of 10 are clusters of climate and environmental issues.

It is quite obvious that nowadays the effects of the modern toxic influence of Modern Civilization on the climate and ecology of the Earth cannot be stopped by either the Declaration of the United Nations

¹ The Global Risks Report (2019). *World Economic Forum*. <<https://www.weforum.org/reports/the-global-risks-report-2019>>.

Conference on the Environment (Stockholm, 1972) or the Report of the United Nations Conference on the Environment and Development (Rio de Janeiro, 1992), or the United Nations Framework Convention on Climate Change and the acceptance of the Kyoto Protocol (Kyoto, 1997), the Charter of the Earth (2000), the Johannesburg Declaration of Sustainable Development (Johannesburg, 2002), or the United Nations World Conference on Climate Change (2015), and neither the UN Sustainable Development Summit (New York, 2015), as well as with any other ambitious projects which have underpinned the global concept of a green policy / low carbon economy based on the principles of equitable distribution of wealth, economic equality and equity, equality between generations, preventive measure approach, development rights, external factors consideration, international cooperation, international responsibility, information, participation and responsibility, sustainable production and consumption, strategic, coordinated comprehensive and integrated planning, reasonable transition, welfare reassessment, gender equality, biodiversity conservation and the prevention of pollution of any part of the environment¹; – nor by the single "environmental practices" of individual environmentally conscious citizens such as Lois Gibbs, Albert Gore, Jane Goodall, Edahiro Junko, Leonardo DiCaprio, Rachel Carson, Carolina Lucas, Wangari Maatai, Dennis and Donella Meadows, Sandra Postel, Mark Ruffalo, Marina Silva, Boyan Slat, Wilton, Witte, Slate, Wil Christopher Flavin, Morgan Freeman and many others, – *it must be admitted that solving of global climate and environmental problems requires much more than everything that has been done so far* – "Taking into account the global nature and rapid growth of human-created problems, realizing that an irreversible point might be traversed in the nearest future, it will not be possible to cope with the half-measures. In the nearest future, shale gas production will deprive us of water; soybean fields and oil palm plantations will destroy – rain forests; carbon emissions deprive us – the usual atmosphere. ... Almost everything we do is detrimental to the biosphere, the environment is becoming less stable and favorable, and our future in the long run is increasingly hazy"², and thus "Just doing something "better" for the environment, we will not stop destroying the ecological interconnections on which our nutrition and health depend. Simply improving our activities does not stabilize the atmosphere. It will not stop the reduction of water resources or the rise of ocean levels. Nor it will return Arctic glaciers. ... We urgently need – and time is still less – to understand how to change the direction of moving for our own safety, the safety of our descendants, and the safety of all other species which are known as our only satellites in the Universe. And while we work on this difficult task, we also have to prepare the society for the future, which can bring difficulties and challenges more complicated than any of those that humanity has faced till these days"³.

The irreversibility of climate changes and the scale of environmental disasters of the "globalization era" only are deepening the demarcation line of the inequality of human existence between the "rich" and "poor". Developed countries with a strong economic and industrial base, using to the mechanisms of international trade, have actually carried pollution and greenhouse gas emissions into developing countries, whose industries operate using cheap labor and cheap "dirty" energy; thus, developed countries have been able to use economic growth to deal the effects of climate change and adapt to environmental transformations (environmental legislation; environmental strategies and programs; environmental expertise; environmental audit, environmental labeling; environmental regulation; technical regulation, standardization and accounting in the field of environment and nature management; education and scientific support of state environmental policy; control and sanctions; intersectoral partnership and cooperation in environmental matters, taxes, benefits, interest rates, customs tariffs, depreciation rates to encourage environmentally friendly production, etc.)⁴; while less developed countries have received even more emissions and environmental pollution, which is an additional factor of danger and instability, both at national and international levels. According to experts, in today's world, the number of people living in poverty is steadily increasing, moreover 70% of them are fully or partially dependent on natural resources, what is making them particularly vulnerable to the effects of environmental transformations. Recently only 9 countries (representing 4 % of the world population) managed to close the gap between the rich and poor (while 80% of the world population increased this

¹ Саммит по устойчивому развитию. Преобразование нашего мира в интересах людей и планеты (25–27 сентября 2015 года). <https://www.un.org/sustainabledevelopment/ru/wp-content/uploads/sites/5/2015/08/Overview_Sustainable_Development_Summit.pdf>.

² Уилсон, Э. (2017). *Будущее Земли. Наша Планета в борьбе за жизнь*. Москва: Альпина нон-фикшн, 10.

³ State of the World 2013: Is Sustainability Still Possible? (2013). *World Watch Institute*. <www.worldwatch.com>.

