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## **Climate Change and Conflict in Sub-Saharan Africa: the Mother of all Problems?**

by

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**KEYWORDS.** — Africa; Conflict; Climate Change; Coping Capacities.

**SUMMARY.** — The impact of climate change is increasingly explained as one of the most serious security threats of the future and a far greater threat to the world's stability than international terrorism. For some, current conflicts as the one in Darfur (described by Ban ki Moon as a 'climate culprit') are (partly) driven by climate change and environmental degradation. It is argued that climate change includes the risk of reshaping the productive landscape, of exacerbating food, water and energy scarcities and of contributing to destabilisation, unregulated population movements and tension. Even if environmental changes induce increased competition between users of scarce goods, the authors want to challenge the common assumption that climate change is a driver of conflict. Drawing on recent examples of conflicts between pastoralist communities in eastern Africa, it will be argued that there is no clear empirical evidence of direct links between environmental stress and conflict and that existing models are largely inspired by neo-Malthusian models of human-resource relations. For the authors, however, the shift from increased competition over resources to open conflict depends on existing coping capacities of societies and the policies, institutions and processes that define access to resources.

### **From Climate Variability to Climate Change**

“Because this global challenge [climate change] can only be met by a global response, we reiterate our willingness to share with all countries the goal of achieving at least a 50 % reduction of global emissions by 2050, recognizing

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that this implies that global emissions need to peak as soon as possible and decline thereafter. As part of this, we also support a goal of developed countries reducing emissions of greenhouse gases in aggregate by 80 % or more by 2050 compared to 1990 *or more recent years*.”

This is paragraph 65 of the G8 declaration “Responsible leadership for a sustainable future” released 9 July 2009 at l’Aquila, Italy. It illustrates on the one hand that the political discussions on climate change have shifted from the acceptance of the principle of climate change, to finding a new year of reference for analysis and policy. The year of reference now is 1990, which is particularly problematic for countries like the US and Canada, whose respective emissions have increased by 18 % and 26 %. On the other hand, a major part of the discussions on climate change are about the reduction of greenhouse gas (GHG) emissions as the COP15 negotiations at Copenhagen have illustrated [1]\*. Although very important, this is not the biggest concern for the African continent. Africa will have to deal with the effects of climate change despite the fact that their own contribution to GHG emissions is minimal. Over the last decade, the Intergovernmental Panel on Climate Change (IPCC) has provided extensive scientific proof that there is almost certainly a substantial human contribution to the development and the evolution of climate change. But even if warming occurs worldwide, what makes the African continent different compared to other regions in the world, is the accumulation of different climate change effects.

First, scientific data suggest that Africa is warming up faster than the global average [2], as figure 1 illustrates.

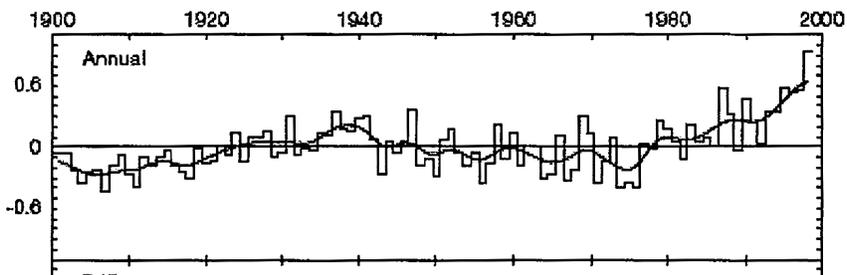


Fig. 1 . — African annual mean temperature anomalies from 1900 to 2000.

\* The numbers in brackets [ ] refer to the notes and references, pp. 148-149.

Secondly, there is not one continent wide “African Climate Change Effect”. Africa is as diverse as it is big. Some areas of Africa will become drier, other areas wetter. For some it might mean prosperity due to an increase of rain and vegetation. For most other areas, however, it will mean dire adversity. Since the climate variations do not take into account the formal frontiers of countries, this might also be a future cause for concern even it remains to be seen how this concern will materialize.

According to the German Advisory Council on Global Change (WBGU) [3], current climate models do not allow us to make a reliable forecast about the average precipitation in the Sahel zone. The Sahel zone is a semi-arid strip of land that passes through Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad and Sudan. For the Western Sahara in particular the current models even produce contradictory results, as some say that there will be more rain, while others predict desertification. There is consensus, however, about the high vulnerability of the Sahel region and the fact that climate change effects could be amplified by the fragile character of states in the region, by the susceptibility to socio-economic crises as well as by violent conflicts within these countries.

