West African Studies

Global Security Risks and West Africa

DEVELOPMENT CHALLENGES

OECD

SAHEL AND WEST AFRICA Club Secretariat

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The Sahel and West Africa Club in a few words

The Sahel and West Africa Club is a group of West African regional organisations, countries and international organisations that work together towards the development and integration of the West African region. The Club's mission is to pool together Members' experiences, ideas and perspectives to help build more effective regional policies. Drawing on factual studies and independent analyses, the Club devises strategic guidelines and policy tools for Members and other stakeholders.

The Club is also a space for policy dialogue. As a member of the OECD Development Cluster, the SWAC Secretariat contributes to the work of the Organisation and ensures that West African concerns and initiatives are taken into account in global debates, particularly those on food, energy and security issues.

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Preface

The beginning of the 21st century marks a turning point in West Africa's history, moving from an era where conflicts and sources of instability were primarily "endogenous" to the emergence of "exogenous" global threats such as terrorism and large-scale drug trafficking. These new threats are added to the local causes of "endogenous" conflicts (competition for resources, irredentist claims, circulation of weapons, border issues, instability of fragile states and weak democracy). However, "exogenous" threats are not triggered or caused by local causes. It is important to understand how internal and external threats coexist and hybridize. Although currently crystallised in the Sahel, the extent of these dynamics encompasses all of West and North Africa.

The articles in this book take a closer look at current security issues: terrorism and trafficking, climate change, and the links between "security and development". One of the major global threats is related to Al-Qaeda in the Islamic Maghreb (AQIM) activities in the Sahel region. AQIM originated from a branch of an Algerian terrorist group that emerged from the Salafist Group for Preaching and Combat (GSPC). The social and security consequences of the Arab Spring could provide an opportunity to regain influence in its region of origin on both the political and military front.

Moreover, the Colombian drug cartels have found a base in Guinea-Bissau, a fragile country, for making the region the main transit zone for cocaine to Europe via North Africa. Well beyond Guinea-Bissau, criminal networks that include drugs, weapons, diamonds, and human trafficking prosper, feed and are being fed by political violence. Hence, helping fragile and vulnerable states in building state-capacity is a major regional and global issue in terms of security and development.

The immensity of the Saharo-Sahelian region and weak governance capacities create an environment that favours the development of illegal activities. Does climate change mean that these territories are destined to dry out further and grow even larger? Projections by climatologists are contradictory, particularly with regard to precipitation. While some models used by the Intergovernmental Panel on Climate Change (IPCC) suggest a continued drying trend, an equal number of models predict an increase in precipitation. However, most experts agree on an increase in temperatures and climate variability. From Mauritania to Chad, ten

million people live in fragile areas of the Sahel. The Sahel has no choice but to cope with this uncertainty.

An analysis of the scientific literature and recent history of conflict shows that impacts of climate change on conflict are questionable. Focusing only on natural determinism is to forget the responsibility of humankind and politics. The human security approach put forward in the UNDP Human Development Report (1994) appears to be more constructive. It broadens the security concept to include aspects such as environmental and food security that are more directly impacted by climate variables. It also implies reorienting the political debate towards environmental, economic or development related issues, allowing it to concentrate on concrete issues like food crisis prevention, land investment, biofuel development, and the impact of excessive agricultural and food price volatility, and thereby enrich the "security–development" nexus.

This debate brings together both security and development specialists and provides an opportunity to foster dialogue between them. This approach is undeniably making progress within the global agenda. For example, it structures the EU Strategy for Africa adopted in 2005 and is also an integral part of the following strategies: the Global Counter-Terrorism Strategy adopted in 2006 by the UN General Assembly; the African Union Border Programme (AUBP); the ECOWAS Intergovernmental Action Group against Money Laundering in West Africa (GIABA); and the EU Security and Development Strategy in the Sahel defined in 2011.

As illustrated by the diverse challenges and interpretations in this publication, a heated debate is still ongoing. This should be encouraged further given the complex nature of the issue. Building on the authors' different disciplines and interpretations, the SWAC Secretariat intends to draw attention to the risk of oversimplified analyses and biased perceptions of security risks, and to highlight the need to think regionally. We also regret the weak representation of West African leaders and institutions in global debates despite their strong commitment to the region's stability.

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Part I
Emergence of Criminal Global Networks in West Africa

Chapter 1

Reversal of fortune: AQIM's stalemate in Algeria and its new front in the Sahel

by Henry WILKINSON

Summary

Since 2007, Al-Qaeda in the Islamic Maghreb (AQIM) has failed to realise its goals in Algeria, the Maghreb and has never carried out an attack in the West. And instead, driven by a mix of necessity, opportunism, a change of ideology in its leaders and a more favourable operating environment, it has intensified its activities in the Sahel, where it now has the potential to pose a significant and tenacious threat to regional security, stability and development. AQIM is neither a large nor a mainstream movement but it is a capable terrorist organisation within the region, and having intensified its activities in the Sahara and accrued considerable wealth from kidnapping operations appears now to be in an advantageous position to exploit the insecurity wrought by Libyan civil war. The contention of this paper is that there is now a serious risk of AQIM reversing years of stagnation and failure, and reinvigorating the jihadist cause in North Africa in a way that few observers of the group would have foreseen before the Arab Spring of 2011. The Sahel countries are therefore at a critical juncture in terms of terrorism threat and response.

Recognising a changing threat, from Algeria to the Sahel

Since 2007, when the Algerian Salafist Group for Preaching and Combat (GSPC) became an Al-Qaeda affiliate and changed its name to Al-Qaeda in the Islamic Maghreb (AQIM), it has struggled to reconcile ambitions of global jihad and attacks on Western interests and regional expansion, with its traditional focus on Algerian insurgency. Riven with divisions over aims, strategy and tactics, and unable to break a stalemate with the Algeria forces that have largely contained the group in its stronghold in the Kabylie region, it has been unable to sustain a consistent operational tempo in Algeria. And it has failed, at least until recently, to develop operational networks in neighbouring countries in the Maghreb countries of Libya, Morocco and Tunisia, or compete for support and recognition in the global jihad by mounting attacks in the West, or sustain a consistent campaign of attacks on Western interests locally. Because of its failure to

realise gains in its primary geographical sphere of North Africa, by 2009, AQIM had shifted its focus southwards into the vast spaces of the Sahel and Sahara. Able to exploit gaps in state control, and free from the issues that had frustrated its success further north, it has mounted a growing number of audacious and high-prolife attacks and kidnappings, predominantly against Western interests. These actions have secured it millions of dollars in ransoms that have made it a comparatively wealthy group, and won recognition from the wider Al-Qaeda movement that has helped to move closer to realising its ambitions of leading and integrating the jihadist struggle in North Africa. In 2011, there are now indications that AQIM, while highly unlikely to abandon the struggle in Algeria, is becoming an increasingly Sahara-based organisation. And of particular concern, it is now using its bases in the Sahel to exploit the new insecurity in Libya and Tunisia to realise goals of regional expansion, develop itself as a movement, build its capabilities and pose a long-term threat to regional security and development in the Sahel.

> « The Sahel countries are at a critical juncture in terms of terrorism threat and response.

Since 2001, the United States has made pan-Sahel security a policy priority area in its so-called global war on terror. During this time, some commentators have argued that foreign and regional governments have exaggerated (and in respect of Algeria some have even alleged collusion in) the terrorism threat in the Sahel, to promote energy and global security interests and sustain their undemocratic regimes and spheres of influence.[1] But while geopolitical interests and agendas undoubtedly exist in the region, the terrorism threat AQIM represents to Western interests and regional stability is increasingly evident, not least in the high-profile kidnappings of Westerners and the attacks it has staged. And, based on current trajectories, unless regional governments and the international community tackle the threat more effectively and comprehensively than they have so far, AQIM is likely to pose a significant and resilient security challenge to economic, social and political development initiatives, and indeed stability, in the Sahel.

Area specialists tend to agree that one cannot understand the problems in the Sahel region of terrorism, illegal migration and trafficking in isolation from the roots that engender them. Yahia Zoubir, for example, argues that the real menace of the region stems from poverty, bad governance, a lack of democracy, corruption and economic mismanagement (Zoubir, 2009). While acknowledging that these conditions are entirely conducive to AQIM's foothold in the Sahel, this paper will largely focus from a security perspective on AQIM as a jihadist terrorist organisation and the ideological, organisational, operational and security-oriented dynamics that led it to the Sahel. It will begin with an appreciation of its origins, aims and evolution as a group in Algeria, and then consider what

factors caused it to fail to realise its goals and shift its focus into the Sahel. With this appreciation, it will then consider its prospects of survival and success in the region, and the implications for regional stability.

Becoming Al-Qaeda

The current Al-Qaeda threat in the Sahel has its roots firmly in Algeria. AQIM's forerunner, the GSPC, emerged in 1996 as an offshoot of the Armed Islamic Group (GIA, the dominant Islamist insurgent movement of the war), to continue the struggle to establish an Islamic state in Algeria while disassociating itself from the GIA's *takfiri* policy of massacring of Muslim civilians (Botha, 2008).[2] From the outset, the GSPC had ties to the transnational jihadist movement of Osama bin Laden and the Afghan-Arab veterans. Indeed, Bin Laden reportedly encouraged the GSPC's first leader, Hassan Hattab, to break from the GIA to try to improve the image of the jihad with tactics and target selection that avoided civilians and focused on the state (Botha, 2008).

Initially based on the fringes of the Kabylie region of northeast Algeria, by 1998, the GSPC had surpassed the GIA in popularity and power and at its peak has an estimated 20 000 members (Springer *et al.*, 2009). With factions active in nine regional "zones" across Algeria but its leadership cadre based its 'central zone' in Kabylie (where it remains), the GSPC was an insurgent group that primarily focused its attacks against the Algerian security forces. Some reports suggest that it had also begun to take over the GIA's European networks (Tawil, 2009). But it was not until February 2003 that it first came to international prominence in the South when a Saharan faction of the GSPC kidnapped 32 European tourists exploring the Sahara Desert, a move which not only won it publicity but also a purported EUR 5 million in ransom (ICG, 2005). In January 2007, after a four-year allegiance with Bin Laden, the GSPC formally affiliated itself with Al-Qaeda as a regional chapter, and assumed the name AQIM. By this time, the GSPC was in considerable decline and its numbers had contracted to what some estimated to be several hundred fighters, mostly based in its mountainous stronghold in the Kabylie region, and several hundred in the Sahel under the command of its southern *emir* at the time, and noted trans-Saharan smuggler and trafficker, Mokhtar Belmokhtar (Jane's Terrorism & Security Monitor, 2009).

The current Al-Qaeda threat in the Sahel has its roots firmly in Algeria.

The GSPC's formal affiliation with Al-Qaeda marked a confluence of the armed struggle by Islamists to establish an Islamic state in Algeria with the global jihad of Bin Laden. Under the leadership of its overall *emir*, Abdelmalek Droukdel, it pledged itself to Al-Qaeda's cause of global jihad, which bound it to attacking the "far enemy" of the West as well as the "near enemy" of the "apostate" regimes of the Maghreb. It also assumed

regional ambitions to unite Salafi jihadist movements beyond Algeria in Libya, Mauritania, Morocco and Tunisia, with the ultimate goal of overthrowing the incumbent regimes and establishing an Islamic Caliphate in the Maghreb. Al-Qaeda's ostensible second in command, Ayman al-Zawahiri, declared in announcing the merger that the new union would be "a bone in the throats of the American and French Crusaders and their allies, and inspire distress, concern and dejection in the hearts of the treacherous, apostate sons of France" (Rogan, 2009).

The GSPC's formal affiliation with Al-Qaeda was unsurprising to attentive observers. Since 2004, its leader Droukdel had become increasingly interested in the role of the GSPC within a larger, transnational jihad (ibid.). But many analysts also saw the move as an attempt to reverse a longer-term trend of decline of the GSPC in terms of numbers and support by attaching itself to Al-Qaeda's global brand and ambitions. They noted that the group had dwindled to just several hundred fighters in Algeria, and was unable to hold any territory in the country or sustain a consistent operational tempo (Jane's Terrorism & Security Monitor, 2009). This view prevails among many experts on the group, such as Jean-Pierre Filiu, who has argued that "going global" was the option the GSPC leadership adopted to reverse this trend of decline, although it seems the leadership of the group also genuinely supported Bin Laden's ideas and goals (Filiu, 2009). It also seemed apparent at the time Belmokhtar was attempting to grow a faction in the Sahel, although there was little evidence it had any popular support and most reports suggest his primary focus was on criminal enterprise and running trans-Saharan smuggling operations through his relations with Touareg rebels and tribes.

« His primary focus was on criminal enterprise and running trans-Saharan smuggling operations.

Since 2007, AQIM has reportedly existed as several different factions operating in different zones, each with a regional *emir*. The "Central Zone" in the north of Algeria leads the insurgency against the Algerian state, and is under the command of AQIM's overall *emir*, Droukdel. Droukdel's leader of the Sahel-Sahara Zone is Yahya Djouadi, who has support bases in Mali. Under Djouadi is the emir of the south-eastern zone, Abu Zeid, who is mainly active in the east and southeast, including Algeria, Mali and Niger; and the *emir* of the south-western zone is Belmokhtar, who is mainly active in Mali, Mauritania and Niger. Other local emirs reportedly include Abu Anas al-Shingieti in the southeast, and Abdelkrim, (the Touareg), in the Kidal region.[3] The extent to which these *emirs* in the Sahel and Sahara operate under the command and control of Droukdel is a matter of some debate, and many experts tend to suggest that they function semi-autonomously. These dynamics, and how they might be driving AQIM's growth and activities in the Sahel, are discussed later in this paper.

The extent to which joining Al-Qaeda changed the GSPC's fortunes and overall goals has been subject to much discussion among security analysts and scholars alike. However, there is a body of evidence that suggests that after becoming part of Al-Qaeda, AQIM almost immediately became riven by a conflict between those who advocated the primacy of its Algeria struggle and opposed joining Al-Qaeda, and those who sought to meet the expectations of Bin Laden in becoming a part of a wider global jihad. The net effect of this division was for the group to go in a state of crisis and fail to move beyond low-level insurgency in Algeria in 2008 or realise any of its wider goals in North Africa. And ultimately, leading it to mobilise its support networks in the Sahel into operational ones, and thus open a new additional front in its jihad.

Renaissance and disunity

Most terrorism analysts expected the joining with Al-Qaeda would lead the GSPC, now AQIM, to change its focus and *modus operandi*, from local insurgency to global jihadist terrorism (Botha, 2008). This concern proved well founded with AQIM's almost immediate adoption of spectacular mass-casualty suicide bombing attacks against international as well as government targets in Algeria. And in May 2007, Droukdel announced that suicide bombings would become the group's main tactic (Filiu, 2010).

The most high profile demonstration of this new strategy was in December 2007 with a double suicide vehicle bombing in Algiers against the High Commissioner for Refugees, the UN Development Programme offices, and Algeria's Constitutional Council. The attack killed at least 26 people and injured 177, mostly Algerian civilians. In a statement shortly afterwards, the group labelled the UN buildings an "international infidels' den" and called on Western leaders to "heed the demands of Al-Qaeda leader Osama Bin Laden."[4] Other attacks on foreign interests in Algeria followed, although almost invariably, the indiscriminate nature of the attacks cost the lives of Algerian bystanders. While AQIM's new use of suicide tactics in Algeria continued to intensify, its attacks on Western interests in Algeria were infrequent, most probably due to a lack of viable targets in its primary area of operations. Those it did carry out, such as the attack on the UN building in Algeria, and a roadside attack on the employees of the SNC-Lavalin firm on 20 August 2008 often resulted in significant numbers of civilian casualties. But most of its attacks were on Algerian security forces much like when it was the GSPC, although the tactics employed also meant that a growing number of civilians also lost their lives (Renard, 2008).

Most analysts expected AQIM to change its focus, from local insurgency to global jihadist terrorism.

The adoption of high-profile Al-Qaeda tactics and target selection also became evident in the Sahel in 2007 and 2008, albeit sporadically with a handful of incidents through the first two years of AQIM's existence.

By 2009, AQIM's factions and their associates in the Sahel had dramatically intensified operations and taken the lead with attacks on Western interests. Kidnappings secured it millions of dollars in ransom to sustain the organisation, in both in the Sahel and the leadership cadre in Kabylie waging insurgency against the Algeria state.

Suicide bombings continued sporadically in Algeria until AQIM suddenly appeared to stop using the tactic after a bombing on a military training camp in Bouira in August 2008. Although it staged a suicide attack against the French embassy in Mauritania in August 2009, suicide attacks did not resume in Algeria until almost two years later in June 2010. The reason for this hiatus in suicide attacks remains unclear, but there are indications that it was symptomatic of some kind of crisis within the group in Algeria and ultimately led it to increase its operations in the Sahel.

With the group remaining silent on the issue, speculation as to the reasons for this cessation of mass-casualty suicide attacks focused on several areas. One widely considered possibility was that the group was unable to mount such attacks simply because of losses of key personnel and its increasingly effective containment by the Algerian security forces in Kabylie. Another more commonly argued view was that it was an indication of an internal power struggle fuelled by the fact that Droukdel did not appear in any video or recording throughout 2009. Analysts pointed to possible rifts arising from Droukdel's decision to merge the GSPC with Al-Qaeda, a move that they say some senior members opposed, particularly due to the adoption of suicide attacks that killed civilian bystanders and the divergence from the GSPC's original purposes. This was the reason why at least one AQIM commander said he defected, according to Algerian press reports, and who cited criticism over the religious legitimacy of AQIM and its tactics by important clerics such as the Saudi Sheikh Salih bin Fawzan, as well as the Egyptian Muslim Brotherhood (Jane's Terrorism & Security Monitor, 2008). According to the newspaper *El Watan*, other GSPC's senior leaders also voiced disagreement with the new "suicide bombers strategy", which they deemed was "imported from Iraq and serving only Al-Qaeda" and wanted to keep the focus of the organisation on Algeria rather than on the global jihad (Guitta, 2010). Hassan Hattab, the former GSPC leader who Droukdel succeeded and who had surrendered to the authorities, denounced the AQIM suicide attacks in Algiers in an open letter to President 'Abd al-Aziz Bouteflika, and repeated his call for AQIM to abandon the armed struggle. He also suggested the Islamist movement had begun to "drift" from its original goals (McGregor, 2007).

« Other GSPC's senior leaders also voiced disagreement with the new "suicide bombers strategy".