⁴ Домбровська, С.М., Коврегін, В.В., Помаза-Пономаренко, А.Л., Колонов, О.М. (2017). *Державне управління у сфері безпеки соціально-еколого-економічних систем*: монографія. Харків: НУЦЗУ, 95.

inequality). Persistent poverty and widening economic gap pose a real threat to social solidarity and undermine political stability¹.

The power and synergy of street riots in the early 21st century intensified the debate in academia about the socio-political engineering of the future world's order in the conditions of globalizing climatic-environmental challenges, in particular how to ensure – the fundamental principles of national security and international stability in the conditions of environmental wars of the future? After all, the obvious antinomy and asymmetry of modern politics in environmental issues, combined with the increasing level of political comprehension of the people, will inevitably lead to socio-political tensions, and subsequently to riots, protests, revolutions, wars and worldwide destabilization. "Recognition of fact that environmental changes will disproportionately affect people with different income levels, sharply striking, above all, the most socially vulnerable social groups who will have limited access to energy, water, adequate quality food and more other services, in particular, health care"² – there is no real alternative but "Humanity have to realize the economic, political and environmental interdependence of the modern world ... Today, in order to survive, it is necessarily to begin actively implementing a unified global strategy for global development on an ecological basis"³.

According to leading experts at the Institute for Public Risk Awareness, Kok Kwang Fung and Olivia Jensen: "If people do not respond to climate warnings, we need to change the message"⁴. Actually, the scenarios of the future "New World Clutter"⁵ due to "extreme climatic and ecological situation" look extremely dramatic, – *Humanity is expected by local, and subsequently global "Ecological Wars"; scale cataclysms, natural disasters, famine, fresh water crisis, mass migration, epidemics and others will become their catalysts*. Thus, an absolutely realistic scenario for the near future is not competition for technical and scientific innovations in the field of artificial intelligence, colonization of space, information and communication, transport, medicine, but a real and fierce struggle for water, food and territories suitable for life. *It is the struggle for "basic resources" which will determine the format of domestic and foreign policy of modern states in the near future*.

Thus, according to the forecasts of environmental analyst Lester Brown, in the 21st century, the real "Hunger Wars" will start on the global stage, "Welcome to the 21st-century food wars", that is how the author of numerous fundamental studies on environmental issues proclaims the advent of "a new geopolitics" of food deficit" – "No country is immuned to protect it from the effects of reducing food supplies"⁶, as the effects of climate changes and the scale of environmental disasters will inevitably lead to a "food crisis". As a result there will be protests, riots, revolution, wars. *Hunger is the greatest threat to future global security and stability*. And despite the loud statements of world leaders on "the determination to rid humanity of poverty and hunger urgently"⁷, the problem of food shortages in some regions of the world is only deepening, to realize this is needed to look up shocking statistics on the number of dead from famine⁸. L. Brown notices that the UN food prices index is surpassing maximums every year, constant price increasing combined with demographic growth, yields declining and natural disasters provoke food deficits. *Deficits become the new norm*; however, and most importantly, in today's polarized world, the price of bread rising by a few percent will be felt differently: for wealthy people in developed countries it will be "unpleasant, irritating", but not critical, "while for about 2 billion of the poorest people on the planet who spend 50-70% of their income on food, this rapid rise in prices could mean a transition from two meals a day to one. Those who barely hold onto the bottom steps of global economic ladder run the risk of losing

¹ *The Green Economy Pocketbook: The case for action/The Green Economy Coalition* (2010) London, 4. <<http://www.cawater-info.net/green-growth/files/green-economy-pocketbook.pdf>>.

² Горин, О. (2012). Нова кліматична ера: глобальне потепління може мати для України як негативні, так і позитивні наслідки. <<https://tyzhden.ua/Society/55859>>.

³ Домбровська, С.М., Коврегін, В.В., Помаза-Пономаренко, А.Л., Коленов, О.М. (2017). *Державне управління у сфері безпеки соціально-еколого-економічних систем*: монографія. Харків: НУЦЗУ, 94-95.

⁴ *The Global Risks Report* (2019). *World Economic Forum*. <<https://www.weforum.org/reports/the-global-risks-report-2019>>.

⁵ Бауман, З. (2008). *Глобалізація. Наслідки для людини і суспільства*. Київ: Вид. дім «Києво-Могилянська академія», 48.

⁶ Brown, Lester R. (2011). *The New Geopolitics of Food. Foreign Policy*. <<https://foreignpolicy.com/>>.

⁷ *Будущее, которого мы хотим*. Итоговый документ Конференции ООН по устойчивому развитию Рио-де-Жанейро, Бразилия (20–22 июня 2012 года). <https://rio20.un.org/sites/rio20.un.org/files/a-conf.216-l-1_russian.pdf>.

