

CLIMATE CHANGE & SECURITY CLIMATE CHANGE AS A "THREAT MULTIPLIER"

Summarized by Hilal Elver

The relationship between climate change and its adverse impact on security in developing countries and countries that vulnerable to climate change in the first place has been and important preoccupation among developed world. Those countries are financially and scientifically well equipped to respond immediate impact of the climate change. However, they are well aware that serious problems of neighboring countries will effect them immediately and unexpectedly. Below the two major players, the European Union and the United States' view on security and climate change connection will be summarized.

I. THE EUROPEAN UNION'S VIEW

The risk posed by climate change is already taking place. The UN estimates that all but one of its emergency appeals for humanitarian aid in 2007 were climate related. In 2007 the United Nations Security Council (UNSC) held its first debate on Climate Change and its implications for international security. The European Community has drawn attention to the impact of climate change on international security and in June 2007 invited the High Representative and the European Commission to present a joint report to the EC in Spring 2008.

According to IPCC even if by 2050 emissions would be reduced to below half of 1990 levels, a temperature increase rise of up to 2 degree Celsius above pre-industrial levels will be difficult to avoid.

Climate change is best viewed as a threat multiplier, which exacerbates existing trends, tensions and instability. The core challenge is that climate change threatens to overburden states and regions which are already fragile and conflict prone. It is important to recognize that the risks are not just of a humanitarian nature; they also include political and security risks that directly affect interests of all countries. Moreover, in line with the concept of human security, it is clear that many issues related to the impact of climate change on international security are interlinked requiring comprehensive policy responses. For example, the achievement of the *Millennium Development Goals* would be at considerable risk because climate change, if unmitigated, may well wipe out years of development efforts.¹

The EU is willing to respond a security thread arisen by the climate change because

¹ Climate Change and International Security: paper from the High Representative and the European Commission to the European Council, March 14, 2008 S113/08. Available at:
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/reports/99387.pdf

it still considers that it plays an important role in global climate policy and it will be impacted directly the security consequences as a geographic proximity of the vulnerable region, the Southern Mediterranean, and MENA region. The EU believes that there is a link between global warming and competition for natural resources while the Communication "Europe in the World" highlighted the effect of globalization on external relations. This is Europe's self interest either direct impact of climate change on Europe or its closer neighbors. ²

WHAT ARE THE THREATS?

- 1. Conflict over resources:** Reduction of arable land, widespread shortage of water, diminishing food and fish stocks, increased flooding and prolonged droughts are already happening in many parts of the world. Climate change will alter rainfall patterns and further reduce available freshwater by as much as 20 to 30% in certain regions. A drop in agricultural productivity will lead to, or worsen, food-insecurity in least developed countries and an unsustainable increase in food prices across the board. Water shortage in particular has the potential to cause civil unrest and to lead to significant economic losses, even in robust economies. The consequences will be even more intense in areas under strong demographic pressure. The overall effect is that climate change will fuel existing conflicts over depleting resources, especially where access to those resources is politicized.
- 2. Economic damage and risk to coastal cities and critical infrastructure:** It has been estimated that a business as usual scenario in dealing with climate change could cost the world economy up to 20% of global GDP per year, whereas the cost of effective concerted action can be limited to 1%. Coastal zones are the home of about one fifth of the world's population, a number set to rise in the years ahead. Mega-cities, with their supporting infrastructure, such as port facilities and oil refineries, are often located by the sea or in river deltas. Sea-level rise and the increase in the frequency and intensity of natural disasters pose a serious threat to these regions and their economic prospects. The East coasts of China and India as well as the Caribbean region and Central America would be particularly affected. An increase in disasters and humanitarian crises will lead to immense pressure on the resources of donor countries, including capacities for emergency relief operations.
- 3. Loss of territory and border disputes:** Scientists project major changes to the landmass during this century. Receding coastlines and submergence of large areas could result in loss of territory, including entire countries such as small island states. More disputes over land and maritime borders and other territorial rights are likely. There might be a need to revisit existing rules of international law, particularly the Law of the Sea, as regards the resolution of territorial and border disputes. A further dimension of competition for

² Ibid

energy resources lies in potential conflict over resources in Polar regions which will become exploitable as a consequence of global warming. Desertification could trigger a vicious circle of degradation, migration and conflicts over territory and borders that threatens the political stability of countries and regions.