The debate about killing Muslim civilians has always been controversial within jihadist circles. Indeed, it was the GIA's indiscriminate killing of civilians that prompted the GSPC to form, in an attempt to, restore

the Islamist struggle in Algeria to its original principles. Indeed, giving the timing of events, it seems probable that the debate not only affected AQIM, but that it was AQIM's new wave of high casualty suicide operations in Algeria that triggered a renewed debate over their permissibility, not only in Algeria but within the wider global jihadi community (Rogan, 2009). There was certainly the criticism of the group and challenges to its methods by leading clerics, Islamist figures, and even former leading lights in the international jihadist movement at the time. Most notably, in August 2009 when the Libyan Islamic Fighting Group (LIFG), following in the footsteps of Egypt's Al-Jamaa al-Islamiyah in 2003, issued a set of revisions in which it renounced violent jihad against one's own rulers, although significantly it still accepted the concept of defensive jihad against a foreign occupying power in Muslim lands (Pargeter, 2009).

One must acknowledge the role of the Algerian security forces over this time in combating the group.

The extent to which Islamic jurisprudence, and ideological and doctrinal challenges from within the organisation and the wider jihadist movement affected AQIM has been subject to much debate. Some have argued that the revisions were unlikely to have much effect at all on AQIM (ibid.). Others, such as Paul Cruickshank, disagreed and argued that although Al-Qaeda's most die-hard supporters would doubtlessly reject the revisions, not all potential jihadist recruits would be immune from a growing critique of Al-Qaeda from historical leaders of the jihadist movement. This, he said, is important because potential candidates for suicide bombings are less likely to volunteer if they have doubts about the religious legitimacy of their actions and the likely rewards that await them. As he cites from the revisions, "Jihad has ethics and morals because it is for God." (Cruickshank, 2009)

One must acknowledge the role of the Algerian security forces over this time in combating the group and the impact this had on its ability to operate and mount attacks. But this division between those dedicated to a purely Algerian struggle and those who leant towards Al-Qaeda and the use of suicide attacks seems to have been of immense consequence to AQIM in its early years. Some reports indicate that hard-core elements in AQIM replaced most of these dissenters who felt the group was recidivating to the practices of the GIA and serving Al-Qaeda's agenda over the cause in Algeria. Which in turn, pushed many *emirs* to defect and provide the authorities with information that led to the arrest or killing of tens of prominent AQIM members (Guitta, 2010). Such defections would have almost certainly impacted upon its ability to mount attacks, but this alone does not account for why AQIM remained capable of staging more conventional guerrilla warfare style attacks, albeit much lower impact ones, against the security forces, yet did not deploy suicide bombers after

Droukdel announced it would be the groups primary tactic. Indeed, it seems highly probable that there was an argument that AQIM's leadership had to resolve, which it surely did by June 2010, when a suicide bomber attacked a police blockade in Bouira and killed eight people. Droukdel also finally remerged in the group's messaging and remains the leader of AQIM today, so if there was an internal conflict he evidently won.

Indeed, on balance, it seems highly probable that a crisis over the permissibility of suicide bombing tactics with the adoption of the Al-Qaeda agenda played a critical role in AQIM not mounting any suicide attacks for two years. But also and more pertinently, it played a key role in AQIM's declining profile in Algeria and its increasing emphasis on operations in the Sahel. Throughout 2007 to 2010, it was increasingly apparent that AQIM was struggling to make a real impact in Algeria, with only two particularly significant attacks against security forces in the whole of 2009. Certainly, its activities were not posing a serious threat to the Algerian regime (Tawil, 2009). And by July 2009, quite probably exploiting this weakness, Algeria's security establishment embarked on what officials termed a major offensive against the group in four key provinces.[5] It launched another in April 2010, focusing on the mountainous and heavily wooded regions of Kabylie, where AQIM has its main hideouts (McGregor, 2010). And then another in the same region in December 2010 that is still ongoing, and which the Algerian authorities reportedly hoped at the time they launched it that it would isolate AQIM's northern stronghold from other AQIM *emir*s in the Sahara (Mandraud, 2010).

The failure of AQIM's international and Maghreb project

Aside from its southern wing in the Sahara and Sahel, by 2009, it was also increasingly clear that AQIM was failing to move beyond the insurgency in Algeria to fulfil its stated goals of mounting attacks against the West and integrating jihadist groups across the North African countries of the Maghreb. This failure to become a genuine pan-Maghreb organisation and expand in Libya, Morocco and Tunisia, requires some explanation if we are to assess its future path in the Sahel, particularly given the major changes in Libya and Tunisia in 2011 and the opportunities these changes might represent for AQIM going forward.

AQIM's failure to expand internationally is certainly evident in the West, where there have been no cases of AQIM mounting a terrorist attack in a Western country, despite concerns among Western governments that joining Al-Qaeda would make this a priority focus for the group (Black, 2008). Indeed, it appears to have largely failed to activate the former GSPC old support networks in Europe, and instead, and seems to have limited itself to encouraging sympathisers in the West to carry out attacks in its name. Instead, AQIM focussed its jihad against the "far enemy" closer to home (ibid.). Droukdel admitted as much in an interview with the *New York*

Times in July 2008, in which he pledged to "liberate the Islamic Maghreb from the sons of France and Spain and from all symbols of treason and employment for the outsiders, and protect it from the foreign greed and the Crusaders' hegemony." This statement was, at least in the analysis of Filiu, a "defiant way to admit that the focus of its anti-Western terrorism would be in the Maghreb itself, and not in Europe, contrary to what Al-Qaeda central in Pakistan had initially hoped."(Filiu, 2010)

Yet, despite Droukdel's pledge, since 2007 and until only recently in 2011, there has been little evidence of AQIM expanding its operational networks across the Maghreb, or integrating jihadist factions across the region under its banner. In Morocco, the Salafist jihadi movement, embodied in groups like the Moroccan Islamic Combatant Group and Salafia Jihadia, as well as more diffuse networks of extremists, appears to have remained largely independent from AQIM, despite assertions by the Moroccan government linking AQIM to attacks in the country. There has also been little evidence that AQIM has succeeded in expanding its theatre of operations into Tunisia – at least not until very recently, as shall be discussed later.[6] Until 2011, the only attack recorded in Tunisia that can been attributed with any reliability to the group was a cross-border incident in February 2008, when one of its Saharan factions kidnapped two Austrian tourists in the desert near the Algerian border and took them to Mali.[7] Similarly, in Libya – again, at least until 2011 – AQIM has apparently failed to mount any attacks and largely failed to bring the remnants of the LIFG, or any other Libyan faction, under its banner. This may be because by the time that AQIM had formed, the Libyan security services had largely broken up the LIFG, and its remnants seem to have opted to join Al-Qaida in Afghanistan and Pakistan or remained in exile.

» The migration of nationals from other Maghreb countries to AQIM was often for training in its desert camps before joining jihad in Iraq.

What information is available, has tended to suggest that small numbers of radicalised Libyans, Moroccans and Tunisians have tended to travel to Algeria to join AQIM, rather than establish AQIM cells in their own countries, largely due to the difficulties in operating in their own countries, at least until the uprisings in those countries this year. Although it has had some success in attracting larger numbers of Mauritanians, the scale of this activity has not been large enough for the group to claim in anyway being a truly pan-Maghreb movement. Indeed, even though AQIM claims to have Libyans, Malians, Mauritanians, Moroccans, Nigerians and Tunisians in its ranks, its leader has conceded that "the large proportion of our mujahedeen comes from Algeria."[8] Filiu argues that AQIM's grand design of a North African integration of jihadi groups collapsed primarily under the enduring weight of Algerian chauvinism (Filiu, 2010). He has pointed out that the GSPC's Algerian hierarchy remains forcefully

in charge of AQIM, where it has not promoted non-Algerian activists to the top layer of the group. He adds that, with the exception of a Libyan cell that emerged outside of the LIFG and that was smuggled into eastern Algeria, AQIM has only admitted non-Algerians on an individual basis (Filiu, 2009).

Another challenge AQIM seems to have faced was competition from one of its ostensible partners in the transnational jihadist movement. There have been several indications to suggest this migration of nationals from other Maghreb countries to AQIM was often for training in its desert camps before joining the much higher-profile jihad in Iraq (Arief, 2011). Indeed, there is some evidence to suggest that many aspiring Libyan, Tunisian and even Algerian jihadists seem to have had a clear preference to fight in Iraq, rather than join AQIM, and that one reason AQIM's regional project has failed, at least until recently, is because waging jihad in Iraq to expel coalition forces was seen as a higher cause. A study by the Counter Terrorism Centre at West Point of Al-Qaeda in Iraq, documents seized by the US military, indicated that the Maghreb countries contributed a significant number of foreign fighters to the jihad in Iraq. Libyans represented 19.2%, Algeria 8.1%, Morocco 6.1% of the dataset. Interestingly, the Sahel countries contributed almost none (in the dataset of 576 foreign fighters there was only one Mauritanian). Of the Algerians in the dataset, the majority listed towns in the north as their hometown with 36.4% from El Oued and 22.7% from Algiers.[9] Simply put, it seems aspiring jihadists viewed the jihad to fight and expel infidel American forces in Iraq as more important and religiously defensible than AQIM's struggle against the Algeria state or their own. This was probably a problem for AQIM that the debate sparked by the revisionists over suicide attacks in Algeria and the function of jihad to expel foreign invaders from Muslim lands, may well have exacerbated AQIM's decline throughout its early years from 2007 through 2009.

Upon empirical review, it is clear that AQIM has both been in decline in Algeria, and failed to fulfil its pledge to Al-Qaeda to expand in the Maghreb countries or mount attacks against in West. And aside from some successful and lucrative kidnappings in the Sahel, it has struggled to mount more than a small percentage of its attacks on Western interests. There appears to be several converging reasons for this. The first is that is has had to compete with an increasingly dedicated, coherent and robust effort by the security forces to contain the group within the Kabylie region. This has kept it under pressure and denied it the opportunity to mount attacks against Western targets. But it also seems that in trying to reconcile its dual identity of domestic insurgency in Algeria with global jihadist terrorism and suicide attacks, it not only plunged itself into a crisis in Algeria but undermined its prospects at the time of becoming a genuinely pan-Maghreb organisation. In trying to reconcile this crisis – which it has

since done – while under immense pressure from the Algerian security forces, AQIM appears to have sought relief by shifting its attention south where the conditions are such that no such dilemma exists. And where the group has been able to become more competitive and relevant in the wider global jihad, and ultimately survive. And indeed is now in a better position to develop into a pan-Maghreb organisation.

Rise in the Sahel

It has been a common theme in discussions on the region over the past decade to question the nature and extent of the jihadist threat in the Sahel and Sahara, particularly after the United States launched its global war on terror in 2001. Some regional commentators, such as Jeremy Keenan, have alleged that the US, French and particular Algerian governments have exaggerated the threat and even been complicit in terrorist activity to extend their influence in the Sahara, and in particular control the region's oil and gas resources and stymie China's advance in Africa.[10] Daniel Volman (2007), for example, has remarked that the US has made Africa another front in its global war on terrorism, maintaining and extending access to energy supplies and other strategic raw material. This scepticism of the threat seems to be a result, at least in part, in the perceived balance of US rhetoric and policy with what has been an observably small amount of actual terrorist activity. In 2005, the International Crisis Group (ICG), reported that the US military was increasingly referring to the Sahel as "the new front in the war on terrorism", but while it conceded that there were enough indications, from a security perspective, to justify caution and greater Western involvement, it observed that Sahel "is not a hotbed of terrorist activity"(ICG, 2005).

Since 2002, the United States has sought to facilitate co-operation among governments in the region to strengthen their capacity to combat terrorist organisations and prevent terrorist groups from establishing bases in the region, rather than directly intervene. In 2002, it launched the Pan Sahel Initiative (PSI) with a budget of USD 8 million to train local security forces, which the US claims was a success after Chadian and Nigerien forces successfully engaged with GSPC operatives through 2003 who were involved in the kidnap of the 32 European tourists. The successor to the PSI is the US-led Trans-Saharan Counterterrorism Initiative (TSCI) or Partnership (TSCP), the aim of which is to "seek to further strengthen regional CT (counter-terrorism) capabilities, enhance and institutionalise co-operation among the region's security forces, promote democratic governance and human rights, and ultimately benefit our worldwide CT goals and bilateral relationships" (Pope, 2005). The TSCI, which involves 11 partner countries

In 2002, the US launched the Pan Sahel Initiative (PSI) to train local security forces.

(Algeria, Burkina Faso, Chad, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Tunisia, and Senegal) officially started in June 2005 with Exercise Flintlock. An exercise which has been conducted annually ever since under the auspices of the TSCP to enable African "partner nations" to better address the destabilising effects of terrorist cells operating in the vast and barren lands in the Trans-Saharan region (Blumenfeld, 2011).

Yahia Zoubir observes that no one disputes the problems of trafficking in the region (drugs, small arms, cigarettes, food, and people) but he argues that terrorism has been only a small part of the blend (Zoubir, 2009). This undoubtedly has been the case in terms of observable terrorist activity until even as late as this year. GSPC and AQIM factions in the Sahel and Sahara, which most credible sources estimate number only in the hundreds of fighters, have historically functioned in more of a support role for the main effort in Algeria, running training camps and feeding money and arms northwards, than as local fronts in a wider jihad (Tawil, 2009). However, with the decline of AQIM in Algeria over the past year, and the increase in attacks on Western interests from Nouakchott to Niamey, this configuration clearly appears to be changing, and balance is tilting away from solely fund-raising criminal enterprises and support activity to include front-line terrorism. Certainly, the financial commitment of the governments of Mali and Mauritania to counter-terrorism, particularly given their low-incomes and other spending priorities on development, seems to affirm the seriousness with which they themselves now view the threat.

After AQIM formed in 2007, it mounted several high profile attacks against Western targets in the Sahel region over the following year, as well as a handful of attacks on local security forces in Mauritania and Mali. As already noted above, this activity included high profile kidnappings of Westerners and suicide attacks, across a vast area from Nouakchott, to Bamako, to Niamey, and even up to Tunisia. Much of this was kidnappings that raised considerable sums of money. In 2009, this activity intensified. For example, in April 2009, it released two Canadian diplomats and two European tourists who it had abducted in Niger several months before, after what some suggest was a ransom payment of USD 8 million and the release of a number of AQIM militants from Malian prisons (Sharrock, 2009). In June 2009, it murdered a British tourist, Edwin Dyer, after the rejected demands for the release of a radical cleric and the payment of a multi-million pound ransom. In August 2009, an AQIM suicide bomber attacked the French Embassy in Nouakchott. In January 2010, a Tunisian who claimed to be a member of AQIM attacked the French Embassy with a grenade in Bamako. This pattern of increased activity continued through 2010, and more recently, in January 2011, AQIM gunmen kidnapped two French nationals in Niamey, and attempted to take them over the Malian border before they murdered them when confronted by security forces.

These operations have almost certainly secured the group millions of dollars from ransoms, but they have also raised AQIM's international profile considerably, drawn Al-Qaeda's core leadership into playing a more visible role in the group's activities that all its other franchises (Tawil, 2011).

Yet despite this observable pattern of violence, some still contend that the AQIM threat in the Sahel is a fabrication or an exaggeration at best. The business risk consultancy Mena Associates even alleges that AQIM "is firmly based in Algeria, with its Sahara-Sahel operations being run from the DRS's (Algerian military intelligence) own headquarters." However, as an explanation for AQIM's observable intensification of activities in the Sahel, and its future potential threat, this is unreliable basis for analysis at best. As Geoff Porter (2011) correctly argues, such interpretations rely on conjecture and supposition. The ICG (2011) now states that AQIM is operating in the Sahel region and is making its diffuse but real influence felt.

The operating areas of these emirs intersect in both Mali and Niger, where they are said to compete for money, prestige and influence.

With AQIM stagnating if not declining activity in Algeria, and the intensifying pattern of violence in the Sahel through 2009 and 2010, some analysts began to speculate that the counter-insurgency operations in Algeria had displaced the group into the Sahara, where it could operate more freely. By 2011, the shifting balance of activity from Algeria to the Sahara and Sahel has been so apparent that by February of this year, Porter (2011) even argued that AQIM had become a predominantly Saharan-based organisation, and suggested that AQIM activities along Algeria's Mediterranean coast had virtually ceased. And that it needed to adopt an alternative strategy. As Filiu argues, it had to rely on the jihadi networks the GSPC developed in the Sahara, especially in Mauritania, to energise the struggle (Filiu, 2009).

While it seems likely that it was a strategic decision that led to a fundamental change to shift its focus southwards, the patterns of activity, and the free-ranging nature and dispersed structure of AQIM's Sahel-Saharan wing has led some to question precisely the dynamics behind this southern expansion, and whether AQIM's factions simply took the initiative on a semi-autonomous basis. Mathieu Guidere (2011) has even suggested that AQIM has grown in the Sahel without anyone knowing what was driving this growth.

This questioning seems partly due to an ongoing debate over the level of the control the AQIM leadership exerts over its southern factions (Filiu, 2009). Terrorism analysts and observers of AQIM, while not discounting political, social, military and other factors, have tended to point to internal factors and ideological dynamics within AQIM itself as the main drivers, particularly in respect of it trying to fulfil role a part of Al-Qaeda's global jihad. Some analysts, as Porter notes, have suggested that the principle

drivers of growth have been a combination of southern factions wanting to please Bin Laden, with an admixture of factional rivalry and competition. Specifically, they argue that the most high-profile southern emirs, namely Belmokhtar and Abu Zeid, have increased their activities to demonstrate to Al-Qaeda's core leadership that they are the true carriers of the AQIM mantle, as opposed to AQIM's leader Droukdel in northern Algeria. One commentator, Olivier Guitta (2010), has even speculated that Abu Zeid, in kidnapping the uranium workers in Niger in September 2010, which won a rare intervention from Bin Laden, did so to try to usurp control of AQIM from Droukdel. However, there appears to be little evidence to support this view and explain how a faction in the Sahara might wrest control of an organisation whose recognised and sworn leadership cadre is in northern Algeria.

While the level of authority that Droukdel maintains over his southern emirs is unclear, there certainly appears to be agreement among that an element of autonomy and competition between the Sahel factions helping to drive AQIM's activity. In particular, researchers point to a rivalry between Abu Zeid and Belmokhtar. Belmokhtar was the first GSPC leader to focus on the Sahel region, and established himself in northern Mali where he sustains what some estimate as 150–200 followers through weapons trafficking, drugs and cigarette smuggling and running protection rackets.[11] Droukdel replaced him as the emir of the wider Sahara-Sahel region with Djouadi, as described above, but Belmokhtar continued to operate in the region, semi-autonomously from AQIM's central command (Tawil, 2009). Abu Zeid, also has an estimated 200 men under command – mainly Algerians, Mauritanians and Malians – and operates with great mobility across Mali and Niger particularly, and is widely described as a rising star in the group generally credited with expanding AQIM operations in Niger.[12] The operating areas of these emirs intersect in both Mali and Niger, where they are said to compete for money, prestige and influence (Tawil, 2009). Guidere (2011) takes a more nuanced view and suggests the increasing activity stems from fact that as AQIM operates in such a large territory, there is not an established hierarchy or a stable command but rather a "shifting leadership" based on the oath of allegiance taken between influential individuals to Bin Laden. The desire of AQIM leaders to "please Bin Laden", to prove their capacity to engage in global jihad through the allegiance mechanism and to win recognition from Al-Qaeda's top command drives their actions. But Porter (2011) contends that divining what the faster pace of Saharan operations says about relations among AQIM leaders and between AQIM and Al-Qaeda itself is fraught with speculation, and that what can only be safely said is that AQIM activity in the Sahel is increasing.