⁸ Worldometers – Світова статистика у реальному часі. <<http://www.worldometers.info/ru/>>.

control completely"¹. Brown states the food shortage is already a reality with specific political consequences, and warns: "What if the shocks that dictators Zine al-Abidine bin Ali in Tunisia, Hosni Mubarak in Egypt and Muammar Gaddafi in Libya had faced with (countries which import 90 percent of their grain), is it not the end of history, but just its beginning? *Be ready*, both farmers and foreign ministers, *for a new era in which global food deficit will determine global politics*"².

Another trigger of the world order destabilization is the "global freshwater crisis". The unprecedented growth of the world economy at the end of XX and the beginning of XXI century multiplied by the cycles of demographic outbreaks, led to a large increase in anthropogenic pressure on ecosystems and natural and aquatic objects, – says environmental journalist, author of numerous publications on "water scarcity", head of the Global Water Policy Project in the United States Sandra Postel: – "*It is worth forgetting about oil. The fair distribution of fresh water is just as an explosive and hardly-reaching political puzzle as global climate changes*"³. "The problems of water consumption and scarcity have become so acute in recent decades that they have come to be considered as one of the most significant evidence of the general crisis of civilization. They are a factor that prevents the development of many countries, a source of interstate conflict and instability. Water scarcity is worsening quality of life, along with poverty, causes unsanitary and increasing of diseases. The degradation of many water reservoirs is the brightest indicator of overall ecological disaster on the planet"⁴. Experts from the World Resources Institute, who designed several models of possible climate and socio-economic transformations based on data from 167 countries, emphasize the criticality of the problem of water scarcity and they concluded that every fifth country will have faced acute shortage of water by 2040, researchers also presented a rating of "Water Stress by Country: 2040", which ranked 33 countries most vulnerable to "acute water shortage" (the most acute problem will be in Bahrain, Kuwait, Israel, San Marino, Palestine, Qatar, UAE, Saudi Arabia, Oman, Lebanon)⁵. Exploring problems and prospects of water supply, national scientist V. Yakovlev considers as a key element of the "drinking water crisis" the irrationality in its use: – "most of it (water) is being spent on domestic needs. Even in the most developed countries, the use of household water per person is 85 – 204 l per day, while at the same time the physiological need in drinking water does not exceed about 3-5 l per person per day"⁶. Obviously, the depletion of water resources, the worsening of drinking water quality and the increase in its scarcity in the future will lead to "*War for Water*", which will become powerful generators of deep destabilization in certain regions of the world, provoking socio-political crises, military conflicts and humanitarian disasters, large-scale migration processes, as it was stated in the report by UN Secretary-General Antonio Guterres: "40% of the Earth's population are already experiencing, in a varying degrees, "an acute shortage of water". By 2030, approximately 700 million people may become refugees due to lack of water"⁷.

Obviously, the turbulence of the climate-ecological transformations of the 21st century provokes a food and drinking water deficit, however the main trigger for the chain reaction of a large-scale food and water disaster is rapid growth in the population of the world, because modern demographic indexes (number of newborns and life expectancy) require an increase in the need for water, food, agricultural areas. "Since the middle of the century, the area of cultivation of cereals, has decreased by 19%, while the number of people on Earth has increased by 132%. Population growth is having a negative impact on agricultural areas, reducing their productivity and even putting them out of circulation. As the area of arable land per capita is declining, more and more countries are facing the threat of inability to provide themselves with food"⁸; "Every year, the number of people who eat at our common dining table is increasing by 79 million people. Unfortunately, the vast majority of eaters accounts for countries that suffer from soil erosion, falling aquifer levels and depletion of water sources. If we are unable to stop population growth, we may not be able to

¹ Brown, Lester R. (2011). *The New Geopolitics of Food. Foreign Policy*. <<https://foreignpolicy.com/>>.

² Brown, Lester R. (2011). *The New Geopolitics of Food. Foreign Policy*. <<https://foreignpolicy.com/>>.

³ Global Water Policy Project. <<https://www.globalwaterpolicy.org/>>.

⁴ Данилов-Данильян, В., Лосев, К. (2006). *Потребление воды: экологический, экономический, социальный и политический аспекты*. Москва: Наука, 200.

⁵ Water Stress by Country: 2040 (2015). *World Resources Institute*. <<https://www.wri.org/blog/2015/08/ranking-world-s-most-water-stressed-countries-2040>>.

⁶ Яковлев, В.В. (2017). *Перспективні джерела природних вод для питного водопостачання України, їх охорона і раціональне використання*. Харків, 29.

⁷ У двух миллиардов человек нет чистой питьевой воды. (2018). <<https://news.un.org/ru/story/2018/03/1325832>>.

