CLIMATIC CHANGES BETWEEN NATURAL CICLE AND ANTROPIC ACTIVITY

SCHIMBARILE CLIMATICE ÎNTRE CICLICITATE NATURALA şi ACTIUNE ANTROPICA

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Abstract: *The climate changes represents an actual priority problem, so either the natural system or the socio-economical system are sensitive to climate changes, but the forecast amplitude and the speed will have an important impact which will threat the sustainability of this systems.*

Rezumat: *Schimbările climatice reprezintă o problemă actuală prioritară, întrucât atât sistemul natural cât şi cel socio-economic sunt sensibile la schimbări ale climei, iar amploarea şi viteza prognozate pentru acestea vor avea un impact semnificativ, care va ameninţa durabilitatea acestor sisteme.*

Key words: *Climatic changes, natural resources, anthrophic ecosystems*
Cuvinte cheie: *Schimbări climatice, resurse naturale, ecosisteme antropice*

INTRODUCTION

Ecosystems, wildlife and people are generally able to adapt to climate change occurring over periods of time. Until now, researchers have not agreed in terms of rapidity with which changes take place. However, the impact of human activities on climate can be measured over several decades, centuries or millennia tire. Motivation to act in connection with climate change should not necessarily found in the world has seen before, but in the scientific model predicts the near future. If the heating process will continue at the pace forecast today, the world will enter a period of climate change unprecedented in human history.

MATERIAL ŞI METHODS

Beyond configurations and theoretical prediction, one conclusion is clear: a major climate change is about to occur, a large heated became rapidly, putting into question the ability of human (society) to adapt accordingly, as species between species. Past climate characteristics are listed in both marine and terrestrial sediments in large ice caps of Antarctica and Greenland, as well as those also in biological records of pollen, tree rings or coral reefs. Moreover, man has recorded in recent wealth of data on climate. Earth's climate is naturally variable, Siracuse heating trends are a normal part of climate cycles. Global average temperature at Earth's surface increased by approximately 0.3 to 0.6 degrees C since the late nineteenth century and approximately 0.2 to 0.3 degrees C in the last 40 years, the latter being period with most reliable data. Year 1998 was the twentieth consecutive year in which temperatures rose above normal limits. The estimates provided in the 1995 IPCC report suggests that it is possible that global average temperature to rise by 1 to 3.5 degrees Celsius in the XXI century (with an estimated average accepted 2 degrees Celsius). Estimates based on more recent models suggest that growth rate could be higher. World regions will be affected equally. The differences relate to the magnitude of projected climate change adaptation as vulnerability and capacity of Earth regions. Scientists predict that warming will be higher in polar than in the equatorial regions. This has significant implications on polar ecosystems, the

wildlife residents of area. At the same time, forecasts show that, within continents there will be a stronger heating than in coastal areas. Regions within continents could be faced with more frequent heat waves more intense. It is assumed that the first part of the XXI century will occur very accelerated melting of glaciers in the Alps. Until around 2035, half of existing glaciers could disappear and, until the middle of XXI century, the losses could reach three quarters, if a general warming in Antarctica could fall more snow and ice cap could rise. The report of the Intergovernmental Panel on Climate Change (IPCC) - as an alternative to gradual warming scenarios that are so common - we present a scenario of abrupt climate change that took place 100 years after the events of 8200 years after records of glacier in Greenland abrupt climate change scenario is characterized by the following weather conditions:

Average annual temperatures in Greenland have decreased by up to -15 degrees Celsius.

• Annual average temperatures increase by up to -14,4 degrees Celsius in areas of major significance in Australia, South America and south Africa;

• Drought remains in most of the decade in major agricultural regions and areas where water resources are important for Europe's major population centers and eastern area of North America;

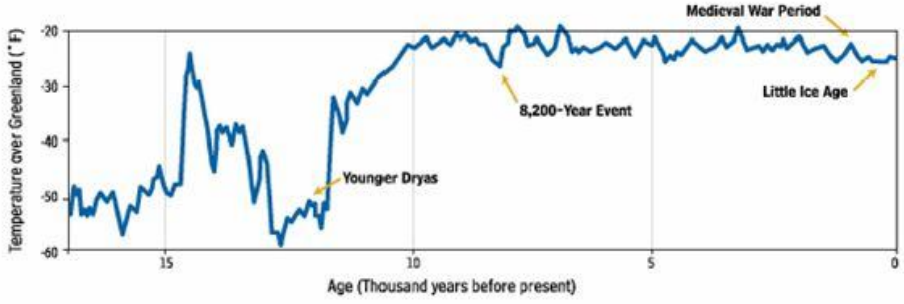
• Even the winds during winter storms to intensify, thus amplifying the impact of change. The North Pacific Western Europe will be the scene of strong winds.