That a competition might exist between two factions seeking dominance, which in turn drives them to escalate their activities and become more violent, is certainly something that has precedence. The most

pertinent example is in Iraq where Al-Qaeda under Abu Musab al-Zarqawi resorted to higher profile and shocking violence to assert is authority over other jihadist groups to unite them under its banner (Brisard, 2005). However, there is little evidence to conclude with confidence that this competitive dynamic is at play in the Sahel, and indeed, whether it alone is sufficient to explain what appears to be a strategic shift by AQIM's Sahel factions from logistical to operational activity. While such a dynamic may exist, and may thus indicate an intensification of terrorist violence, it fails to take into account the fact that unlike in Algeria, where there is a strong and cohesive security regime to keep the group relatively contained, the Sahel region comprises vast remote spaces, porous borders, and far less effective and cohesive security regimes. In short, while acknowledging counter-terrorism efforts by Mauritania, the conditions in the Sahel enable AQIM to operate with relative freedom and impunity compared with Algeria – a gap the group has increasingly exploited.

The matter of Western influence, and particularly military presence, is likely to prove a major challenge in efforts to counter and confront AQIM's growth in the Sahel.

While the dynamics behind AQIM activity in the Sahel are open to debate, it is clear is that attacks on Western interests in the Sahel have won the group greater recognition internationally. And they have helped it to create a much-needed perception of success, while at the same time avoiding the local casualties and thus divisions and debates over its tactics and target selection that seemed to trouble it in Algeria. In this respect, AQIM in the Sahel seems to have taken great care to frame its activities as defensive classical jihad to expel infidel "invaders", rather than insurrection against the state. For example, on 9 March 2010, it released a communiqué in which it warned the Sahel countries against joining Algeria and Western countries like the United States and France in their war against Al-Qaeda. It said that it was never AQIM's aim to lure Sahel countries to the "battlefield", as they were just targeting the "Crusaders" and their interests in those countries. And it said that while "some limited incidents" had occurred previously against the armies of the Sahel countries, these were only for self-defence. It warned these governments that this situation would change if they take part in the war against AQIM.[13]

Framing the struggle in the Sahel very much in terms of a defensive jihad against Western influence seems to be a central aspect of AQIM's strategy and narrative in the region. In doing so, AQIM taps into what Jonathan Githens-Mazer (2009) identifies as a widespread belief among North Africans that the persistence of repressive political control reflects continuing active intervention on the part of the West to support these illiberal regimes in the face of democratic and popular challenges. He argues that the sense of injustice and disappointment relating to the use

and abuse of state power continues to shape North African political mobilisation. While AQIM seems to have avoided confrontation with the regimes in the Sahel except in "self-defence", and instead has focussed more on international targets, this may point more to a longer-term strategy of first winning support and recognition through attacks that are more widely acceptable and appealing to the wider transnational jihadist movement. In effect, by deepening its presence in the Sahel, it is enabling AQIM to genuinely "go global" and avoid the mistakes that prompted its original failures to expand in 2007 and 2008, and its decline in Algeria. If one accepts this reasoning, then its success or failure to attract jihadists from across the Maghreb and Sahel under it banner hinges on what kind of footprint Western powers have, or will have, in the region.

The matter of Western influence, and particularly military presence, is likely to prove a major challenge in efforts to counter and confront AQIM's growth in the Sahel. So far, despite such initiatives as the TSCI and the formation of a transnational counterterrorism centre in Tamanrasset in Algeria, the Mauritanian, Malian, Nigerian and Algerian governments often appear, as Porter (2011) observes, to be working at cross purposes in combating AQIM in the Sahara and Sahel, which has created an opening for the group's different factions to carry out operations. Moreover, there has also been resistance among some states to go along with some US counterterrorism initiatives. In particular, the US has struggled to harmonise counterterrorism legislation across different countries, and failed to find a host for its Africa Command (AFRICOM) in the US Department of Defence headquarters, amid widespread concerns over US securitisation policy in the region, and fears among African regimes of a public backlash over unpopular US policies across the Arab world.[14]

AQIM after the Arab Spring

Against this backdrop of a burgeoning AQIM presence in the Sahel and the security gaps that exists that have created a more permissive environment for the group to effectively open a new front there, there is now another dynamic likely to further drive AQIM's expansion in the region. This dynamic may enable it to reverse the past four years of relative decline and stalemate, and enable it to realise it goals of genuine growth and integration of jihadist networks across the Sahel and Maghreb.

The popular pro-democracy uprisings in Tunisia, Egypt, Libya, and across the Arab world are widely regarded as a major challenge to Al-Qaeda's radical narrative that the only viable way for the Arab peoples to rid themselves of oppressive regimes and have just societies is through violent jihad to establish Islamic states in the Salafist model. The long-term impact of the Arab Spring on global and indeed local jihadist terrorist movements remains hard to discern. But what is becoming increasingly apparent is that the civil revolts in both Tunisia and Libya, and the on-going

armed conflict in the latter, has presented AQIM with a significant growth opportunity due to the breakdown in security and state control in both countries.

AQIM was quick to recognise that the removal of the Ben Ali regime in Tunisia and the Gaddafi regime in Libya and the subsequent collapse of the security regimes was a gift for it revitalise its pan-Maghreb ambitions. For example, in February, AQIM issued a statement expressing its support to the uprising against Gaddafi and said, "We declare our endorsement and support for the Libyan revolution and its legitimate demands, and assure our people in Libya, we are with you and will not desert you and God wiling we will make every effort to support you".[15] And, since the outbreak of the Libyan civil war, there have been indications that AQIM has been mobilising in Libya and Tunisia and infiltrating terrorists into both countries. On 3 March 2011, the Algerian newspaper *Al-Fadj*, citing security sources, reported that dozens of Libyan AQIM terrorists, that had taken part in attacks in Algeria and the Sahel, had returned to their country to fight the Gaddafi regime. On 18 March 2011, two Tunisian security officers and two suspected AQIM members died in a clash in north Tunisian town of Rouhia. The remaining suspects fled, and reportedly had links to an AQIM cell that security forces earlier disrupted in the southern city of Tatouine that included an Algerian and a Libyan.[16]

The acquisition of such arms will confer considerable capabilities to AQIM to increase its operations in the Sahel and Algeria.

But more recently, there have even been indications that AQIM might also turn against the National Transitional Council (NTC) in a bid to establish Islamic rule. In a statement posted on the *Menbar Tawhid wal-Jihad* website in late May, Abu Muslim Al-Jazairi, an important figure in Al-Qaeda jurisprudence, called on Libyan Islamists to set up an armed organisation and to distance themselves from the NTC and its "Western allies". He also called on Muslims to co-operate with other jihadist groups of the region, such as AQIM in their war against the Council and pro-Gaddafi forces.[17] Even if one is sceptical of the Algerian press reports of AQIM activity, this is clearly an indication of a reversal of fortune in AQIM's pan-Maghreb image and it is possible it could lead to a revival of its regional ambitions.

While the extent to which AQIM might succeed in establishing itself in Libya remains unclear, the insecurity in Libya is already having an effect on the threat in the Sahel. On 1 June 2011, Reuters reported that the commander of the US military's Africa Command expressed "a very real concern" about the proliferation of weapons from Libya to AQIM. And Algeria's delegate minister for Africa and Maghreb Affairs said, "Libya is now a huge depot of arms… and we know that sophisticated weapons have been transferred from Libya to northern Mali".[18] A senior Algerian

security official also told Reuters that convoys of pick-up trucks carrying weapons had been crossing the border from Libya to Niger and from there to northern Mali where AQIM has bases in the desert. The official said the weapons included Russian-made shoulder-fired Strela surface-to-air missiles, RPG-7 anti-tank rocket-propelled grenades, Kalashnikov heavy machine guns, Kalashnikov rifles, explosives and ammunition.[19] The European Union's Counter-Terrorism adviser, Gilles de Kerchove, confirmed these reports in a press conference in early September, when he said that AQIM had gained access to weapons in Libya and that they were "either small arms or machine-guns, or certain surface-to-air missiles, which are extremely dangerous because they pose a risk to flights over the territory."[20] "The acquisition of such arms will confer considerable capabilities to AQIM to increase its operations in the Sahel and Algeria, and possibly other countries as well, including the capacity to mount larger-scale higher profile attacks. The proliferation of surface to air missiles in particular represents a significant potential threat not only to civil and military aircraft in the Sahel but across the region. The threat implications of this are so significant that the Chadian President has even warned that AQIM's looting of arsenals has poised it to become the best equipped army in the region.[21]

Conclusion

AQIM is evidently not a mainstream or even particularly large movement and has been – or at least was until 2009 – in a protracted state of decline since its inception. But it is resilient and opportunistic, and having increasingly expanded its operations into the Sahel, may now be on the threshold of posing a far greater threat to regional security and stability and profiting from the instability and insecurity wrought by the Arab spring.

Since 2007, AQIM has struggled to achieve its pan-Maghreb project in Algeria, Libya, Tunisia and Morocco due to a mix of a robust security regimes and counter-terrorism operations, but also and perhaps more crucially, its inability to reconcile its roots in Algerian insurgency with its joining the global jihad of Al-Qaeda. While the extent to which the balance of its activities have increased in the Sahel in relation to its historical focus in Algeria remains unclear, what is clear is that the Sahel region has become pivotal to any future success the group may enjoy. In the vast expanses of the Sahara, it has enjoyed freedom of movement and exploited gaps in poorly coordinated inter-state security regimes. This has enabled it to focus its operations to fulfil the anti-Western narrative of Al-Qaeda and exploit a view among many North Africans that Western intervention in the region sustains repressive and unrepresentative regimes. This narrative of classical defensive jihad against Western occupation – perceived or in fact – provides not only with a form of legitimacy but has already shown

signs of earning it support and recognition from the wider jihadist movement, and hence appeal among a wider pool of potential recruits across North Africa and the Sahel than it has hitherto enjoyed.

History has shown that Al-Qaeda flourishes where state control is weak to non-existent, and where it is able to create instability and conflict through acts of terrorism. This has been evident in all countries where Al-Qaeda affiliates exist, namely Afghanistan, Iraq, Pakistan, Somalia, and Yemen's tribal areas. The fact that AQIM has failed to grow in Algeria but has seen opportunity in the Sahel region, and now in Libya and Tunisia demands attention. And with what appears to be a brewing security crisis caused by the conflict in Libya, Western and regional powers will have to frame their response carefully, lest the empower AQIM into becoming the vanguard of a new front in the global jihad in the Sahel.

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NOTES

1 *See: Keenan, Jeremy (2009), 'The Dark Sahara: America's War on Terror in Africa' (New York: Pluto Press); And 'France's Military Intervention in the Sahel', MENAS Associates, 2 August 2010.*

2 *Takfir is the practice of accusing other Muslims of apostasy.*

3 *Various sources, including: UNSC Committee Pursuant to Resolution 1267 (QI.D.249.08) www.un.org/sc/committees/1267/NSQI24908E.shtml; and, Tawil, Camille (2009), 'The Al-Qaeda Organisation in the Islamic Maghreb: Expansion in the Sahel and Challenges from Within Jihadist Circles' (Washington: Jamestown Foundation).*

4 *Algiers bomb shatters UN office, News, 12 December 2007.*

5 *'Algeria Launches New Offensive Against AQIM', Middle East Newsline, 21 July 2009. www.menewsline.com/article-4107-Algeria-Launches-New-Offensive-Ag.aspx*

6 *The US Department of State said that some TCG members reportedly maintain ties to the Algerian GSPC.*

7 *The faction was reportedly under the command of Abu Zeid, AQIM's overall emir for the Sahel region.*

8 *'An Interview With Abdelmalek Droukdal', New York Times, 1 July 2008.*

9 *Bombers, Bank Accounts and Bleedout, p. 34, www.princeton.edu/~jns/publications/Sinjar_2_July_23.pdf, The study noted that Libya contributed the second highest number after Saudi Arabia, and most came from North East Libya.*

10 *Menas Associates – Sahara Focus 2009.2 – Draft Copy of Lead Story – 12.05.09 Associates www.menas.co.uk/newsroom/Western%20Security%20compromised%20by%20 Algeria%20and%20AQIM%20in%20Saharan%20hostage%20taking.pdf; And Keenan (ibid.)*

11 *www.timesonline.co.uk/tol/news/world/africa/article6426506.ece*

12 *Abdelhamid Abou Zeid, a harsh and violent leader within AQIM, Ennarhar Online, 22 September 2010.*

13 *"A Speech to People and Rulers of the Sahel and South of the Desert Countries," Al-Andalus Establishment for Media Production, posted to Shumukh al-Islam web forum, 9 Mar 2010.*

14 *Beth Elise Whittaker, 'Soft balancing among weak states?' International Affairs 86:5, Sep 2010, pp.111–4.*

15 *Posted on Shumukh al-Islam web form, sourced to al-Fajr Media, 23 February 2011.*

16 *'Two Tunisian officers killed in clash with armed Al Qaeda suspects, two militants dead', Al-Arabiya, 18 May 2011; english.alarabiya.net/articles/2011/05/18/149593.html*

17 *Contacts between insurgents and al Qaeda for the announcement of jihad in Libya, Ennahar Online, 25 May 2011, www.ennaharonline.com/en/international/6624.html*

18 *U.S. concerned over Libya weapons reaching Al Qaeda, Reuters, 1 June 2011, af.reuters.com/article/senegalNews/idAFLDE75015Y20110601?sp=true*

19 *Al Qaeda acquiring weapons in Libya:Algerian official, Reuters, Mon Apr 4, 2011, af.reuters.com/article/topNews/idAFJOE7330LB20110404*

20 *'Libya: al-Qaeda acquires weapons', The Telegraph, 5 September 2011 www.telegraph.co.uk/news/worldnews/al-qaeda/8743276/Libya-al-Qaeda-acquires-weapons.html*

21 *'The Dangerous Link: AQIM, From The Sahel To Libya', African Bulletin, www.african-bulletin.com/watch/793-the-dangerous-link-aqim-from-the-sahel-to-libya.html*

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Chapter 2

The security challenges of West Africa

by Eric DENÉCÉ and Alain RODIER

Summary

West Africa has been faced with a multitude of wide-ranging security challenges. This article provides a comprehensive assessment in understanding some of the region's security challenges. It highlights their negative impact to the stability, development and economies of the region. Three concurrent factors are identified: 1 – persistent internal conflict emphasised by the structural weakness of governments; 2 – jihadist terrorism as a manifestation of the rise of radical Islam and the presence of AQIM in the Sahel; and 3 – the growth of organised crime including drug and human trafficking and piracy. The role of key regional and external actors in fueling insecurity in the region is also analysed. It concludes that security challenges can no longer be solved in a national or regional framework. The transnational connection between the Sahel and West Africa with North Africa is an important element that supports the expansion of such a framework. Regional, transnational and international co-operation are effective and long-term solutions that will improve the security landscape of the region as a whole.

Despite the efforts made over the years, the Member States of the Economic Community of West African States (ECOWAS) have been unable to find the necessary stability and security for their development. The situation in the region is a source of growing concern and never before have violence and illegal activity been seen on such a large scale.

The West African States are suffering from the effects of three concurrent factors.

- *Persistent internal conflict* and local insurgencies. These have been exacerbated since the end of the 2000s by the global economic crisis – having major repercussions for Africa – and by population growth and global warming – which intensified rivalries over arable land. Individuals and groups are turning to violence in the hope of getting what they do not have or, in some cases, driving out those who do not belong to their ethnic group or religion.

These conflicts persist because governments have difficulty imposing their authority on the countries for which they are responsible. The resources available to West African States have dwindled since the end of the Cold War mainly because of cutbacks in civil and military assistance provided to them in the context of East/West competition.

- *The entrenchment of jihadist terrorism*, embodied by Al-Qaeda in the Islamic Maghreb (AQIM). This is first and foremost a major threat to the security of Sahel countries, whose economies are weakening because of lost opportunities resulting from insecurity caused by AQIM. Furthermore, extremist and armed Islamic movements are spreading beyond the Sahel into several West African States, especially in Nigeria.
- *The spread of organised crime*, a global phenomenon that has also embraced West Africa. International criminal organisations have emerged in the region over the last ten years or so, taking advantage of weak governments, to engage in their illegal activities. It also has a destabilising effect on legal economies in which bribery is used to ensure local complicity.

Internal conflict, jihadist terrorism and organised crime have a deep impact on the economy, the development and the security of the peoples of West Africa. They cause many civilian casualties as a result of massacres and forced displacements and violations of human rights continue to be committed.

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Instability and insecurity continue to spread partly because of the structural weakness of governments in the region, affecting major urban centres in West Africa as well as in remote areas. Rife with trafficking of all sorts, these violent areas are breeding grounds for criminal and terrorist organisations.

Foreign businesses and nationals in these countries face growing insecurity in their daily lives and are particularly worried by these developments in which some do not hesitate in shutting down their businesses, further weakening the countries concerned.

Persistent internal conflicts

Africa is the continent hardest hit by internal conflicts and West Africa is no exception. The region has been the scene of many internal conflicts since the early 1990s, having complex origins equally with complex issues at stake.

Civil wars in Côte d'Ivoire, Liberia and Sierra Leone have threatened the stability of the entire region and caused many casualties.[1] Intervention by international and regional communities were able to put an end to the

fighting and the massacres, and prevented the violence from spreading to neighbouring countries, which established more or less successful peace processes.

Since 2005, institutional stability has been restored and peace is being consolidated in Liberia and Sierra Leone, though these strife-torn countries are virtually still under international control. The situation in Côte d'Ivoire also seems to be improving after the departure of president Gbagbo.

However, internal conflicts, some of which have been going on for years continue to simmer in West Africa. Particular trouble spots include Casamance (Senegal) and the Niger delta (Nigeria), and a Touareg insurgency in northern parts of Mali and Niger.

- In southern Senegal, the separatist conflict (1982 – cease fire in 1985) between the Movement of Democratic Forces of Casamance (MDFC) and the Senegalese armed forces still engenders violence. Its effects are also being felt in neighbouring Guinea-Bissau.
- The Niger delta, shaken by a series of armed confrontations and terrorist attacks since 1999, is a strategic region because of its oil reserves. The local insurgency has ethnic, economic and environmental grievances.
- Mali and Niger have been shaken by an insurgency of the Touareg community, partly caused by the Touaregs' exclusion from economic development. Since Touaregs are present throughout the region, their insurgency could easily degenerate into a regional crisis affecting all the countries of the Sahel.