The third matter to take into account is the agricultural sector, on which climate change has a very direct impact. The IPCC report published in 2007 highlighted that Africa is the most vulnerable continent to climate change because of weak capacities to adapt. In rural environments, adaptation strategies have been put in place to deal with what already exists in terms of climatic variations. These may not be able to allow communities to cope with future climate change that may increase the frequencies or amplitudes of floods or droughts and the temperature. Agricultural productivity is likely to decline with repercussion on food security. For Southern Africa in particular, it is likely that the simultaneous occurrence of desertification, salinization and regional water scarcity will cause declining grain harvests and thus have a direct effect on food security.

For the Sahel and Southern Africa, overgrazing, deforestation and non-sustainable agriculture are vital issues to tackle because these are human induced climate vulnerabilities. These matters will only get worse if weak economic and political structures cannot address widespread poverty and social inequality, because tackling these fundamental problems will provide the building stones for a sustainable recovery. CHEVALIER (2008-9) concludes that: “climate variability therefore threatens to destroy the foundations of African economies and the livelihoods of millions of people. For this reason it is necessary...to consider climate change in the context of socio-economic development, and ...to point out the interconnectedness between climate change and development in sub-Sahara Africa.” [4]

### **Climate Wars?**

“Darfur in a convenient military and political shorthand — an ethnic conflict pitting Arab militias against black rebels and farmers. Look to its roots, though, and you discover a more complex dynamic. Amid the diverse social and political causes, the Darfur conflict began as an ecological crisis, arising at least in part from climate change.” In some literature, Ban Ki Moon’s Op-Ed in *The Washington Post* “A Climate Culprit In Darfur” dated 16 June 2007 is quoted as a recognition of the fact that the conflict in Darfur is the first climate change conflict; some even called it the first climate war. This is not what this quote and the entire comment in question actually says: it articulates the existence of a complex dynamic of social, political and economic causes to which climate change can be added, that lay at the basis of the conflict in Darfur.

It can be agreed though that climate change is a threat to the African continent and that it will have a major impact on life through a series of possibly cascading events: desertification could trigger a vicious circle of degradation, migration and conflicts over territory. Migration in turn may increase conflicts in transit and destination areas. This in turn may significantly increase instability in weak or failing states by overstressing the already limited capacity of governments to respond effectively to the challenges they face. [5] The EU military operation EUFOR Chad is a good example of the cascading effect that climate change could have. The mission was confronted with what was called “unintended feedbacks”. One of these unintended feedbacks from the conflict on the environment in Chad and Sudan was the change in the set-up of the population. There was an increase in urbanization in Darfur and Eastern Chad due to the improved security. The increase in urbanization attracted Internally Displaced Persons (IDP) and (climate) refugees next to urban centres, which was problematic because it took away the best cultivable lands. In turn, this put food security under pressure due to a lack of arable land and water. [6] This example reinforces the idea of the cascading effect that multilayered conflicts can have. It also illustrates the paramount importance of in-depth knowledge of the local and regional socio-economic and political context. Climate change can only aggravate these circumstances if this state of affairs remains unaddressed and if coping mechanisms fail to be implemented.

### **Climate Change as a Threat Exacerbator**

“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 humanitarian nature; they also include political and security risks that directly affect European interests.” [7] This quote from HR/SG Javier Solana exemplifies that climate change can be seen as a “threat exacerbator” augmenting existing pressures and creating “threats” for international and human security. In his paper, Solana identifies six “threats”: conflict over resources, loss of territory and border disputes, environmentally-induced migration, situations of fragility and radicalization, tension over energy supply and pressure on international governance.

Even if growing political awareness of the issue of climate change vis-à-vis violent conflict is proof of a recognition of the complexity of the matter, this awareness includes the risk of political (ab)use of climate change as a threat. The UN Secretary General Ban Ki Moon created a diplomatic window of opportunity for the Sudanese President Al-Bashir by writing “A Climate Culprit In Darfur” to revive the dialogue with the Sudanese government and the international community. Drawing attention to the issue of climate change would have allowed the President of Sudan to save face and accept an internationally brokered compromise. Instead President Al-Bashir later abused that same opportunity given to him to rid himself of all blame for the current conflict in West Sudan and its history all-together.

### **Climate Change as Driver of Conflict?**

Climate change is seen as a new paradigm. The question we need to ask, however, is if climate change could be considered as an actual driver of conflict. Is there an actual relation between climate change and security and, if so, in what way should it be interpreted? DABELKO (2009) draws our attention to four lessons when addressing the climate security link. First, the relation between climate change and violent conflict should not be oversold. Climate change is expected to exacerbate conditions that can contribute to conflict, but characterizing climate change as producing a new kind of conflict is both wrong and counterproductive. To illustrate this pitfall, Dabelko brings forward the political and economic motivations for fighting in Darfur, stressing the fact that climate change and limited natural resources should not draw away attention from the political relationships, power struggles and ethnic grievances contributing to conflict. On the contrary, the interplay between environmental issues, political relationships, ethnic and other grievances should be integrated into the wider analysis. Secondly, ongoing natural resource and conflict issues should not be neglected. There is already a considerable body of research on natural resources and conflict that has very little to do with climate change.