⁸ Біляцький, С., Ярова, Н. (2006). Соціальні наслідки зростання населення Землі. *Політичний менеджмент*, 6, 147.

eradicate hunger"¹, so, – *it is precisely only the ability of states to solve quickly and efficiently the problems of food and water supplies that the issue of national security and international stability will depend on.*

Studying the effects of anthropogenic impact on our planet, Gaia Vince emphasizes, – "Due to the peculiarities of humankind use of land resources, vegetation zones are becoming barren deserts. Intensive agriculture and population growth in arid regions are accelerating desertification. Desertification is destroying soils, leading to mass migration of villagers to urban slums and increasing poverty. Desertification across the globe leads annually to the degradation of more than 12 million hectares of arable land. About 40% of the entire African territory has already undergone these processes, and analysts warn that by 2025, two-thirds of the continent's arable land may have been lost"². Obviously, climate change and environmental transformation, desertification and soil erosion, food deficit and drinking water crisis will provoke inevitably mass migration processes, – "*climate refugees*" and «*environmental migrants*» in the struggle for "*living space*" and basic resources will become the main source of tension and instability in the 21st century. "Taking into account that most of the 2.4 billion people who will have increased the world's population by 2050, will be born in low aquifer level countries, flows of refugees trying to save themselves from thirst will most likely become commonplace. Such refugees number will be particularly large in the arid and waterless regions, where population is rapidly growing beyond water availability. These areas fall into hydrological poverty"³. In fact, for the 25 million people, the *War for the Living Space* has already begun. According to the Institute for Environment and Human Security: "this year, 25 million people worldwide have been forced to leave their habitats for reasons of inappropriate environment (compared to 22 million refugees because of civil wars and all kinds of persecution)", and disappointing prognosis is suggested that the number of future "climate refugees" will have increased to 250 million by 2050"⁴.

Despite the well-justified conclusions of modern scientists and the warning about the risks of global climate-ecological catastrophe, which is able to provoke local socio-political crises, protests, riots, revolutions, wars (due to scarcity of basic resources – food, drinking water, medical supplies, areas suitable for living, etc.), and subsequently the global social tragedy – *the Global Ecological War for Survival*, – today, many countries "behave selfishly and are not in a hurry to spend preventively on the worldwide anti-crisis measures, considering such a behavior permissible, until then these problems will directly affect them. The same is true regarding the ratification of a number of international agreements regulating and limiting interventions in ecosystems, production of raw materials, industry, agriculture, military-industrial complex. Most political players in the modern world are not in a hurry to limit themselves"⁵, however, as Ban Ki-moon noted "We must especially help the poorest and most vulnerable layers of the population. Climate change increases the risk for hundreds of millions of people ... Nine out of ten deaths due to natural disasters happen in low- and middle-income countries. These states need special attention. However, reducing the risks of disasters is in everyone's interest and everyone's business"⁶.

To sum up it is obviously needed to prioritize the environmental issue in the global political and economic space and to realize the need for global integration in order to save Modern Civilization and the possibility of further evolution of Humanity in harmony with the nature of the Earth. The responsibility and cooperation are emphasized by environmental policy expert Lester Brown – "We have to make a choice between the future where food prices will be rising steadily, famine will be spreading and political instability will also increase, and the future where food prices will be stabilized and dependence on oil and carbon emissions will be sharply decreased"⁷, and he adds, "If leading countries do not announce general mobilization to regulate population number, climate stabilization and groundwater supplies, for the sake of soil conservation, protection of farmland... the threat will only be increasing"⁸.

¹ Браун, Л. (2010). *Как избежать климатических катастроф? План Б 4.0: спасение цивилизации*. Москва: Эксмо, 5.

² Винс, Г. (2016). *Приключения в антропоцене. Путешествие к сердцу планеты, которую мы создали*. Москва: Колибри, 209.

³ Браун, Л. (2010). *Как избежать климатических катастроф? План Б 4.0: спасение цивилизации*. Москва: Эксмо, 94.

⁴ Institute for Environment and Human Security (2019). *United Nations University*. <<http://www.ehs.unu.edu/>>.

⁵ Безгодков, А. (2016). *Планетарная рента как инструмент решения глобальных проблем*. Санкт-Петербург: Питер, 13.

⁶ *Протоколы Третьей Всемирной Конференции ООН По Снижению Риска Бедствий* (14-18 марта 2015), Сендай, Япония, 42. <https://www.unisdr.org/files/45069_proceedingsthirdunwcdrrru.pdf>.

⁷ Браун, Л. (2010). *Как избежать климатических катастроф? План Б 4.0: спасение цивилизации*. Москва: Эксмо, 85.

⁸ Браун, Л. (2010). *Как избежать климатических катастроф? План Б 4.0: спасение цивилизации*. Москва: Эксмо, 74.

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