Although wars between countries and disputes between neighbours are generally disappearing from the region, some border problems still remain. Porous frontiers and non-existent border controls allow armed gangs to roam at will, bringing violence, crime and looting in their wake (Liberia/Côte d'Ivoire).

The lack of government capacity-building

One of the main reasons internal conflicts persist lies in the structural weakening of governments since the early 1990s.

During the Cold War, regional conflicts in Africa were essentially an extension outside Europe of the confrontation between East and West. For the superpowers, it was vital to counter the influence of the other bloc by providing military and financial support to regimes favourable to their cause and by destabilising those that were not. For decades, Africa was on the receiving end of subsidies and handouts from the West or the Communist camp.

This mindset, and its practical side-effects, disappeared almost overnight with the collapse of the Soviet Union. Most African countries lost their strategic importance in the new world order and only a handful continued to be of some interest, due to their mineral resources.

Eager to reap the benefit of the peace dividend, the Cold War belligerents immediately cut their economic and military assistance to African countries. Arms shipments, the assumption of certain government budgets and training programmes for military and police officers, as well as some civilian technicians, were soon stopped.

The slashing of foreign handouts meant that African countries had to deal with their internal security and economic development problems on their own, and generally proved themselves incapable of doing so. Whole areas slipped out of government control. No longer able to exercise authority in their own country, riddled with corruption and nepotism, many of them began to unravel from the inside paving the way for civil war, unchecked violence and lawlessness, as seen in Liberia and Sierra Leone.

Other internal threats

Internal tensions are exacerbated by rapid population growth, which places even more strain on slender local resources and makes sharing them even more difficult. With demographic growth approaching 3% a year, West Africa's population will double over the next 25 years. An increase on that scale will affect both human and food security across the entire region. Poverty is already getting worse even though global wealth is steadily increasing causing people to migrate and fuelling growing resentment of countries in the northern hemisphere. These factors play into the hands of radical ideologies, since the poorest people are always tempted to fall back on identity-based, ethnic or separatist movements or religious fundamentalism.

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Population growth also affects fragile internal balances. Because local agricultural resources are insufficiently exploited, people migrate in search of better living conditions and squabble over access to resources, especially water and land. In these conditions, nomadic and pastoral populations, whose attitude to ownership is very different from that of sedentary populations are either endangered or cause problems, generating tensions and confrontations.

Depopulation of the countryside combined with demographic growth increases urbanisation and the concentration of populations in ever-growing mega-cities. Because of the poverty and the weakening of social bonds typical of such cities, they have become centres of violence and criminal activity. Gangs, mafias and radical Islamic groups flourish. Trafficking of all sorts is rife and it is possible to disappear without trace.

Parts of some cities have become no-go areas for which it is impossible for security forces to control intervening only intermittently and at considerable risk. Dangerous mega-cities like Lagos, partly made up of slums under the thumb of criminal gangs, have become the main theatre for the fight against organised crime.

External factors that contribute to regional instability should also not be forgotten, especially that of foreign interference. West Africa is rich in natural resources such as oil, gas, iron, phosphate, copper, tin and uranium coveted by the Western powers and by China who are confronting each other more and more openly for control over these resources. Foreign countries do not hesitate to manipulate local players in order to secure their influence in the region, with the aim of exploiting these natural riches or preventing others from getting their hands on them. These external rivalries do much to fuel local conflicts. Other international but non-governmental influences also contribute to insecurity in the region, notably the global economic crisis and the steady spread of radical Islam.

External factors that contribute to regional instability should also not be forgotten, as foreign interference.

But two major threats of external origin have recently appeared and now pose a real problem because they exceed all the others in intensity: jihadist terrorism and the arrival of major international criminal networks.

Jihadist terrorism

The deterioration of the security situation in the region is primarily linked to the rise of radical Islam and its violent manifestation, jihadist terrorism. Drawing inspiration from Salafism, a form of militant Islamism in which it seeks to impose its rules everywhere, jihadist terrorism is now the main threat to democratic values and the balance of societies in the region. Although it concerns the Sahel region above all, terrorism is a strategic threat to the security of all West African States.

The Rise of Radical Islam

In Mali, Pakistani and Afghan preachers were first seen in Kidal and Tessalit in 2002. They formed the vanguard of Al-Qaeda. The two cities, along with Adrar des Ifoghas, a former stronghold of the Touareg insurgency in Mali, soon became gathering places for many international jihadists and welcomed by members of the Dawa sect.

In Niger, Islamists have long been active through religious schools whose members support radical Islam. Although religious political parties are banned, associations have taken over their role and media that support fundamentalist ideas put out propaganda. The Niger authorities, well aware of the harmful influence that some imams can wield, have expelled many foreign preachers since 2003, especially Afghans, Pakistanis and Syrians. A second centre of fundamentalism exists in the south of the country, around the city of Zinder, because it is close to Nigeria.

Radical Islamic movements are prevalent in northern Nigeria and in states with a Muslim majority. The armed Islamic movement "Boko

Haram" came into existence in the north-east of the country in 2004. It is responsible for killings that mainly target government representatives, Christians and Muslims deemed too "moderate". Sharia law is promulgated there. Hostile towards Westerners, the youth has a real admiration for Bin Laden.

In Mauritania, Salafist influence is growing because of Wahhabi mosques and Koranic schools funded by Gulf States. This situation is particularly apparent in cities like Nouakchott, Nouadhibou, Rosso and Zouerat. Searches carried out in mosques in Nouakchott in May 2005 revealed that radical Islamists were plotting against the government. Several dozen Mauritanians are thought to have spent time in terrorist camps in Algeria and northern Mali with the help of a radical Islamic organisation called the Mauritanian Group for Prayer and Jihad (GMPJ). With financial support from Al-Qaeda, it recruited young people in mosques to fight in Iraq and Afghanistan.

Fundamentalists are regarded with a certain indulgence by deprived Muslim populations, especially as they provide basic healthcare and sometimes food assistance when national and international aid programmes fail. Young people, unable to find jobs because of the economic crisis, are increasingly receptive to the fiery preaching of certain imams trained abroad.

At the same time, growing numbers of international jihadists have arrived in Africa since 2002, when the American intervention drove them out of Afghanistan. Al-Qaeda, no longer entirely secure in Pakistan or Iran, sought new "safe havens" to set up training camps for its cadres and militants before sending them back to fight.

Terrorist networks found an ideal fallback zone in a region having many advantages for them. The Sahel-Sahara region is vast, thinly populated and under-governed. Borders are neither marked nor patrolled in which movement remains unhindered and there exists innumerable hiding places. People increasingly subscribe to the ideas of radical Islam and because trafficking of all kinds is rife, jihadists can easily replenish their supplies of weapons and vehicles, etc. Corruption also makes it easier for illegals to move around freely. Governments try to fight terrorism gradually but there is no regional coordination of policy.

As a result, the threat has intensified since 2004, especially in southern Algeria, Mali, Mauritania and Niger. Bombings, kidnappings of European nationals and actions against security forces have proliferated but it is in Algeria where the biggest threat has emerged.

Al-Qaeda in the Islamic Maghreb

Al-Qaeda in the Islamic Maghreb (AQIM) officially succeeded the Salafist Group for Preaching and Combat (GSPC) on 25 January 2007 by swearing allegiance to Osama bin Laden. The aim of the Algerian terrorist

organisation was to extend the jihad to the whole of the Maghreb by incorporating other local Islamic movements.

The GSPC has long had relations with Al-Qaeda. Phone intercepts revealed that Hassan Hattab, the founder of the GSPC, had held several conversations with Bin Laden in 1999 and 2000.

Until 2007, the GSPC mainly operated in Algeria (including the Saharan zone), with offshoots in Europe. The alliance with Al-Qaeda extended AQIM's sphere of influence to Mauritania, Mali, Niger and, to a lesser extent, Nigeria and Chad. Pushes into Burkina Faso are now beginning to be felt. Recent information also indicates that the presence of AQIM is being felt in Libya because of the civil war. Above all, the GSPC has made its European networks available to AQIM, in return for which it receives funding to continue the fight in Algeria and the Sahel.

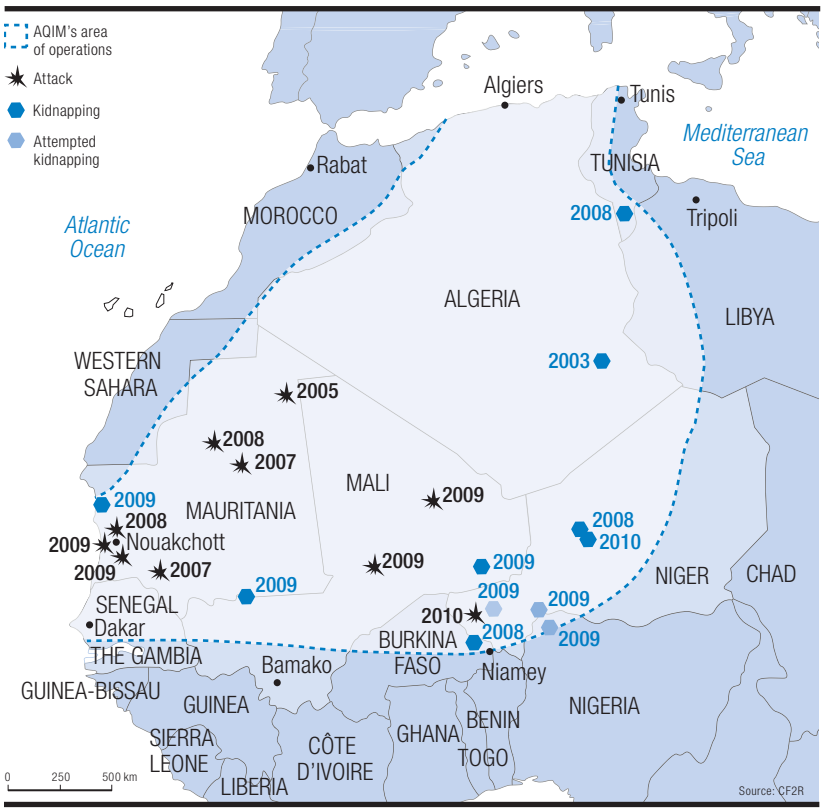
AQIM, which reportedly numbers barely more than a thousand fighters, has two branches. The first branch, in northern Algeria, is continuing its operations against the government in Algiers and is seeking to extend its action in Europe, especially in France. The second branch operates in the Sahel-Sahara zone forming the "9th region"; it seems to enjoy considerable autonomy from the leadership based in the "2nd region" to the east of Algiers. Since 2007, it has been led by Yahia Djouadi, alias Yahia Abou Amar Etiarti, known as the "emir of the Sahara".

By adopting a regional stance, AQIM extended its catchment area to Islamic groups in the Maghreb and Sahel. Its forces estimated to number about 300 activists now include Burkinabé, Mauritanians, Malians, Nigerians and members of various Islamic movements in North Africa as well as Algerians.

The "9th region" of the Sahel-Sahara zone does not appear to have a centralised command structure; it is instead formed of groups that act independently of each other: the Katibas *Tareq Ibn Ziyad* (or *El Fatihine*), *El Nasr Aflou*, *Talaia es-Salafia* and *Mouhadjiroune*. For security reasons, these Katibas are said to have been split up into smaller units called "seriyas". These are small, heavily armed groups equipped with 4x4 vehicles which move around mostly at night with the help of night-vision equipment and sat-nav devices. During the daytime, they hide out camouflaging themselves in order to avoid air and satellite surveillance. The seriyas use sophisticated means of transmission to communicate with each other and often communicate in code in order to foil enemy intercepts. In exceptional cases, these groups may combine their forces to carry out joint operations.

AQIM would not have been able to establish themselves without the support of local people. Some of its leaders have contracted marriages of convenience in various communities in exchange for protection. AQIM has also made up for certain government failures by providing solutions to some of the problems in people's day-to-day lives.

Figure 1
AQIM's area of operations to the north and south of the Sahara



The terrorists live off the taxes they levy on the trafficking that takes place in the areas under their control which ensures regular revenues. Ransoms paid for freeing hostages is believed to have brought them over EUR 150 million since 2005. They distribute some of their financial resources to local populations, thus replacing governments that have difficulty fulfilling their social missions. Hence, the terrorists "buy" the co-operation of the Sahel's inhabitants, who in turn provide the logistical support they need in order to survive. AQIM also uses its funds to bribe public officials and launder income from illegal activities. The building industry has always been a favourite conduit for criminal organisations looking to launder dirty money. It is striking indeed to see the growing number of new buildings in Timbuktu, Gao and Kidal. Many "nouveaux riches" have thus appeared in the Sahel.

One development is evident: AQIM is participating in criminal activities, even though it continues to advocate Islamic ideals. After the kidnapping of two Austrian nationals in April 2008, AQIM made it known

throughout the Sahel that it was willing to pay between one and three billion Algerian dinars (EUR 100 000 to EUR 300 000) for abducted Westerners depending on the hostage's status. This "notice" was followed by the kidnapping of two Canadians in December 2008, four Europeans in January 2009 (two Swiss, a German and a Briton), a Frenchman, three Spaniards and two Italians in late 2009 and a dozen French nationals in Niger in 2010, all of them "sold" to AQIM.

Paradoxically, this development reflects the fact that AQIM's terrorist activity is declining as governments in the region step up their fight against the organisation with Western assistance. AQIM is having difficulty federating jihadist elements from the Maghreb and the Sahel and seems not to be attracting jihadists returning from Iraq. It does not appear to have the operational capacity to export terrorism outside the region given the measures taken in North Africa and Europe. Above all, AQIM does not convey an inspiring political or religious message. Nevertheless, the organisation is still active and represents a danger for the region's governments. Its localisation in the Sahel makes AQIM a permanent source of insecurity, especially as collusion with local and international criminal elements operating in the region is becoming daily more apparent.

Since the early 2000s, West Africa has experienced a worrying rise in criminal activity linked to international organised crime.

However, the deterioration of the situation in Libya, especially the looting of the army's stockpiles of weapons by insurgents which is then sold on to traffickers, is a source of particular concern, since it could give AQIM fresh impetus.

AQIM is reported to have obtained substantial quantities of weapons from Libyan traffickers, especially portable surface-to-air missiles. The Malian authorities have observed several deliveries of arms (AK 47, RPG 7, ZSU 23, SAM 7) and equipment (pick-ups and troop transporters) in the north of the country. In late April 2011, the Malian Minister of Foreign Affairs, Soumeylou Boubeye Maiga, described the situation as "serious and worrying". He mentioned the establishment of a new AQIM base in Mali, near the border with Mauritania, which would allow the organisation to launch new operations in Mauritania and fall back into Mali.

As a result of the arrival of Libyan arms, AQIM is in the process of building up its arsenal, thus increasing the threat it represents for the region's governments. Because of the situation in Libya, the organisation could be tempted to extend its operations further east.

The spread of criminal activity

Since the early 2000s, West Africa has experienced a worrying rise in criminal activity linked to international organised crime. It has become a new transit point for various types of traffic, including drugs, and the scene of kidnappings and piracy.

South American cocaine trafficking

Over the last ten years, the Sahel and West Africa have emerged as new hubs for cocaine trafficking initially coming from South America as a result of two developments in Latin America in which the consequences are being felt in the region. Mexican cartels have the overall monopoly in transporting and distributing cocaine to the United States. At the same time, the North American market for cocaine is becoming saturated.

These two developments in the drugs "business" caused Colombian, Peruvian and Bolivian drug traffickers – who between them produce about 1 000 tonnes of pure cocaine a year – to turn to Europe which has proved to be a highly profitable market.

Since 2005, South American drug traffickers regard West Africa as being one of the safest routes to Europe. The Caribbean and Europe's Atlantic coast are under increasingly close surveillance. The South Americans therefore prefer to take the new route, known as "Highway 10", which roughly follows the 10th parallel. Almost half of the South American cocaine destined for Europe is believed to take this route.

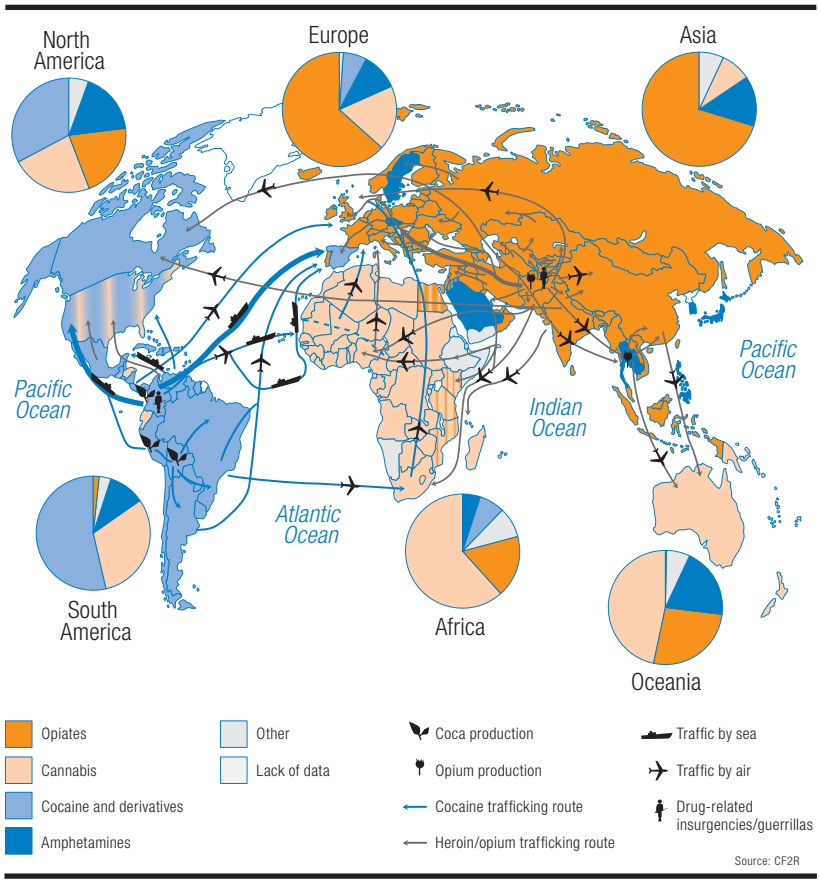
Although the journey is more expensive because the distances are longer, it is much safer. Losses due to seizure have fallen substantially, easily offsetting the higher costs of a longer journey and longer delivery times.

80% of narcotics are shipped by sea, on cargo vessels, yachts, trawlers, etc., and come ashore on the coasts of Cape Verde, Gambia, Guinea-Bissau, Guinea-Conakry, Ghana, Mauritania and Senegal. A smaller proportion is reported to pass through Benin, Côte d'Ivoire, Liberia, Sierra Leone and Togo. The drugs are generally transferred near the coast to smaller craft which then return to discreet unloading points.