Issues like lack of access to resources, pressure by patronage systems and abuse of people at the bottom of the chain of command are only a few of the quandaries that this research addresses. Climate change could potentially pose a considerable additional threat but even with a stable climate, the existing problems this research brings to the fore are difficult to tackle: abuse of power, lack of governance, poverty aggravated by a lack of food, clean water and infectious diseases threaten lives daily and can hardly be neglected. Thirdly, it should not be simply assumed that climate change will produce massive migration. Climate change will most probably push people to move as we will illustrate in the example of Ilemi Triangle, but the notion of ‘climate migration’ is increasingly framed as a given without being problematized. Fourthly, it should not be forgotten that climate mitigation efforts can introduce social conflict. Since confronting climate change can have unanticipated consequences, mitigation efforts must be conflict-proof to avoid creating new inequities and instigating new conflict. [8]

### **Competing Frameworks of Analysis**

Only anecdotal research is available on the influence of climate change in conflict areas. Neo-Malthusian models of human-resource relations heavily influence most of that research but there are competing perspectives of analyses. The first perspective is that of Thomas Malthus (1798) who wrote “An Essay on the Principle of Population” [9] in which he challenged the unrestrained optimism about human progress inspired by Enlightenment philosophers. Over the course of two centuries, his bleak vision of human history and the future of humankind has had a considerable impact. Malthus put forward to “fixed laws of nature”: the first was “food is necessary to the existence of man”; the second was “the passion between the sexes is necessary for the existence of mankind”. Malthus concluded from his assumptions that the power of population was indefinitely greater than the power of the earth to produce food and the outcome was inevitable: too many people for too little food resulting in violent conflict. Translated in modern terms, the neo-Malthusian baseline says that high rates of demographic growth lead to collapse of resources and that collapse in turn results in instability. One example is the argument put forward by Thomas Homer-Dixon, who starts from neo-Malthusian assumptions to state that there is a link between population growth, environmental scarcity and violent conflict. [10]

The second perspective is that of a research tradition of technological optimists referred to as cornucopians. They postulate that scarcity exists by

definition when a resource is not in infinite and unconditional supply. They give primacy to the human ability to overcome scarcity through technology and the application of knowledge. GLEDITSCH & URDALL (2002) illustrate the implications of this research tradition with the example of fresh water and use Homer-Dixon's metaphor of the pie as the symbol for the fixed amount of resources that are available according to the neo-Malthusian tradition. "The level of technology influences the size of the pie; in the case of fresh water, technology both determines the quantity that can be extracted from the ground and the capacity to purify polluted water." [11] Another assumption the cornucopians put forward is elasticity without any absolute limitations for the supply of many natural resources. If we apply this to the example of water again it implies that technology determines the amount of water each individual needs through water saving techniques. That in turn means that a larger population can be served with the same amount or even with less water.

According to the cornucopians, most scarcities are local rather than universal, which means resources that are available in abundance in one place can be traded against another that is scarce there and vice versa, thereby benefiting from comparative advantages.

The third analytical perspective places violent conflict in the context of the political history and structural forms of violence in which things like population growth and environmental scarcity occur. As MATTHEW (2002) stated in "Environment, Population and Conflict": "the scarcity-conflict image is somewhat misleading insofar as it fails to situate conflict in a broader context of the robust capacity to adapt to environmental and other stresses that is manifest in most societies. This capacity can take decades to be activated or become successful, something that short-term political analysis may fail to pick up." [12] The combined influence of population growth, availability of resources and climate change needs to be thoroughly examined further, in case-specific historical and political contexts. However, it is quintessential to take into account the importance of adaptation and coping strategies, that are paramount in overcoming the tangible effects of climate change.

### **From Threat Exacerbators to Threat Minimisers**

Overall, there are problems of water scarcity, desertification and soil salinization, but poverty, demographic pressure, increasing urbanization and economies that are highly dependent on agriculture are root causes of a large number of violent conflicts in sub-Saharan Africa that stay unaddressed.

These longstanding issues, combined with widespread governance insufficiencies, illustrate the need for adequate adaptation strategies that have thus far been lacking. The real catch for African countries is that those who will be hit hardest by the impact of climate change lack the capacity to deal with its consequences. This lack of capacity has nothing to do with climate change but bring us back to development basics like poverty eradication, governance, conflict management, and local and regional cooperation.