This report explores how such a scenario of abrupt climate change could destabilize the geopolitical environment, leading to disturbances even wars, due to constraints on primary resources, such as:

1. Food crisis due to reduction of global agricultural production;

2. Low water availability in key regions due to altered rainfall patterns, which cause frequent floods and dry phenomens.

3. Interrupted access to energy sources, due to the great frozen and absence of rain.



Graficul de mai sus (evolutia temperaturii in Groenlanda in ultimele 20.000 de ani), derivat dintr-un esantion din ghetarul din Groenlanda, ilustreaza tendinta istorica a anumitor regiuni de a experimenta perioade de raciri abrupte, in cadrul unor perioade mai mari de incalzire.

Starting with the fourteenth century, the North Atlantic region was a cooling that lasted until the mid-nineteenth century. It could be that this cooling was caused by a significant slowdown of ocean currents, although it is generally regarded as solar emissions reduced and / or volcanic eruptions are leading to ocean changes.

This period, known as the "Little Ice Age", lasted between 1300 to 1850 and brought severe winters, sudden climatic changes, the political, economic and social impact in Europe.

This period was marked by reduced harvests, famine, disease and migration of population, perhaps the most acutely felt is that of the Norge, known as Vikings, who have lived in Iceland and later - in Greenland. Ice formations along the coast of Greenland have prevented merchants to lead boats in Greenland and fishermen - fish whole winter. As a result, farmers were forced to sacrifice birds even low fed, but without fish, vegetables and cereals was not enough food to feed the entire population.

RESULTS AND DISCUTIONS

There was great uncertainty regarding climate dynamics in the southern hemisphere, particularly the lack of data paleoclimatic, which are not available regarding the Northern Hemisphere. Weather patterns for key regions of the Southern Hemisphere could mimic those of the Northern Hemisphere, becoming colder, more severe as drought and much more heat waves will "travel" from the tropics to the Northern Hemisphere, trying to balance in terms thermodynamic climate system. As an alternative, the cooling of the northern hemisphere could increase warming, the rainfall and storms in south, as the heat normally transported from equatorial regions by ocean currents will be blocked and warming on greenhouse gases will continue to accelerate.

Graficul de mai sus prezinta o panorama simplificata a *pattern*-urilor meteorologice portretizate in scenariul de fata.

Achieving sustainable development desire - and the increasingly efficient agriculture - is attainable under the current global counter the major challenges that reinforce each other: global climate change, drastic restriction of biodiversity species of organisms, the default value of genetic resources, yet fully exploited, the processes of degradation, erosion and soil pollution, support sustainability of life on earth, the universal generator of food for all creatures, diminishing fresh water resources.

Water will become the cornerstone of sustainable development and the present and future of mankind. Although surface water covered the earth globe is 71%, only 2.5% of total fresh water back. Following the boom, the intensification of water use worldwide in more and more areas of activity and global warming worldwide, freshwater resources available and substantially decrease gradually.

Thus, from 7000 m^3 which returned in 2000 per year per person is expected to decrease up to 5100 m^3/year/head in 2025.

CONCLUSIONS

Intergovernmental PANEL ON CLIMATE CHANGE (IPCC) claims that the threat of gradual climate change and the impact on reserves of food and other resources of importance for people not take a character so serious as to create national security problems. The optimistic estimate that the benefits come from technological innovations will be able to overcome the negative effects of climate change. Subject matter the climate, the prospect of gradual change that will take place in future estimated that agriculture will continue to thrive and growing seasons will increase. Northern Europe, Russia and North America will be prosperous in terms of agriculture, while southern Europe, Africa, Central and South America will suffer from increased drought, heat, lack of drinking water and a small percentage of production. Overall, global production of food produced in different scenarios of climate change will increase. The prospect of climate change can be a dangerous act of self-deception, as we face ever more weather disasters - more hurricanes, monsoon phenomens, floods and droughts - all over the world.

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