The cocaine is then taken on smuggling routes across the countries of West Africa and the Sahara for subsequent shipment to Europe either by air or overland and then by sea. The Sahel plays a predominant role in the system making it a new hub for international drug trafficking. Two main routes that cross through the Sahel are:

- The western route. The cocaine arrives in Guinea-Bissau then passes through Guinea-Conakry or Senegal. Shipments are assembled in Mali then carried through little-policed areas in the south east of Algeria, like Tindouf, before reaching the Mediterranean coast via the Sahara and the Maghreb;
- The eastern route. Cocaine arriving in the Gulf of Guinea lands in Benin, Ghana, or Togo, and then generally passes through Nigeria. It is then carried via Niger and Chad to Libya or, to a lesser extent, Egypt. Benghazi is one of the main ports for on-shipment to Europe.

Figure 2
Consumption and supply routes



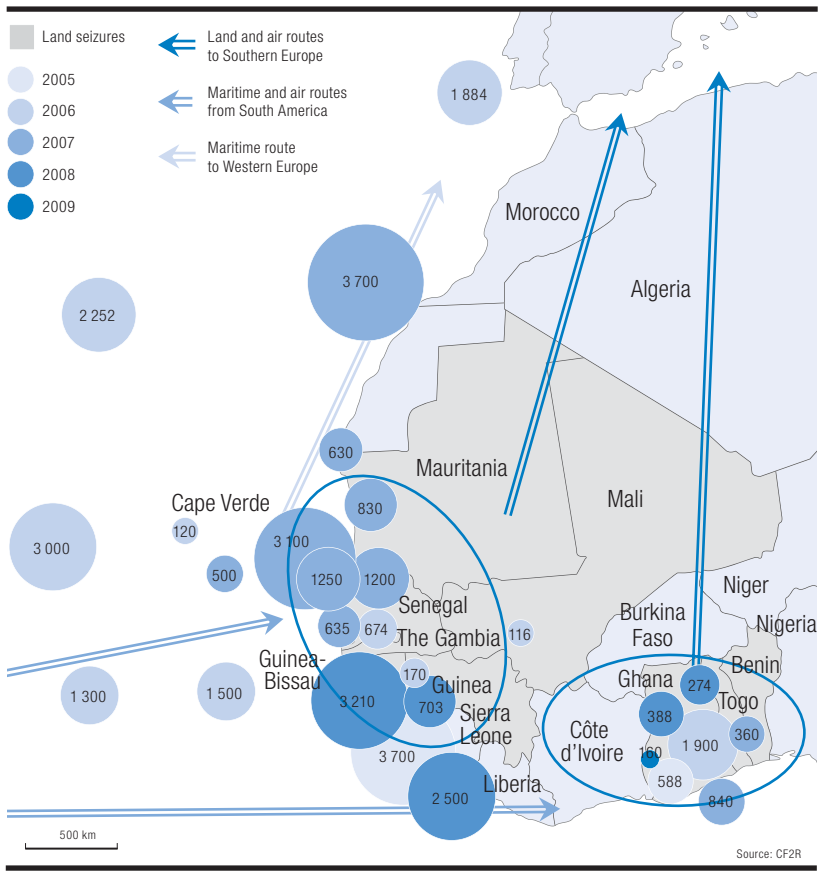
The local traffickers who transport the merchandise through Africa are either small, disparate groups, heirs of the caravan drivers who used to smuggle contraband or organised gangs, the biggest of which stem from Nigerian mafias whose influence extends to the Americas, the Caribbean, the Far East and Europe. Other groups are said to be made up of former Polisario members.

Then there is AQIM. Although there is no formal proof to date to confirm AQIM's involvement in drug trafficking, it appears that some of the movement's Sahelian members are associated with it at least in terms of "protecting" the illegal trade. In addition, it has been proven on many occasions that drug trafficking goes hand in hand with arms trafficking which is bound to be of direct interest to AQIM.

But West African countries are not just a transit zone. They have become a new drugs warehouse as well. The drugs are mostly stored in secret stashes in the Sahel – northern Mali is one of the main warehouse zones – before being split up and shipped to their final destination. Local groups charge EUR 2 000 per kilo of cocaine for transport and security.

In order to organise the African networks, several South American cartels are said to have made contact with Touareg tribes, members of the Polisario Front and Islamic movements. They all ensure safe transfer of the merchandise. According to the US Drug Enforcement Administration, at least nine South American cartels are operating in Africa.

Figure 3
Main cocaine trafficking routes in West Africa



South Americans have thus established long-term operations in West Africa, creating front companies under the cover of import-export, fish farming, fishing, tourism, construction, etc. These "businessmen", mostly from Colombia, Mexico and Venezuela, present themselves to the local authorities as genuine entrepreneurs who are going to invest substantial amounts of money in the country, in which local authorities generally turns a blind eye to the real origin of the funds. In some cases, cartel representatives marry local women, making it even easier for them to integrate.

This overview would not be complete without some mention of the Lebanese networks. The Lebanese own a whole host of small businesses throughout the entire region. Mostly Sunni Muslims, some of them have direct links with Hezbollah, which is very well established in Latin America. Hezbollah engages in a range of trafficking activities, including drugs, to meet its needs since aid from Iran is dwindling because of the economic crisis. Lebanese networks are equally involved in importing drugs into West Africa.

Other forms of criminal activity

Narcotics are not the only commodities to take the smuggling routes. Other forms of traffic also exist, which include the trafficking in people, arms, ivory from Cameroon, Mozambique, and Zambia, rhinoceros horn, cigarettes, counterfeit medical drugs, precious stones, wood, oil, toxic waste, alcohol, stolen 4×4s and luxury vehicles, etc.

Nouakchott is the main port of entry for illegal goods destined for the cities of Morocco. They are exchanged with the Sahrawi for camels, goats, cigarettes and foodstuffs. Contraband cigarettes are disposed of in Senegal and Algeria.

The Polisario Front is the main purveyor of light weapons to and from Mauritania. The traffic takes place throughout the Western Sahara, in Mali and in Algeria. Zouerate is a market well-known throughout the region for its caches and stocks of arms. A 2008 report by Mauritania's Department of National Security estimated that some 70 000 weapons were in circulation in the country and said that the number was steadily increasing with the proliferation of criminal activity.

The spread of criminal activity is a major source of destabilisation, since it threatens the rule of law and corrupts economic activity.

There has been a worrying rise in the number of kidnappings in the region over the last ten years or so. Kidnappings have become a highly lucrative business; tourists, journalists, expatriates, business travellers and aid workers are favourite targets. Criminal and terrorist organisations increasingly use kidnapping to raise money.

In West Africa, many kidnappings take place in countries where international companies operate. In Nigeria, armed gangs on the lookout

for easy money operate with impunity and kidnap European, American or Asian expatriates working for oil companies. But most kidnappings of Westerners take place in the Sahel. In most cases, the victims are kidnapped by criminal gangs that are then "sold to" to radical Islamic groups. This generally explains the relatively long lapse of time between the kidnapping and the first official demand.

Another rapidly expanding form of criminal activity is piracy, which generally involves seizing a cargo or even an entire ship and holding its crew for ransom.

Although there has been a considerable increase in piracy in East Africa, especially in the Gulf of Aden and off the Somali coast, Africa's Atlantic coastline is becoming more and more dangerous. Acts of piracy are steadily increasing, especially in the Gulf of Guinea and off Liberia, Nigeria and Sierra Leone, and can be extremely violent. Heavily armed pirates operate from fast craft which rarely hold more than half-a-dozen men and their attacks may end in the killing of the entire crew.

Effects of criminal activity in the region

The spread of criminal activity is a major source of destabilisation, since it threatens the rule of law and corrupts economic activity. Parallel economies have emerged and in some countries, this black market economy outweighs the legal economy. Criminal organisations generate vast profits which enable them to buy complicity and silence. Where it is present, organised crime may control a part of that country's political, economic and social life.

Some government members are accused of fostering illegal activities, often preying on natural resources, for the purpose of personal enrichment. Not only do such activities ruin national economies, but in some cases it is the politicians themselves who reap the greatest benefit from their own country's insecurity, in close co-operation with the mafias, which explains why local criminal organisations can often operate with impunity.

Some countries' foreign currency reserves have increased spectacularly in recent years (Guinea-Bissau, Guinea-Conakry, The Gambia, etc.). It is suspected that such an influx of capital can derive from drug trafficking; record inflation has been the direct consequence. The same applies to remittances from "expatriates", which have also risen sharply, especially in Côte d'Ivoire, Ghana, Nigeria and Senegal. There are suspicions as to the real origin of the funds.

Some of the money from illegal trafficking is laundered locally, through construction companies, bars, restaurants and hotels. The amount involved is believed to be some USD 73 billion with tax evasion accounting for USD 43 billion. The favourite countries for money laundering are Guinea-Bissau, Liberia, Nigeria (flag of convenience and tax

haven), Ghana and Senegal. Money laundering is believed to have been one of the main drivers of the property boom in Dakar over the last ten years during which over 3 000 buildings of three storeys or more are reported to have been built.

However, it is in Guinea-Bissau that the situation is of greatest concern. The United Nations Office on Drugs and Crime (UNODC) considers the country to be a narco-state. There has not been any conviction for drug trafficking in recent years. Some elected officials are notorious traffickers. The country has lost its credibility and only the economy generated by drug trafficking enables it to survive.

Criminal activity in general and drug trafficking in particular have major effects on all the countries in West Africa, fuelling conflict, sustaining local guerillas and terrorist groups and accelerating the growth of the illegal black market economy. They foster insecurity, violence and corruption.

Ethnic and religious conflict, civil disturbance due to global economic shocks, fighting for the appropriation of natural resources, terrorism, organised crime: the factors of insecurity are multiplying and diversifying in West Africa. Concurrent and more and more frequently combined, these factors present a considerable challenge to the countries in the region (which were already experiencing difficulties even before the economic crisis and globalisation) to effectively ensure the security of their territory, their people and their borders.

The economic cost of this insecurity is enormous. »

The economic cost of this insecurity is enormous, in terms of the loss of human life, the destruction of infrastructure, the interruption of economic activity, the looting of natural resources, corruption, the flight of foreign investors and operators and migration. These factors hinder economic development and threaten human security.

The incapacity of governments to exercise their sovereign functions in the countries they are supposed to govern is the central security issue in West Africa. Foreign criminals are attracted by that fragility, since they know they can take advantage of local disorder to prosper. The result is the growing criminalisation of the economy to which AQIM contributes.

The risk ahead is that power will fall into the hands of criminal organisations or governments bound to their interests. If that were to happen, it would result in the criminalisation of not only economic life but also political life. Guinea-Bissau may well be the first example.

Thus, the challenges facing West African States are even greater now than before. The problems can no longer be solved in a purely national or even regional framework because they are linked to factors that lie beyond the region or in the international sphere.

The search for effective, long-term solutions must be undertaken in a collective and coordinated manner and must be envisaged in a wider

framework. Under those circumstances, there appears to be four essential priorities for action.

- First, the notion of West Africa's strategic sphere needs to change. Security challenges now extend well beyond the regional sphere and are increasingly linked to transnational or external factors. It is no longer possible to dissociate West Africa from the Sahel-Sahara and North Africa. It would be a mistake to continue to regard them as separate geopolitical spheres.

  The region is becoming more vulnerable because of its direct proximity to the Sahara, formerly a frontier zone marking a clear separation with North Africa but now a contact zone with the Mediterranean and the Near East. Because of its vast size and its historical, cultural and trading links with the Arab and Muslim world, the Sahara is both a meeting place and a sanctuary for criminal and terrorist groups. During the past two decades, it has turned into a vast grey area, beyond the control of adjacent countries.
- Second, it is essential to take joint action against terrorism and organised crime because the connection between international drug trafficking networks and AQIM is a fact and they support each other. Terrorist networks take advantage of trafficking to acquire arms and equipment. The insecurity they maintain enables international criminal organisations to extend their activities. That is why there cannot be a fight against terrorism without a global fight against organised crime in all its forms.
- Third, current challenges can no longer be addressed within a purely national framework because the threats are transnational. That is why it is essential to promote regional co-operation. Security in West Africa can be ensured only by a concerted effort between governments and by close co-operation between neighbours in order to coordinate their resources. Above all, the fight against terrorism and organised crime must not be hampered by issues of borders and sovereignty or by regional rivalries.

  Even though West Africa has taken regional integration the furthest, the security policies of West African States do not at present converge. On the contrary, they sometimes neutralise each other in the name of national interests. It therefore seems essential to consider the introduction of a collective regional security mechanism which would provide the framework for devising a real strategy and for coordinating operations. Such an initiative seems all the more necessary because national military resources are so slender that the only way to achieve a significant effect is to regularly concentrate them on targeted objectives.
- Fourth, given that a growing number of threats derive from sources outside the region, the countries of West Africa should be involved in international debates and co-operation. The fight against criminal

organisations and their trafficking activities calls for concerted policy action between producer and consumer countries. Experience has shown that when a country acts effectively but in isolation against organised crime, the problem merely shifts elsewhere, and continues to grow. It is therefore essential for West African countries to be part of the global fight, to participate in finding solutions with non-African countries, and to reinforce the means of specialised international organisations such as Interpol.

The same applies to the fight against jihadist terrorism which is a form of global terrorism that can be countered only by coordinated action by African, Arab and Western countries.

Ideally, these four priorities for action should be accompanied by increased military and police resources, currently undersized in relation to the threats, and by the establishment of an appropriate legal framework, so that the fight can be conducted in compliance with the rule of law.

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NOTES

1 *50 000 dead, 10 000 amputees, 10 000 child soldiers and 10 000 cases of rape in Sierra Leone alone.*

Part II
Climate Change and Security

Chapter 3

The climate of the Sahel

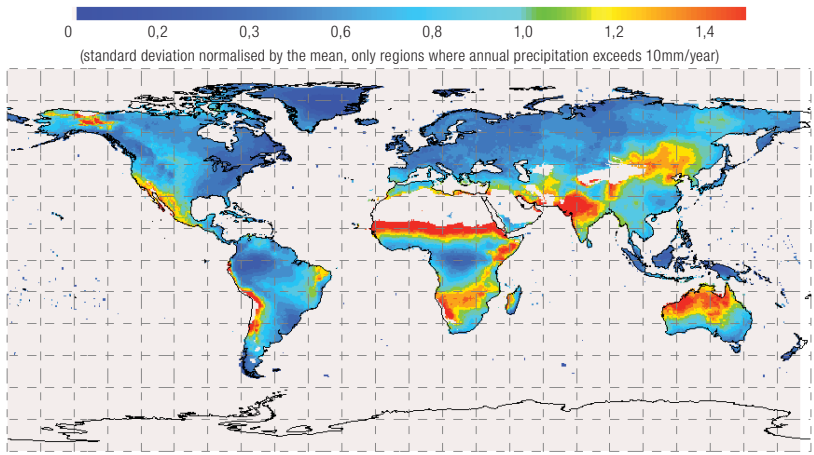
by Carlo BUONTEMPO, Ben BOOTH and Wilfran MOUFOUMA-OKIA

Sahel definition, location and peculiarities

The Sahel, here defined as the portion of Africa between 12°N and 20°N, is a semi-arid eco-region that separates the Sahara desert from the Sudanian tropical savanna. This flat region is known to be particularly vulnerable to natural variability as most of the human activities in the region depend on the highly volatile single annual rainfall season, June through September with the maximum in August. The severe droughts that hit the region in the late seventies and early eighties act to remind us of the direct consequences of these events. This has been arguably the longest and the most geographically extended drought recorded anywhere in the world during the 20th century.

Figure 1

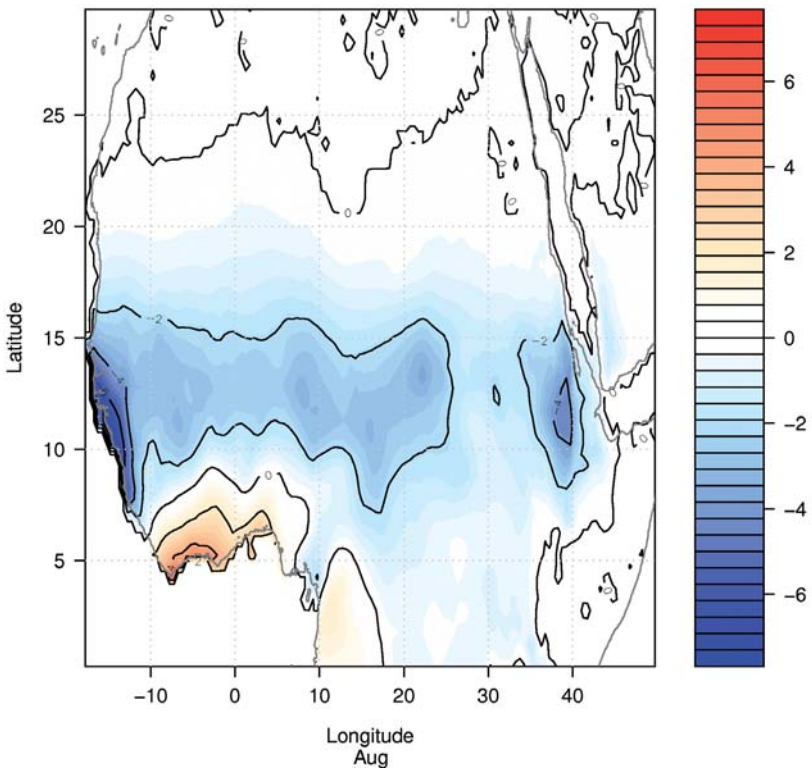
The plot shows the coefficient of variation for annual precipitation (standard deviation normalised by the mean) for regions where annual precipitation exceeds 10 mm. The Sahel stands out as one of the areas where the variation is most severe. The plot is based on CRU data.



From a climatological point of view the Sahel represents a hotspot as far as annual rainfall variability is concerned. Few other regions in the world (among them NW India and central Australia) share the extreme variability seen in the Sahelian climate (see Figure 1).

Despite the initial idea of a direct connection between land use change and drought (Charney *et al.*, 1974), which is now largely discounted by the scientific community, West Africa is still considered a "hotspot" where the interactions between the land and the atmosphere are expected to play an important role, through the recycling of precipitation and the modulation of humidity and temperature gradients (Douville *et al.*, 2007).

Figure 2
First empirical orthogonal function of the observed summer (JJAS) precipitation over the Sahel (CRU dataset for 1901 – 2000)



There is a growing concern for the future climate of the region as anthropogenic global warming continues, since the population of the Sahel depends largely on rainfed agriculture and on transhumant livestock rearing, and climate change may alter the availability of water

resources (IPCC, 2007). However, the CMIP3 climate projections produced by a wide range of modelling groups for the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC-AR4) show little consensus over West Africa (IPCC, 2007). This lack of consensus results partly from the inability of climate models to capture the basic features of the present-day climate variability in the region.