4. **Environmentally-induced migration:** Those parts of the populations that already suffer from poor health conditions, unemployment or social exclusion are rendered more vulnerable to the effects of climate change, which could amplify or trigger migration within and between countries. The UN predicts that there will be millions of "environmental" migrants by 2020 with climate change as one of the major drivers of this phenomenon. Some countries that are extremely vulnerable to climate change are already calling for international recognition of such environmentally-induced migration. Such migration may increase conflicts in transit and destination areas. Europe must expect substantially increased migratory pressure.
5. **Situation of fragility and radicalization:** Climate change may significantly increase instability in weak or failing states by over-stretching the already limited capacity of governments to respond effectively to the challenges they face. The inability of a government to meet the needs of its population as a whole or to provide protection in the face of climate change-induced hardship could trigger frustration, lead to tensions between different ethnic and religious groups within countries and to political radicalisation. This could destabilize countries and even entire regions.
6. **Tension over energy supply:** One of the most significant potential conflicts over resources arises from intensified competition over access to, and control over, energy resources. That in itself is, and will continue to be, a cause of instability. However, because much of the world's hydrocarbon reserves are in regions vulnerable to the impacts of climate change and because many oil and gas producing states already face significant social economic and demographic challenges, instability is likely to increase. This has the potential to feed back into greater energy insecurity and greater competition for resources. A possible wider use of nuclear energy for power generation might raise new concerns about proliferation, in the context of a non-proliferation regime that is already under pressure. As previously inaccessible regions open up due to the effects of climate change, the scramble for resources will intensify.
7. **Pressure on international governance:** The multilateral system is at risk if the international community fails to address the threats outlined above. Climate change impacts will fuel the politics of resentment between those most responsible for climate change and those most affected by it. Impacts of climate mitigation policies (or policy failures) will thus drive political tension nationally and internationally. The potential rift not only divides North and South but there will also be a South - South dimension particularly as the Chinese and Indian share of global emissions rises. The already burdened international security architecture will be put under increasing pressure.

WHICH REGIONS ARE MORE VULNERABLE AND EUROPE SHOULD WORRY ABOUT IT?

Since the most vulnerable regions are MENA, political instability and conflicts in the region will directly pose threat to EU's borders on immigration. The recent uprising in Tunisia and Libya is a vivid example of this threat. It is easy to understand that why European powers are willing to use military intervention option using NATO infrastructure on Libya. Europe's preoccupation not only migration but more importantly is to protect Europe's energy supply routes.³ Below the EU's concern over MENA region:

Africa:

Africa is one of the continents most vulnerable to climate change because of multiple stresses and low adaptive capacity. In North Africa and the Sahel, increasing drought, water scarcity and land overuse will degrade soils and could lead to a loss of 75% of arable, rain-fed land. The Nile Delta could be at risk from both sea-level rise and salinisation in agricultural areas while 12 to 15% of arable land could be lost through sea-level rise in this century with 5 million people affected by 2050. Already today, climate change is having a major impact on the conflict in and around Darfur. In the Horn of Africa reduced rainfall and increasing temperatures will have a significant negative impact on a region highly vulnerable to conflict. In southern Africa, droughts are contributing to poor harvests, leading to food insecurity in several areas with millions of people expected to face food shortages. Migration in this region, but also migration from other regions through Northern Africa to reach Europe (transit migration) is likely to intensify. In Africa, and elsewhere, climate change is expected to have a negative effect on health, in particular due to the spread of vectorborne diseases further aggravating tensions.

Middle East:

Water systems in the Middle East are already under intense stress. Roughly two-thirds of the Arab world depends on sources outside their borders for water. The Jordan and Yarmuk rivers are expected to see considerable reduction in their flows affecting Israel, the Palestinian territories and Jordan. Existing tensions over access to water are almost certain to intensify in this region leading to further political instability with detrimental implications for Europe's energy security and other interests. Water supply in Israel might fall by 60% over this century. Consequently, a significant drop in crop yields is projected for an area that is already largely arid or semi-arid. Significant decreases are expected to hit Turkey, Iraq, Syria and Saudi Arabia and thus affect stability in a vitally strategic region for Europe.

Besides MENA, the EU worries about South Asia because of important economic partnership that will have a negative impact of production and distribution chain

³ Ibid.

that are situated along the vulnerable coastlines.⁴ Central Asia is also considered that politically, economically and strategically will have a direct and indirect impact on the EU.⁵

The Arctic is another region that rapid melting of the polar ice caps will open up new waterways and international trade routes. In addition, the increased accessibility of enormous hydrocarbon resources in the Arctic region is changing the geo-strategic dynamics of the region with potential consequences of international stability and European security interests. The resulting new strategic interests are illustrated by the recent planting of the Russian flag under the North Pole. The growing debate over territorial claims and access to new trade routes by different countries which challenge Europe's ability to effectively secure its trade and resource interests in the region and may put pressure on its relations with key partners.

WHAT ARE THE POLICY RECOMMENDATIONS BY THE EU?

Considering all these already happening events, the EU is very much aware of its active role in Climate Change negotiations is vital. The EU is still supporting the 2 degree celsius target. They also are aware that they cannot do anything alone even if they take the domestic responsibility over this policy. The EU basically gives special attention to US, China and India, and to some extent to Russia.

The EU is also ready to budgeting the security consequences of the climate change. Under this consideration they intensify the capacity building for research and analysis, monitoring, early warning watch lists that includes state fragility and political radicalization, tensions over resources and energy supplies, environmental and socio-economic stresses, threats to critical infrastructures and economic assets, border disputes, impact on human rights and potential migratory movements.