CHEVALIER (2008-9) puts forward that: "it is thus imperative that efforts to mitigate and adapt to climate change should be presented as complementary to the broader economic agendas of African countries, and that they should not be seen as impeding wider development objectives." [13] The Institute for Development Studies states that if climate change adaptation and mitigation policies are to be successful they need political support from African leaders and they need to be development led. [14] In September 2009 Ban Ki Moon, the Secretary-General of the United Nations, published a report entitled "Climate change and its possible security implications". In this report, he acknowledges the existence of climate change as a threat exacerbator and identifies what he calls threat minimizers. These threat minimizers are: adaptation, economic development, governance, capacity building, mitigation and conflict prevention embedded in sustainable development.

Two examples illustrate that the complexity of situations on the ground where climate change can play a role as threat exacerbator is only one factor in an intricate play of social, economic and political elements and conflict mitigation strategies.

The Karamoja is a region in the northeast of Uganda bordering with Kenya to the west and South Soudan in the north. This region is prone to food shortages due to unpredictable weather patterns but also illustrates how the difficulties with food production and management can cascade into other coping mechanisms like cattle raiding and the proliferation of guns. In the Karamoja region rainfall is unpredictable and there has been a drastic reduction of the vegetation cover of between 4 and 8 % during the last ten years. Throughout the century, it has changed from savannah grassland over steppe to thickets and shrubs today

The World Food Programme (WFP) has a permanent base in Karamoja and has been distributing food there since 1963. It was one of the first operations that WFP did in Africa. The droughts have reoccurred almost permanently since 1982. Prolonged drought periods like this have destabilizing effects on a society. People flee from the region if they can, but the most tangible effects are for the pastoralists who have to roam the land in search of suitable pasture for their cattle. The reduction of pastures reduces the number of cattle and intensifies

cattle raiding. In the past, raiding was mainly a survival response, taking place when disease and famine struck a community. To restock depleted livestock, they went and raided others. Now people do raids to get income, it is done at any time and perpetrated for commercial gain. Raiding used to be controlled by the Council of Elders who allowed the use of small weapons like spears, bows and arrows, but currently armed youth gangs use machine guns to control crowds to take their cattle.

In the Ilemi Triangle, a disputed territory that seats where the border of southeastern Sudan joins with northwestern Kenya and southwestern Ethiopia the problems are very similar. Due to climate change the pastoralists had to cross over into each other's grazing grounds thereby disrupting the traditional co-existence in this transborder region and resorting to armed conflicts.

Inadequate coping strategies also have their bearings on the cultural traditions of pastoralist communities in the Horn of Africa, more specifically on the initiation of young warriors. After initiation, the warrior is allowed to marry by paying an appropriate bride price, which ranges from 50 to 100 cattle or a few Kalashnikovs... The dowry places enormous pressure on young men, whose choice is between accumulating livestock through traditional animal husbandry, which could take many years, or resorting to a quick fix, and that is raiding. The reinforcement of the culture of arm bearing is the synthesis of various factors. First the insecure social relationships, where the traditional instruments of intercommunity conflict management are weak, and pristine tradition is an enormous burden for the young male right of passage. Rustling for livestock and using guns are means to actualize the right of passage into manhood. Secondly, there is a symbiotic relationship between security and economic development, in the sense that as climate change degrades the productivity of land, raiding becomes a coping mechanism. Finally, the proliferation of guns in the periphery of the State is the outcome of international vectors, particularly civil conflicts, which have emanated from State collapse and a product of domestic manipulation by irresponsible leaders.

### **Conclusion:**

#### **Climate Change and Conflict in Sub-Saharan Africa: the Mother of all Problems?**

Multiple factors have an impact on the possibility of armed conflict: poverty, scarcity and access to natural resources, population characteristics, ethnic and religious fractionalization, education levels, geography and previous

conflict. [15] Climate change is only one of the many security, environmental, and developmental challenges facing Africa. Climate change is in effect, a “threat exacerbator” that makes existing concerns, such as water scarcity and food insecurity, more complex and intractable. However, it is non-climate factors — poverty, governance, conflict management, international and regional diplomacy — that will largely determine whether and how climate change moves from being a development challenge to presenting a security threat. The preconditions for conflict create pressure on the social architecture of societies but it is the ability to adapt and the capability of subsequently developing coping strategies that determine whether a potential conflict will erupt or not.

A balanced policy on climate change should thus take into account the fact that climate change is a cross cutting issue. This brings the need for coordination between different responsibilities to the fore: there is a need for long-term capacity building and cooperation on development basics but we also need to monitor the security evolution on the ground closely. It is not because there is no conflict directly related to climate change so far that there are no indirect influences that may have a major impact on the safety of African society. The most successful policy on climate change for the African continent would be one that integrates development and international security concerns.

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