Novel datasets from the recent French led project on African Monsoon Multidisciplinary Analysis (AMMA, Redelsperger *et al.*, 2006), and the European Union funded ENSEMBLES project (van der Linden and Mitchell, 2009) will provide the high quality observational and multi-model climate data needed to carry out new analyses.

Climatic overview

Summer rainfall distribution in the Sahel can roughly be divided into five different homogeneous regions: three maxima (one along the west coast at around 8°N and weaker ones around Lake Chad and over the western Ethiopian plateau), and two minima (one centred around Greenwich meridian and one around 30–35°E).

The dominant process controlling the climate of this region is the West African Monsoon (WAM) system, a recurrent low-latitude large-scale circulation pattern arising from the meridional boundary layer gradient[1] of temperature and humidity between the warm and mostly dry sub-Saharan continent and the tropical Atlantic Ocean. The WAM system develops from April to October, bringing the Inter-Tropical Convergence Zone (ITCZ)[2] and associated rainfall maxima to their northernmost location in August. The analysis of daily rain gauge data performed by Sultan and Janicot (2000) and Le Barbé *et al.* (2002) reveals that the intraseasonal migration of rainfall maxima is a discontinuous and nonlinear process with three main phases: (i) the pre-onset or arrival of the inter-tropical front (ITF) at 15°N in May, bringing enough moisture for isolated convective systems to develop over the Sahel; (ii) the onset which occurs at the end of June and corresponds to the abrupt latitudinal shift of the ITCZ from a quasi-stationary location at 5°N in May-June to another quasi-stationary location at 10°N in July-August, and (iii) the retreat of the ITCZ towards the equatorial Atlantic ocean, which occurs in September-October. The intraseasonal variability of the WAM has been linked to various factors, notably the westward travelling monsoon depression (Grodsky and Carton, 2001), interactions with the local orography[3] (Dobrinski *et al.*, 2005), dynamics of the Saharan heat low (Sultan and Janicot, 2003; Sijikumar et al, 2006), and surface albedo (Ramel *et al.*, 2006).

On interannual and decadal time scales, Sahelian rainfall is known to be affected by a variety of regional and global sea surface temperature (SST) anomaly patterns. These include inter-hemispheric contrasts of SST (Folland *et al.*, 1986; Rowell *et al.*, 1995) and anomalies in the tropical

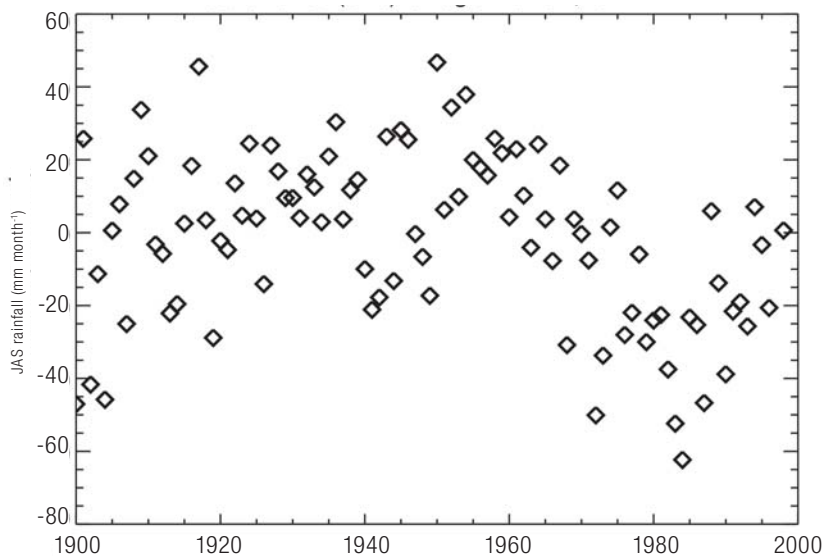
Atlantic (Hastenrath, 1990; Vizy and Cook, 2001), the east Pacific (Folland *et al.*, 1991; Janicot *et al.*, 1996; Rowell, 2001), the Indian ocean (Palmer, 1986, Shinoda and Kawamura, 1994; Rowell, 2001), and the Mediterranean (Ward, 1994; Rowell, 2003; Jung *et al.*, 2006).

One of the most prominent observational features of the area is the dipole structure that associates dry conditions in the Sahel and wet conditions along the Guinean coast (south of 10°N) with the presence of warm Gulf sea surface temperature anomalies (Cook and Vizy, 2006). Figure 2 shows the first mode of variability (empirical orthogonal function) of monthly precipitation in August.[4] This means that an increase in precipitation over the Sahel is usually associated with a decrease in precipitation along the coast and vice-versa. Such a dipole appears to be largely associated with the variation in sea surface temperature over the Gulf of Guinea, as a warm sea surface promotes convection over the sea, reducing the penetration of the convergence band over the Sahel.

Historical prospective

The Sahel has experienced an unprecedented and severe long lasting drought from the late 1960s to the late 1980s, with partial recovery through 2003 (see Figure 3).

Figure 3
Sahelian (10/18N, 20W/22E) mean summer (JAS) rainfall for the period 1901 – 2003



While there is consensus that there has been a recovery, there remains disagreement arising from different data sources over its magnitude (Nicholson *et al.*, 2000; Biasutti and Giannini, 2006; Dai *et al.*, 2004).

The drivers of this historical Sahel drying (1960–1990) have been the subject of considerable research. Much of the early focus centred on the role of local feedbacks from land use change on rainfall (e.g. Charney *et al.*, 1974 and 1975) and it took some time for the idea that Sahel rainfall changes could be modulated by remote changes to be accepted. Correlations between Sahel rainfall and sea surface temperatures were identified by Folland *et al.* (1986). These Sahel rainfall-sea surface temperature connections have subsequently been confirmed by papers looking at both observations (e.g. Baines and Folland, 2007; Sutton *et al.*, 2005) and models (e.g. Hoerling *et al.*, 2006; Giannini *et al.*, 2003; Biasutti and Giannini, 2006). A strong consensus emerged in these studies that the North-South gradient in the Tropical Atlantic and the Indian/Indo-Pacific temperatures have played a role. However, teleconnections[5] may extend beyond these two regions (Rowell *et al.*, 2003, linked changes in Mediterranean temperatures to Sahel rainfall).

Whether we can attribute the historical changes to natural factors or man-made climate change will have important implications for how we assess future drought risk.

Having established that historical sea surface temperature changes have played a role in the Sahelian drought, no consensus has yet been reached on whether these SST changes were part of a natural variability or were forced in some way by past human emissions. Whether we can attribute the historical changes to natural factors or man-made climate change will have important implications for how we assess future drought risk. It has been shown that SST variability similar to that observed in the Atlantic can be reproduced by climate models without the need of including climate change (i.e. not driven by human emissions) (Knight *et al.*, 2005). Analyses of the observations (Sutton *et al.*, 2005) and current models and observations (Ting *et al.*, 2009) attribute SST variability to models of the natural Atlantic Multidecadal Oscillation (AMO). Baines and Folland (2007), point out that much of the change in observed Atlantic SSTs coincides with the historical increase in man-made aerosols. There are also well understood physical mechanisms that explain why hemispheric differences in historic aerosol emissions may have contributed to the observed changes in Atlantic SST (Rotstayn and Lohmann, 2002, Hoerling *et al.*, 2006) and these can be demonstrated in current generation climate models (Kawase, 2010).

Putting aside for the time being whether the observed SST changes were natural or man-made, research has also focused on how much of the historical drying change can be accounted for by the observed SST

changes. Scaife *et al*. (2009) compared how well climate models prescribed by observed sea surface temperatures explained the Sahel rainfall changes. All the models reproduce the observed drying signal, although the fraction of the historical rainfall change explained varies depending on the model used. Only one of the 10 models explored in this paper was able to reproduce the full magnitude of the rainfall change, suggesting that either the models miss some aspect of the process which links SSTs to rainfall or there were other processes which may have also played a role. The answers to this question lie beyond the current science, but it has been suggested, for example, that interactions with Saharan dust and human land use (both atmosphere interactions which are not, or poorly, represented in current models) may be possible candidates for missing processes in our understanding of past changes.

Figure 4

Lat-time plot of precipitation (Hovmuller diagram) for the month of August for the entire Sahelian region. The drought of the 1980s appears both as a reduction in the mean value of precipitation and as a southward displacement of the northern edge of the wet area.

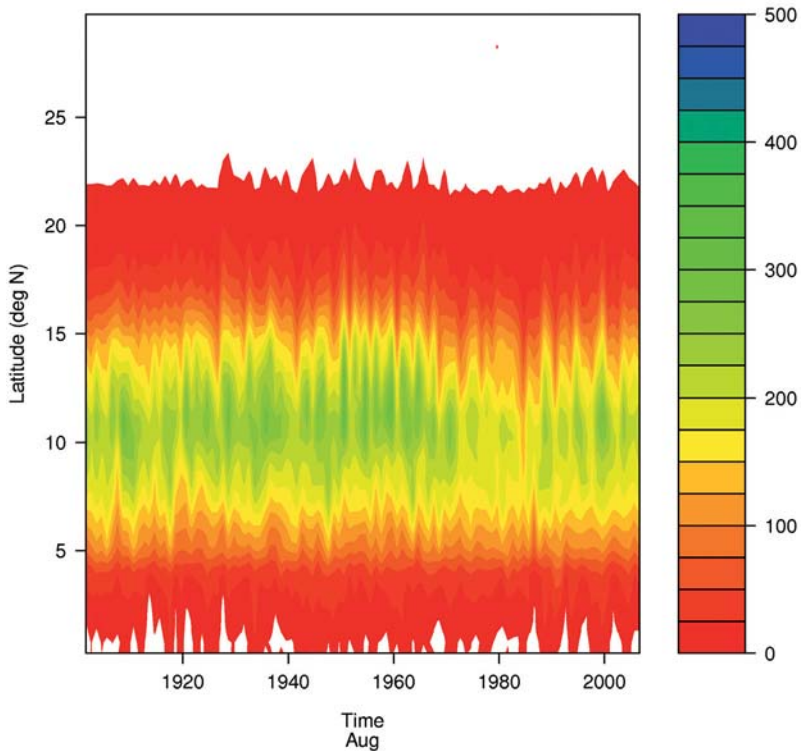
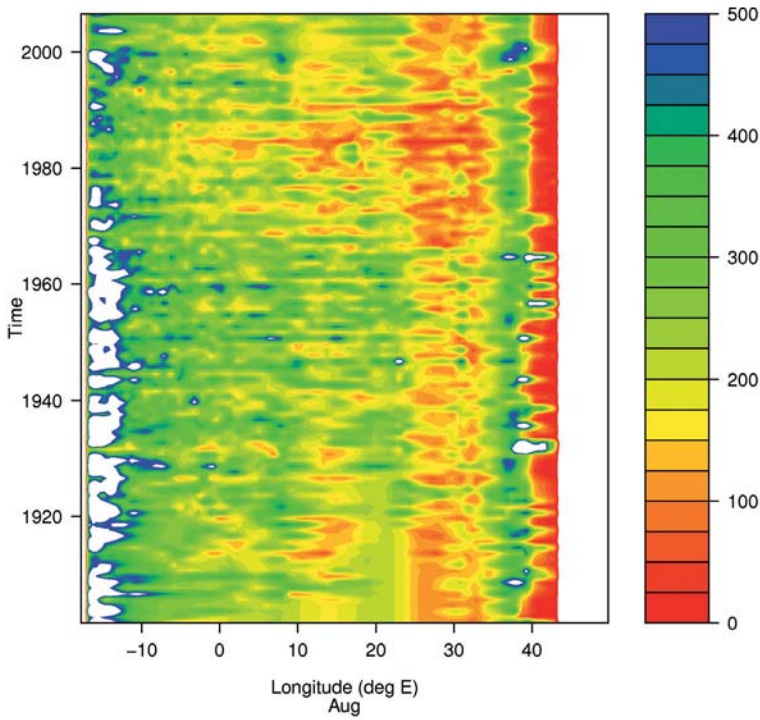


Figure 5

Time-longitude distribution of Sahelian rainfall, at the 12N. The uniformity of the values at the beginning of the record reflects a significant lack of data there.

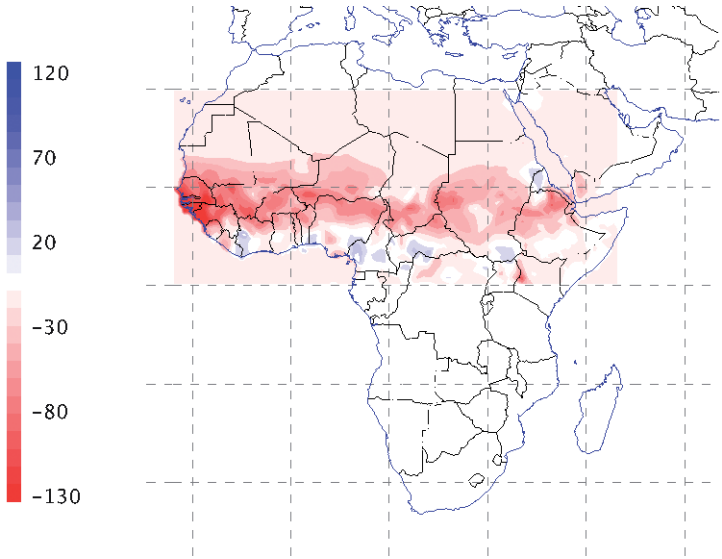


Hotspot analysis

We based our analysis on the CRU 3.0 dataset produced by the University of East Anglia (Mitchell *et al.*, 2005), arguably one of the most reliable sources of historical information for the region. Our definition of the Sahel region corresponds to an area characterised by a single rainy season per year with annual maximum precipitation occurring in August. Such a circumstance allowed for a simplification, as analysing precipitation only occurring during the wet season automatically removes the seasonal cycle.

The dry anomaly associated with the drought of the 1980s appears to be mainly associated with a lack of precipitation during the month of August rather than during the other three months of the wet season. This observation fits nicely with the notion that the drought was associated with a southward shift in the summer position of the inter-tropical convergence zone with respect to other years. All of the models used in the IPCC AR4 (CMIP3 ensemble) show a link between rainfall in the Sahel and the SST with lower rainfall normally associated with warmer sea surface.

Figure 6
Average summer precipitation anomaly [mm/month] for the period 1975 – 1990 with respect to the mean of the 20th century.



The strong drought of the 1980s (see Figures 3, 4 and 5) represents the single most dramatic event on record. During this dry period not only was the rain lower than usual but the geographical extent of the wet region was located significantly farther south (e.g. 1984) than in other years.

Another important aspect is that, in contrast to other events on record, the drought of the 1980s has affected the whole of the Sahel at once (see Figure 5). While the drying pattern at continental level appears to be linked to an increase in the average temperature of the surface of tropical oceans, the inter-annual variability, which is mainly controlled by ENSO teleconnection, tends to affect east and West Africa differently (Biasutti *et al.*, 2008).

A more conventional representation of the drought is presented in Figure 6 where the average precipitation for the month of August over the period 1901 – 2000 was compared with the same field during the drought period (i.e., the 15 years between 1975 and 1990). The difference between the two fields indicates a general reduction of precipitation over Sahel and a little increase along the coast of Guinea. This also highlights the dipole structure and provides additional evidence to the link between Sahelian rainfall and the position of the ITCZ monsoon front.

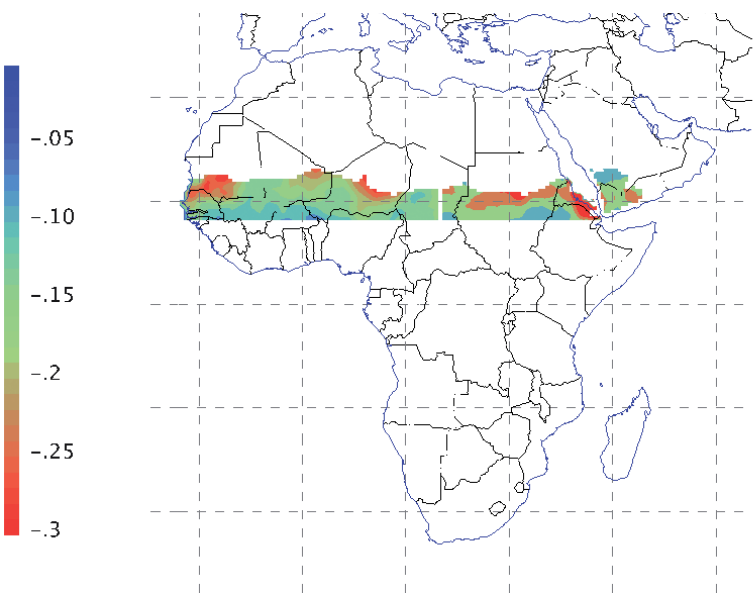
A simple analysis

We performed a sensitivity analysis based on historical observations to identify the regions where, in the past, droughts have caused the largest

relative anomalies in rainfall.[6] First we ranked all years on record according to the amount of rainfall observed during the month of August, then clustered the anomalies associated with the 10 worst drought on record (for East and West Sahel independently, arbitrarily separated at 20°E). The results shown in Figure 7 suggest the presence of at least three particularly sensitive regions. One lays along the west-most part of the region (Senegal and Mauritania), the second stretches between Mali and Niger and the third sits along the eastern fringe of Ethiopia and extends northward up to Sudan. For some of these areas, such as eastern Sudan/Eritrea, the average reduction of rainfall during the 10 most severe droughts of the 20th century was close to 100%. Of the 10 worst droughts on record, only 4 (1984, 1972, 1986, 1990) occurred simultaneously in eastern and western Sahel. This may indicate that different processes are responsible for the occurrence of dry conditions over the eastern and the western side of the continent. ENSO teleconnection, for instance, is much stronger over the great horn of Africa than it is over West Africa (Biasutti at al., 2008). The plot in Figure 7 represents a merge of the composite analysis for the east and west.

Figure 7

Number of summer (JJAS) wet days during the 10 worst droughts of the 20th century expressed as a fraction of the climatogical value over the period 1970 – 2000. Only the area with at least 77 mm/month is shown in the plot. Three hotspots can be identified: one along the west coast (Senegal Mauritania, one between Mali and Niger and the third on Sudan-Eritrea and northern Ethiopia.