The EU focuses the security risk of climate change in the multilateral arena, in particular within the UN Security Council, the G20 as well as the UN specialized bodies to strengthen certain rules of international law. Apparently this July Germany as the president of the Security Council raised the issue of climate change

⁴ Sea-level rise may threaten the habitat of millions of people as 40% of Asia's population (almost 2 billion) lives within 60km from the coastline. Water stress and loss of agricultural productivity will make it difficult for Asia to feed its growing population who will additionally be exposed to an increase of infectious diseases. Changes in the monsoon rains and decrease of melt water from the Himalayas will affect more than 1 billion people. [id]

⁵ Central Asia is another region severely affected by climate change. An increasing shortage of water, which is both a key resource for agriculture and a strategic resource for electricity generation, is already noticeable. The glaciers in Tajikistan lost a third of their area in the second half of the 20th century alone, while Kyrgyzstan has lost over a 1000 glaciers in the last four decades. [id]

as a security threat. However, some permanent members such as Russia were not willing to include this to the agenda of the council considering their national interests.

II. THE UNITED STATE'S SECURITY CONSIDERATION IN RELATION TO ABRUPT CLIMATE CHANGE

Recent researches suggests that there is a possibility that gradual global warming could lead to a relatively abrupt slowing of the ocean's thermohaline conveyor, which could lead to harsher winter weather conditions, sharply reduced soil moisture, and more intense winds in certain regions that currently provide a significant fraction of the world's food production. With inadequate preparation, the result could be a significant drop in the human carrying capacity of the Earth's environment.⁶

The research suggests that once temperature rises above some threshold, adverse weather conditions could develop relatively abruptly, with persistent changes in the atmospheric circulation causing drops in some regions of 5-10 degrees Fahrenheit in a single decade. Paleoclimatic evidence suggests that altered climatic patterns could last for as much as a century, as they did when the ocean conveyor collapsed 8,200 years ago, or, at the extreme, could last as long as 1,000 years.

In a report prepared by two scientists for the United States National Security agency as an alternative to the scenarios of gradual climatic warming that are so common, they outlined an abrupt climate change scenario patterned after the 100-year event that occurred about 8,200 years ago. This abrupt change scenario is characterized by the following conditions:

- Annual average temperatures drop by up to 5 degrees Fahrenheit over Asia and North America and 6 degrees Fahrenheit in northern Europe;
- Annual average temperatures increase by up to 4 degrees Fahrenheit in key areas throughout Australia, South America, and southern Africa;
- Drought persists for most of the decade in critical agricultural regions and in the water resource regions for major population centers in Europe and eastern North America;
- Winter storms and winds intensify, amplifying the impacts of the changes. Western Europe and the North Pacific experience enhanced winds.

The report explores how such an abrupt climate change scenario could potentially de-stabilize the geo-political environment, leading to skirmishes, battles, and even war due to resource constraints such as:

- 1) Food shortages due to decreases in net global agricultural production;
- 2) Decreased availability and quality of fresh water in key regions due to shifted precipitation patterns, causing more frequent floods and droughts;

⁶ *An Abrupt Climate Change Scenario and Its Implications for United States National Security*, by Peter Schwartz and Dough Randall, February 2004,

3) Disrupted access to energy supplies due to extensive sea ice and storminess.

As global and local carrying capacities are reduced, tensions could mount around the world, leading to two fundamental strategies: defensive and offensive. Nations with the resources to do so may build virtual fortresses around their countries, preserving resources for themselves. Less fortunate nations especially those with ancient enmities with their neighbors, may initiate in struggles for access to food, clean water, or energy. Unlikely alliances could be formed as defense priorities shift and the goal is resources for survival rather than religion, ideology, or national honor.

This scenario poses new challenges for the United States, and suggests several steps to be taken:

- Improve predictive climate models to allow investigation of a wider range of scenarios and to anticipate how and where changes could occur;
- Assemble comprehensive predictive models of the potential impacts of abrupt climate change to improve projections of how climate could influence food, water, and energy;
- Create vulnerability metrics to anticipate which countries are most vulnerable to climate change and therefore, could contribute materially to an increasingly disorderly and potentially violent world;
- Identify no-regrets strategies such as enhancing capabilities for water management;
- Rehearse adaptive responses;
- Explore local implications;
- Explore geo-engineering options that control the climate.

There are some indications today that global warming has reached the threshold where the thermohaline circulation could start to be significantly impacted. These indications include observations documenting that the North Atlantic is increasingly being freshened by melting glaciers, increased precipitation, and fresh water runoff making it substantially less salty over the past 40 years. This report suggests that, because of the potentially dire consequences, the risk of abrupt climate change, although uncertain and quite possibly small, should be elevated beyond a scientific debate to a U.S. national security concern.