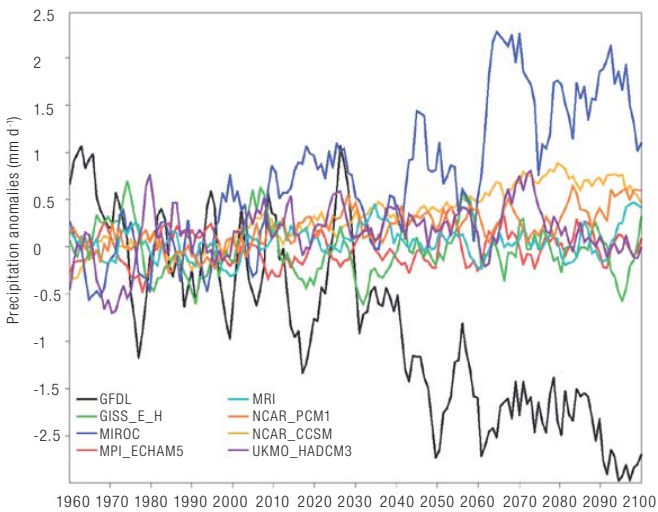


Climate change prospective

As discussed previously, historical changes in sea surface temperatures have been shown to be linked with rainfall in the Sahel. Such a correlation may mean that some part of future Sahel rainfall is predictable. How predictable it will be is likely to be dependent on the timescale. On shorter seasonal to decadal timescales, prediction systems utilising observations on the ocean state may show skill in predicting changes in SSTs. These prediction systems[7] are due to come online in the next 5 years and until the potential skill in these systems can be assessed it will remain an open question how successful they will be. As we have seen (Scaife *et al.,* 2009) predicting changes in SSTs explains part but not all of the observed Sahel rainfall, so until the mechanisms which explain the rest of rainfall patterns are understood there is likely to be a limit to what fraction of future Sahel rainfall we can hope to predict.

Figure 8

Time series of Sahel precipitation anomalies for 1960–2100 as simulated by eight coupled general circulation models of the global ocean and atmosphere. Precipitation is averaged over West Africa from 10–20° N and smoothed using a five-year running mean, and anomalies are the differences from the 1950–1999 mean for each model. Biasutti and colleagues find a puzzling mismatch in the future evolution of sea surface temperatures and Sahel rainfall in the various models, unlike the simple regression model that explains past variability reasonably well. Reproduced with permission from Cook 2008.



On the longer multi-decadal to centennial timescale any future skill will depend on understanding and representing processes linking global warming and Sahel rainfall. As discussed in Section Historical prospective, there is a suggestion that past man made aerosol changes may have played a role in the historical Sahel drying. Looking at processes represented in current generation climate models, Biasutti *et al.* (2008) concluded that in a majority of models, processes which accounted for past climate-Sahel rainfall changes do not explain the rainfall trend in the twenty-first century. In these models other processes become significant in the future and there is little current agreement on neither the magnitude nor even the sign of the impact from these processes. However, the magnitude of climate change impacts on Sahel rainfall may be very significant (Cook, 2008) with some models suggesting either substantial increases, or dramatic reductions in future rainfall (see Figure 8) – much of which will no longer be mediated by SSTs (Biasutti, 2008). Until the processes responsible for these projected changes can be understood and constrained, the long term future climate change impact on Sahel rainfall will remain uncertain.

What we do and do not know about future Sahelian climate

Climate projections over the Sahel are particularly challenging for two reasons. On the one hand the large climate variability observed over the 20th century makes it more difficult to extract a signal attributable to climate change above the background noise, and on the other hand climate models are in significant disagreement over this region. This is particularly true for precipitation where models disagree even on the sign of the change.

What we do know is how some of the most important climate drivers for the region are likely to change. CMIP3 simulations consistently indicate a more rapid warming of the land with respect to the surrounding ocean. Such a difference in the warming trend, mainly driven by the difference in the heat capacity of the two, is likely to have an impact on the strength of the monsoon flow. Over Africa the maximum warming appears to be over the deserts and somehow limited over the wet regions where an increase in evaporation partially balances the warming trend.

Climate models are also in agreement in predicting a general increase in the intensity of tropical rainfall, based on a solid physical explanation directly linked to the change in the atmospheric moisture availability.

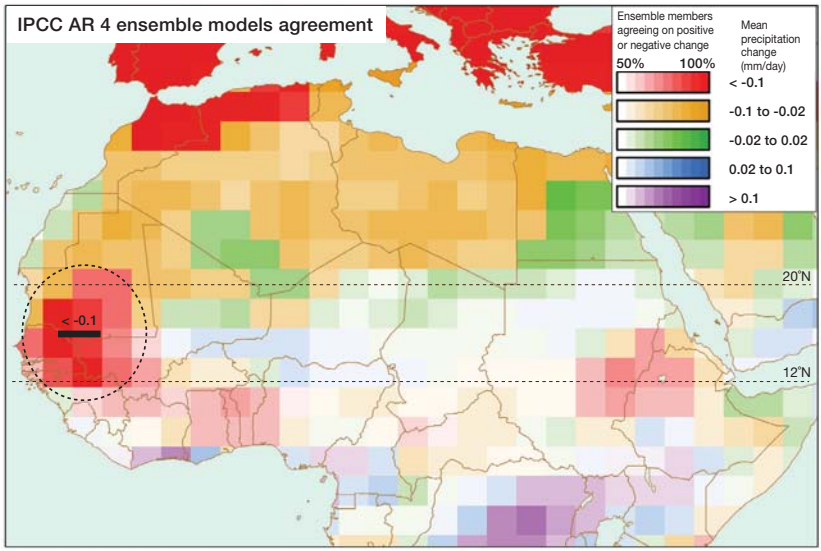
AR4/Met Office/ENSEMBLE prospective over the region

In this section we discuss separately the projections for temperature, which is more certain than those for precipitation. The difference in model skill between these two parameters has motivated some authors (PNAS, Nov. 2009) to analyse the impact of climate variability using only projected temperature changes. Although such an approach appears

interesting there is enough evidence to suggest that the direct impact on water resources (notably through precipitation) from climate variability still represents the most important factor in the region.

Figure 9

Difference (mm/day) in summer (JJA) precipitation between 2020–2049 and 1960–1990 across AR4 ensemble. The colour indicates the strength of the signal while the colour-intensity indicates the consistency across the ensemble. West-most Sahel is the area where both the largest and the most reliable signal can be noticed (Neil Kaye is acknowledged for the plot).



Rainfall

Very little consensus exists on what the long term effects of climatic change are likely to be for most of the region, under a business as usual future scenario as discussed at the beginning of this section. Our limited understanding of the processes governing tropical rainfall does not allow us to make any robust climate prediction in the Sahel as a whole. The faster warming of the land with respect to the sea would intensify the monsoon activity by increasing the land-sea contrast. In contrast a strengthening of the Saharan thermal high[8] may increase the dry advection[9] in the region, thus suppressing convection.

Given the large disagreement between models, we advise against basing the assessments of future climate change in the Sahel on the results from any single model in isolation. According to IPCC, AR4, whose summer rainfall projections are presented in Figure 9, the large-scale disagreement between individual models is evident for most of the Sahel where a lack

of signal is indicative of divergence in even the sign of projected rainfall changes. However, there are individual regions which appear to suggest consistent patterns of rainfall changes arising from global warming. The most significantly affected are the coastal countries of west Sahel, which show a consistent reduction of projected precipitation across all the models in the IPCC AR4 assessment. A Met Office ensemble (not shown) also identifies drying over the same region of West Africa. There does also appear to be a more marginal consensus of a summer drying in the Ethiopian highlands from the IPCC models (see Figure 9) which is not reproduced within the Metoffice ensemble. The impact of any summer drying in the Ethiopian highlands is likely to be more than offset by increases in rainfall during other seasons which appear consistent across current models [Christensen *et al.* 2007].

Despite the skill climate models have in predicting seasonal variability over the Sahel, very little consensus exists on future projections. »

Following the hotspot analysis we can see what model projections mean for each of the three areas we have identified. For the west-most part of the region a robust decrease in summer precipitation can be expected. This clearly appears both in the AR4 ensemble and in the smaller parameter ensemble developed at the Metoffice Hadley Centre. The situation is less clear for the second hotspot, located over Central Sahel, where model projections are less robust and are different in the two ensembles analysed. Therefore, for this area it is essential to provide reliable seasonal predictions to reduce vulnerability and promote adaptation in the absence of a clear climate signal. Finally, although no consistent message emerges for summer precipitation in eastern Sahel (east of 20°E), an increase in annual precipitation appears to be detected in most of the models.

Temperature

The inter-model disagreement is less problematic for temperature. All models are suggesting an increase in surface temperature for business as usual future scenarios. This warming is likely to be 150% higher here than in the global average, which means a temperature increase between 3 and 4 degrees. Half of the models used in IPCC AR4 predict an increase within 0.5 degrees of these median values (Christensen *et al.*, 2007). In Africa the signal-to-noise ratio for temperature is very high, which implies that for most locations a 10 years average is sufficient to notice a discernible warming.

Geographically, the greatest warming (~4 degrees) is likely to occur over land and in particular on the western side of the Sahel. Over the coast and close to the southern edge of the region the increases are likely to be smaller but still substantial (~3 degrees). The strongest warming is expected to occur during the summer months (Christensen *et al.*, 2007).

At surface level part of the warming can be offset by a local increase in precipitation via evaporative cooling. This can potentially become important in some regions along the southern edge of the Sahara desert.

Extremes

Very little modelling and observation evidence on trends in extremes exists for the Sahel. The thermodynamic argument suggests a general increase in the intensity of high-rainfall events. There is no consensus among models whether extremely dry or extremely wet seasons are likely to become more common over the area, although there is a great deal more certainty that extremely hot seasons will become more frequent in the future.

Conclusions and recommendations

Despite the skill climate models have in predicting seasonal variability over the Sahel, very little consensus exists on future projections, as models disagree even on the sign of the change. Such a significant disagreement has the potential to make long-term model projections nearly impossible for the region as a whole, at least until further advancement is made in the underlying scientific understanding. Projections for temperature tend to be more uniform among climate models and suggest that an increase, especially for summer, is likely to largely exceed the global mean increase. Through an analysis of the most intense droughts of the XX century three hotspot areas were identified:

- For the western-most Sahel a significant decline in annual precipitation should be expected.
- For the eastern side the signal, especially during the summer, is less clear but most of the models expect an increase in annual precipitation.
- For the central hotspot located between Niger and Mali, there is currently not enough information to evaluate with confidence whether precipitation is more likely to increase or decrease in the future.

The newly released multi-model climate model datasets from the ENSEMBLES project together with extended observational datasets from the AMMA project will allow for more extensive studies and provide new insights on the climate drivers of the region.

Despite the effort recently put into understanding the climate of the region, further research is needed to improve both the representation of important climate processes (e.g. aerosol-cloud interaction, land-air interaction, direct and indirect impacts of dust) in climate models and the description of some missing teleconnection patterns. This could be a tedious process requiring a significant investment and relatively long time to produce desired results. In the meanwhile an effort should be put

in promoting adaptation to climate variability by improving the distribution and the dissemination of the seasonal and decadal predictions many climate centres are now able to provide.

Finally, the importance of a reliable set of good quality observations can have in the Sahel region cannot be understated. There is intrinsic value in these datasets, as they enable an understanding of the current vulnerability to variability in the past climate. Good quality observations are also essential for both the detection of change in the climate state and the validation of model simulations. Therefore, it is vital to not only maintain but also develop the current observation network in countries of the Sahel.

Carlo BUONTEMPO was trained in Atmospheric Physics at the University of Rome "La Sapienza". He was a research fellow at the Institute of Climate and Atmospheric Science of the Italian Research Council. He then completed a PhD in Physics at the University of L'Aquila before moving to York University in Canada for his post-doc. He joined the Met Office in 2005 and became part of the newly formed climate impact group in 2007. Since then he worked on a number of projects aiming to make climate change information more useful to decision makers. Since 2010, he leads the Climate Hazard and Impact Processes group.

Ben BOOTH was trained in the field of Atmospheric Physics, completing his doctorate studies at Oxford. In 2004, he joined the Climate Research division within the UK Meteorological Office, as part of a group working to produce probabilistic future climate projections. As part of this work he developed an interest in the processes behind large scale regional climate changes, our confidence in these processes and what this implies about what we can and can not say about regional projections.

Wilfran MOUFOUMA-OKIA was trained as an engineer specialised in Numerical Weather Prediction at the Hydrometeorological Institute of Odessa. He completed a Msc in Atmospheric and Oceanic dynamics at the University of Paris 6, a PhD in geophysical fluid mechanics at the National Polytechnic Institute of Grenoble, and postdoctoral research on the modelling of air pollution at *Ecole Nationale des Ponts et Chaussées of Paris.* In 2004, he joined the Climate Research division within the UK Meteorological Office, as a Regional Climate Modelling scientist responsible for the development, evaluation and dissemination of various regional climate modelling systems, and advising on their use for the construction and application of climate change scenarios. Currently, he is part of the "Global Model Evaluation and Development (GMED)" team, a new structure established by the Met Office and which brings together staff previously engaged on model evaluation and development in separate groupings in Forecasting Research and Development and in Climate Research. GMED staff work closely with various internal and external teams in testing model developments and also on providing diagnostic insights into model strengths and weaknesses.

NOTES \\

1 *Gradient: the spatial rate of change of a physical quantity.*

2 *ITCZ: the inter tropical convergence zone is the area encircling the earth near the equator where winds originating from the northern and southern hemispheres come together and which appears as a band of clouds, usually thunderstorms. Through its north and south displacement, which follows the apparent movement of the sun, the ITCZ is responsible for most of the annual rainfall in the tropics.*

3 *Orography: the morphological structure of the earth surface, including relief of mountains, hills and, more generally, any part of a region's elevated terrain.*

4 *CRU data 1901–2000; University of East Anglia Climate Research Unit (CRU). CRU Datasets, [Internet]. British Atmospheric Data Centre, 2008, 11-09-2009. Available from badc.nerc.ac.uk/data/cru, Mitchell et.al. 2005.*

5 *Teleconnections are the links existing between climate anomalies in distance locations such as for instance the pressure in the central Pacific (El Nino Southern Oscillation) and the rainfall over Africa.*

6 *We limited the analysis to the region where annual precipitation exceeds 77 mm, chosen as a threshold below which human activities are very marginal.*

7 *Prediction systems maybe based on model projections weighted by goodness of fit to observations or other statistical properties and may also incorporate human judgement.*

8 *Sahara thermal high: this is the high pressure system encountered over the Sahara desert.*

9 *Dry advection: displacement of an air mass with low specific humidity from its region of origin into another location.*

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Chapter 4

The Sahel and the climate security debate

by Tor A. BENJAMINSEN

Summary

With climate change becoming a leading global political issue, the idea that there is a close link between global warming and violent conflicts has also caught international attention. The Sahel, in particular, is pointed out as the clearest example where there are climate-driven conflicts. Many politicians and international civil servants in particular, seem attracted to this idea. For instance, in a newspaper article UN Secretary-General Ban Ki-moon made a connection between global warming and the Darfur conflict (Ban 2007). The idea was also at the crux of the decision to award the 2007 Nobel Peace Prize to former US Vice President Al Gore and the Intergovernmental Panel on Climate Change (IPCC). According to the Norwegian Nobel Committee, human-induced climate change is one of the main causes of violent conflict and war in the world today. In his presentation speech at the award ceremony in Oslo, chair of the committee Professor Ole Danbolt Mjøs said:

"The consequences (of climate change) are most obvious, however, among the poorest of the poor, in Darfur and in large sectors of the Sahel belt, where we have already had the first 'climate war'. The wind that blows the sand off the Sahara sets people and camels moving towards more fertile areas. The outcome is that nomads and peasants, Arabs and Africans, Christians and Muslims from many different tribes clash in a series of conflicts. There are many dimensions to this, but it is growing increasingly obvious that desertification is a central underlying factor. The pattern from Darfur has now spread to Chad and the Central African Republic. Large parts of the Sahel belt, from the Sudan to Senegal, are coming under threat."
(nobelpeaceprize.org/en_GB/laureates/laureates-2007/presentation-2007/)

This is the essence of an argument about the climate-conflict link in the Sahel that consists of two elements:

- Global climate change leads to drought and desertification, which in turn lead to resource scarcity.
- This resource scarcity leads to migration and the emergence of new conflicts, or it triggers existing, latent conflicts.

This chapter takes a critical look at both these claims and assesses them on the basis of available international research. But before assessing these two claims, a brief review the climate security literature on the Sahel will be presented.

The climate security debate: theories, politics and missing evidence

The idea that climate change leads to violent conflicts in general can be regarded as a continuation or revised version of the Malthusian concept of scarcity of resources as a cause of environmental degradation, poverty and an escalating struggle for resources. Thomas Homer-Dixon is the best-known proponent of the so-called environmental security school. According to Homer-Dixon, resource scarcity can be caused by population growth, environmental degradation or social inequality (Homer-Dixon, 1994, 1999). He also believes that arid regions in Africa are particularly prone to scarcity-induced conflicts. More recently, he has also focused on climate change as a cause of resource scarcity and war (Homer-Dixon, 2007).

A team of Swiss researchers associated with the Swiss Peace Foundation have also been prominent representatives of the environmental security school. They have had an even more pronounced focus on the Sahel as a crisis area (Bächler and Spillmann, 1996; Bächler 1998). According to Bächler (1998), the Sahel is a typical example of an area where conflicts are caused by environmental degradation. In this region, animal husbandry and farming have led to erosion of the landscape (p. 69), population growth has led to deterioration of the vegetation (pp. 67 and 70), and livestock herding has led to general overgrasing (p. 69). Bächler (1998) presents a list of 11 conflicts that allegedly demonstrates the link between environmental degradation, socio-economic change and violence in the Sahel.

« The concept of scarcity as a cause of war and violence has taken root in the media and popular scientific publications.

The concept of scarcity as a cause of war and violence has taken root in the media and popular scientific publications too. The American journalist Robert Kaplan has been particularly influential. In a well-publicised article from 1994, he claimed that the conflicts in Liberia, Rwanda and Somalia were unequivocally the result of overpopulation and subsequent environmental crisis in Africa (Kaplan 1994).

Since then, a range of journalists and popular-science writers have played a significant role in spreading a Neo-Malthusian message to politicians and the general public (e.g. Diamond's 2005 bestseller). The scarcity perspective has also been promulgated in a special edition of *National Geographic Magazine* focusing on Africa in September 2005 (see Moseley 2005 for a critical commentary).

A major criticism of the security school is that the term "resource scarcity" is defined so vaguely and broadly that it loses all meaning (Gleditsch, 1998; Fairhead, 2001; Richards, 2005). Since armed conflicts are almost without exception about control over land, such conflicts will necessarily have a resource dimension. However, it does not ensue that this dimension explains the conflicts. It is also misleading when such different processes

as environmental degradation, increased population pressure and inequitable access to resources are forced together into a single concept of resource scarcity. In this way, the concept loses its analytical power.

Peluso and Watts (2001) also argue that conflicts cannot be understood on the basis of a simple chain of events triggered by resource scarcity, via reduced economic activity and migration, to a violent outcome. Instead, violence is context-specific, and at the same time it is a result of overarching power and production relations.

Elinor Ostrom, who received the Nobel Prize in economics in 2009, also represents a perspective that stands in contrast to the environmental security school. She and her collaborators have shown how scarcity of resources might lead to co-operation and sustainable use instead of conflicts (Ostrom, 1990; Poteete *et al*. 2010).

Some critics claim that population growth can actually serve to increase the resource base and lead to sustainable agricultural intensification in keeping with the Danish agricultural economist Ester Boserup's theory (Boserup, 1965). There are in fact examples from Africa of increases in population combined with favourable government policies that have led to increased investments per unit area in the form of work and capital and thus an improved resource base (e.g. Tiffen et al., 1994; Mortimore, 1998; Benjaminsen, 2001).

While until recently, the focus in the scarcity literature was on "overpopulation" and the associated "overuse" of renewable natural resources, climate change has been increasingly in focus as a prime cause of conflicts only during the last few years. As already mentioned, the Darfur conflict is then often presented as the best example of the correlation between climate and conflict. For example, Jeffrey Sachs (2007: 24) states that "Darfur's extreme poverty, rising population, growing water stress and desertification are all important contributors to the Darfur crisis. (...) extreme poverty, falling incomes and failing rains ... are the crucial drivers of conflict in less developed countries; much less solid evidence implicates political repression".

There is no evidence of a falling or a rising trend in rainfall in Darfur in the period 1972–2002.

This is a good example of how Malthusian factors and climate change are merged into one story to explain conflicts. Homer-Dixon has also claimed – without undertaking any detailed studies of the politics, climate or ecology in Darfur – that climate change is one of the causes of this conflict: "There is evidence that warming's effect on crops and pastureland is a cause of the Darfur crisis" (Homer Dixon, 2007). In an online discussion forum, however, he refuses to go so far as to say that climate change is the main cause of the conflict in Darfur ("In the case of Darfur, it's pointless to ask about, or to argue over, the relative importance of climate change as a cause of the violence. But based on the evidence

available, we can say with considerable confidence that any adequate description or explanation of the crisis must include climate change as a causal factor", badc.nerc.ac.uk/data/cru).

A report published by the United Nations Environmental Programme (UNEP) in 2007, which received extensive media coverage and obtained political influence, also claims that there is a close link between climate change, desertification and the conflict in Darfur (UNEP, 2007). The report attaches a great deal of importance to the fact that the average rainfall in some parts of Darfur has decreased by 16–34 %, if the periods 1946–1975 and 1976–2005 are compared. However, the report fails to mention that since the mid-1980s, rainfall has increased again. For example, if we look at the 30-year period prior to the conflict breaking out in 2003 there is no decreasing trend (Kevane and Gray, 2008). In fact, there is no evidence of a falling or a rising trend in rainfall in Darfur in the period 1972–2002.

This fact does, however, not impress Mazo (2010) who insists that Darfur is "the first modern climate change conflict". He argues that although climate change was not a necessary or sufficient condition for the conflict, it was "a critical factor underlying the violence" and that "to say that other factors were equally, or even more, important politically or morally is not to deny that Darfur was a climate-change conflict" (Mazo 2010: 85–86). He supports this argument primarily by using the above-mentioned UNEP report as well as a recent article by Burke *et al*. (2009). The latter study focused on temperature instead of rainfall and reported a strong correlation between annual temperature and the incidence of civil war in Sub-Saharan Africa during 1981–2002. However, according to Buhaug (2010), there are reasons to be sceptical about the results of Burke *et al*. (2009). The study applies an unconventional definition of civil war, studying years that generated at least 1 000 battle deaths only and failing to distinguish between lesser war episodes and peace. The restrictive sample inclusion criterion also implies that many relatively large conflicts are excluded from the analysis. In addition, Buhaug shows that the original findings are not robust to small changes in the climate parameters and model specification. Finally, he points out that since 2002, the final year of Burke *et al*.'s sample, civil war incidence and severity have decreased further in Africa while warming has persisted.

The idea that climate change leads to more violent conflict has earlier been criticised by for instance Barnett (2003), Nordås and Gleditsch (2007), Theisen (2008) and Salehyan (2008) who did not find any evidence for scarcity being a driver of conflicts. Nordås and Gleditsch (2007: 628) also remark that "even the IPCC, which rightly prides itself of being a synthesis of the best peer-reviewed science, has fallen prey to relying on second- or third-hand information with little empirical backing when commenting on the implications of climate change for conflict".

Finally, to look beyond the aggregate level and the general concepts usually used in this debate, Buhaug *et al*. (2010) operationalised the hypothesised link between climate change and conflicts. They identified three main processes that this link could potentially consist of; intensification of natural disasters, increasing resource scarcity, and sea-level rise. These processes could then cause destruction of infrastructure, increased health risk, and loss of livelihood. It should be stressed, however, that these are hypothesised links that find little support in the empirical literature, whether based on qualitative case studies or quantitative large N-studies.

Does climate change lead to desertification?

Claims about desertification in the Sahel are as old as European presence in the region. Already in the early 1900s, there were debates about whether desertification in French-occupied West Africa was a man-made process or caused by desiccation (Benjaminsen and Berge, 2004). With time, however, the view that it was created by local overuse of natural resources prevailed and even during the droughts of the 1970s and 1980s this view dominated in research, policy and media presentations.

From the late 1980s, claims of widespread degradation and desertification in the Sahel have been undermined by a number of studies. For instance, scientists at the National Aeronautics and Space Administration (NASA) in the USA have studied satellite images of the southern limits of the Sahara and concluded that the edge of the desert moves back and forth as a direct result of annual rainfall (Tucker *et al*., 1991; Tucker and Nicholson, 1999).

Furthermore, a number of studies published from the late 1980s led researchers to increasingly question the idea of desertification in the Sahel. Some of this research was reported by *New Scientist* in an article entitled "The myth of the marching desert" (Forse 1989). This research led to what has been termed a paradigm shift in drylands research (Warren and Khogali, 1992; Behnke and Scoones, 1993; Benjaminsen, 1997). It recognises the resilience and variability of drylands and stresses the need for flexibility in coping with a highly unstable environment. These ideas have led to the questioning of ecological theory based on notions of equilibrium, carrying capacity, succession and climax as applied on tropical drylands. Instead, non-equilibrial ecological theory states that the vegetation in drylands varies with the annual rainfall and that external factors such as climate, rather than livestock numbers, tend to determine the vegetation composition and cover (Ellis and Swift, 1988; Behnke, Scoones & Kerven, 1993). Moreover, unavailability of forage in bad years may depress livestock populations to the point where the impact of grasing on vegetation is minimal (Sullivan and Rohde, 2002). Therefore, in areas of fluctuating climates, rainfall rather than density-dependent factors related to herbivore numbers may ultimately be the most significant variable determining

herbivore populations. Wet season pastures such as in the West African Sahel, with its short rainy season, domination of annual grass species, and high resilience, would be a typical example of a non-equilibrial system (Hiernaux, 1993; Turner, 1993; Benjaminsen, 1997). The herders' use of pastures is adapted to the seasonal changes in these drylands. During the rainy season, when the grass grows, herders often move, and therefore exercise little pressure on the vegetation (Hiernaux, 1993).

Since it is largely rainfall that drives the Sahelian ecosystem, global warming might in the long run lead to desertification – if it reduces rainfall. However, as demonstrated by Buontempo *et al.* (2010) in Chapter 3, there is currently considerable uncertainty about current rainfall trends and projections in the Sahel. Not only are there uncertainties about future scenarios, but there are also some disagreements about how to read available climate data. For instance, Hulme (2001) and Chappell and Agnew (2004) disagree on how to interpret rainfall data from the Sahel for the period 1930–1990. While Hulme (2001) hold the position that there was a 20–30% decline, Chappell and Agnew (2004) question this claim arguing that this decline was largely produced by historical changes in the climate station network

> « It recognises the resilience and variability of drylands and stresses the need for flexibility in coping with a highly unstable environment.

Climate researchers in general stress that there is a great deal of uncertainty as to how global warming will affect the climate in the Sahel. This is also underlined by the IPCC in its fourth report (Boko *et al.* 2007: 444), which points out that the various models do not concur concerning future climate scenarios for the Sahel. While some models support the theory that this region will become drier, other models suggest that it might rain more in the future in the Sahel (e.g. Haarsma *et al.*, 2005; Odekunle *et al.*, 2008).

Buontempo *et al.* (2010, Chapter 3) also highlight the problem of current generation climate models not being able to capture processes driving Sahelian climate in the 21st century, in particular as concerns precipitation. In addition, given the large disagreement between models, they advice against basing the assessments of future climate change in the Sahel on the results from any single model in isolation. Until the processes responsible for the projected changes can be understood and constrained, the long term future climate change impact on Sahel rainfall will remain uncertain.

Throughout the Sahel, there has now been a partial recovery of rainfall over the last 20 years. Research on the Sahel is thus no longer discussing desertification, but the fact that the Sahel has become greener. For instance, in November 2005, the Journal of Arid Environments published a special issue on "The Greening of the Sahel" (see Hutchinson *et al.*, 2005 and Olsson *et al.*, 2005).

Hence, climate change may lead to drier conditions and desertification in the long term if rainfall declines. It is, however, problematic to conclude that current rainfall trends are on the decline. In fact, uncertainty remains thus far the key characteristic of climate scenarios for the Sahel.

Do Sahelian droughts lead to more conflicts?

There is not a lot of research to build on in order to answer this question. As already mentioned, there is some disagreement in how to interpret the role of drought in explaining the case of the conflict in Darfur. In order to illustrate the potential role of drought in such conflicts, I will, in this section, dwell on two cases from Mali taken from my own research (Benjaminsen and Ba, 2009; Benjaminsen, 2008): The first case deals with a conflict between settled farmers and migrating pastoralists in the inland delta of the Niger river. The other example is the Touareg rebellion, which was a major conflict that escalated to civil war-like proportions.

A farmer-herder conflict in the inland delta of the Niger river in Mali

Historically, the delta is one of West Africa's richest regions, in terms of farming, herding and fishing. The Niger and its delta allow farmers to grow crops farther north than anywhere else in the West African Sahel. At the same time, the delta represents an essential resource for pastoralists in the dry season. Herders and their livestock congregate in the delta region in the dry season from December to June, while in the rainy season (July to September) and in the early part of the dry season, they wander up to several hundred kilometres to reach good pastures in the savannah.

In addition to being a source of drinking water for livestock, nutrient-rich pastures called "burgu" grow in the water here. These various water plants are found in deeper water than rice. During the last few decades, paddy fields have been extended, at the expense of burgu. It is reckoned that roughly a quarter of the burgu areas have been turned into paddy fields since the 1950s (Kouyaté 2006). This is partly the result of reduced water levels in the river during the droughts in the 1970s and 1980s (see Figure 2) when the paddy fields dried out and new ones were established in burgu areas. In addition, development of a hydroelectric dam in Sélingué in southern Mali, which was completed in 1982, is a major cause of the lower water levels downstream (Turner 1992, Cotula and Cissé 2006). As we shall see, government policy has also played a decisive role in this process.

There is some disagreement in how to interpret the role of drought in explaining the case of the conflict in Darfur.

Over the last few decades, there have been a growing number of conflicts about who has control of the land in the delta (Barrière and Barrière, 2002; Ba, 2008). In order to understand the current resource management regime and the ensuing conflicts, we need to look at the

history of the region. In 1818, Islamic clergymen mobilised a jihad and conquered the delta region under the leadership of Cheikou Amadou. This resulted in the establishment of an Islamic theocratic state, the Dina, based in Hamdallahi, south of Mopti. The Dina formalised many of the customary resource management principles and rights in the delta region. As part of this formalisation, the delta plain was divided up into administrative units called leyde (singular: leydy). Traditional village chiefs, called Jowros were authorised to manage these units, and all users of the burgu pastures had to pay a fee to the local Jowro. This is still the basis of the current system. Today there are 31 leyde in the delta region.

The Jowros, who are noble Fulani pastoralists (Rimbé), were to manage the pastures, while responsibility for allocating farmland was delegated to a Bessema, who was the chief of the low-caste Rimaybé. Both the Rimbé and Rimaybé are Fulani, but while the former are traditionally pastoralists and thus have high status, the latter are primarily farmers and have low social status.

When this area came under French rule in 1895, the French retained many of the administrative principles of the Dina regime. For example, the Jowro were allowed to continue to operate as "masters of the pastures" and collect fees from users of these pastures. Then, in 1960, Mali became independent under a socialist government led by Modibo Keita. The new government viewed "development" in terms of industrialisation and modernisation of farming. Pastoralism was regarded as an obstacle to this kind of modernisation. Nomadic herding was also seen as counter to rational resource management. Modibo Keita said that settlement of all nomads was one of the most important tasks of the new state. Only then could herders become productive citizens (Benjaminsen and Berge, 2004). The socialist government also regarded the Jowros as feudal lords and generally tried to undermine their authority.

In 1968, Lieutenant Moussa Traoré led a coup that resulted in a military government, which eventually to some extent reinstated the Jowros. By the next coup d'état in March 1991, which introduced democratic elections, the Jowros had once again become powerful local actors through alliances with the cadres in the only permitted political party.

The village Saremala is located in Kounary leydy in the heart of the delta. In the village live the local Jowro and a small number of Rimbé, while the vast majority of the villagers are Rimaybé. The Office Riz Mopti (ORM) – the state organisation of promotion of rice cultivation – is active in this region. Since the state formally owns all the land in Mali, the ORM can confiscate land at will. In particular, much of the burgu pastures controlled by the Jowro have been confiscated and turned into paddy fields. These fields have been divided up into equal-sized parcels of land and leased out to people who have applied to the ORM for land. In addition, there has been widespread random cultivation of burgu pastures by local

Rimaybé farmers. The massive loss of burgu pastures, which constitute the power base and main source of income for the local Jowro, is leading to a gradual transfer of local power from the Jowro to the Bessema. A positive aspect of this is that the previously underprivileged Rimaybé now have more power and a higher standard of living. A negative aspect is that important pastures used in the dry season are disappearing and being replaced by paddy fields. These are pasturelands that the entire pastoral system in the delta region depends on.

In the wake of the transition to democracy in 1991, the state's presence in rural areas was reduced for a period. This was in general a time of great uncertainty about the future direction of the political and administrative system in Mali. State bodies were reorganised, and plans were laid for a new, major decentralisation reform. Many local actors took advantage of the power vacuum that arose in the early phase of the decentralisation process, by taking possession of land in various ways. This also happened in Saremala. Farmers extended their fields into pasturelands, while the Jowro tried to regain control over the lost burgu areas that had been converted into cultivated farmland. Farmers usually give a small symbolic share of the harvest (usually about 5 kg) in recognition of the person who owns the land according to customary law. However, the political changes and the state's temporary withdrawal since 1991 had whetted the Jowro's appetite, and he decided to try to take control of the cultivated land and introduce a clearer tenant farming system with a larger yield for the owner of the land. This strategy failed because of strong resistance from the Rimaybé.

» The drought contributed temporarily to the shrinking of available burgu pastures for pastoralists.

Frustrated at his loss of power and the loss of the burgu pastures, the Jowro decided to take the Rimaybé to court in 1994. On 25 August 1994, the local court in Mopti ruled in favour of the Jowro, establishing that he had customary rights over all the land in Saremala, not just the pastureland. However, the Rimaybé appealed the case to the Appeal Court in Mopti, which ruled on 31 May 1995 that while the Jowro had customary rights, the Rimaybé had usage rights to the same land. While both parties interpreted this ambiguous ruling in their own favour, the Jowro appealed the case to the Supreme Court. At the same time, the Jowro of Saremala, started acting as if his ownership rights had been finally confirmed by the legal system, banning Rimaybé farmers from cultivating the land. At the harvest in December 1995, he announced a general ban on harvesting rice, stating that all harvested rice would be confiscated by force. The Rimaybé (farmers) then paid 18 armed guards to protect them while they harvested their crops. Despite the guards, there was an armed confrontation between the Rimbé (herders) and the Rimaybé on 23 January 1996 resulting in two dead and 16 injured farmers and herders. The village

chief, a Rimaybé, claims that the Jowro had bribed the guards to look another way and not intervene when the Rimbé tried to force the Rimaybé to stop harvest the rice.

On 18 February 1997, the Supreme Court declared that the Appeal Court's decision was invalid and sent the case back to that court, which upheld its earlier decision on 2 July 1997. Indeed, it even increased the ambiguity of its former ruling by ascribing the Jowro all three aspects of ownership under French law: usus, fructus and abusus. Usus is the right to use, fructus is the right to enjoy the fruits of (harvest, rental income, etc.) and abusus is the right to get rid of the property by giving it away or selling it. This judgment actually gave the Jowro more extensive rights than any reasonable interpretation of customary rights might ascribe to him. It is also self-contradicting in another way, because according to Malian law, only the state has the abusus rights to land without deeds. To top it all off, the Appeal Court granted the farmers usage rights to the land they have been cultivating for several decades. This means that the farmers are ascribed the rights of usus and fructus. In practice, this means that the Jowro and the Rimaybé farmers were granted basically identical rights (usus and fructus), which both parties interpreted as a victory. However we can probably conclude that the Rimaybé have more to celebrate because the court granted them rights they would otherwise have had little chance of establishing under the customary system.

It seems that the legal wrangling back and forth and the court's ambiguous rulings are the result of both parties having paid bribes to the judges and their entourage. Bringing a conflict before a court of law is often a final desperate attempt on the part of one of the parties. Prior to this, the parties have usually already spent vast sums of money on trying to influence the administration.

This case study reviewing the political and economic context of a herder-farmer conflict in Mali shows that the drought in the 1980s was one of several factors that contributed to the loss of burgu pastures and marginalisation of pastoralists – and thus indirectly to more conflicts. The drought contributed temporarily to the shrinking of available burgu pastures for pastoralists. With less pastoral space available, herders and livestock will more easily trespass and damage agricultural crops, and conflicts might emerge. However, since the end of the 1980s, there has been more rain and the water levels in the Niger River have increased. Yet the number of conflicts in the delta has continued to be high due to a continued political and economic marginalisation of pastoral space and pastoralists. So while theoretically general resource scarcity might lead to more conflicts, the state's policy, which led to marginalisation of pastoralists – and in turn to increased scarcity of pastoral land – plays a far larger part in explaining the increase in the number of conflicts in the inland delta region of Mali.

The Touareg rebellion in Mali

The Touareg rebellion in Mali took place between 1990 and 1996 and resulted in several thousand deaths and a quarter of a million refugees fleeing to neighbouring countries. This is a conflict that advocates of the environmental security school explain through desertification and an ensuing scarcity of natural resources. For example, Kahl (2006: 234) claims that in northern Mali, the combination of "population pressures, poor land use practices, and a fragile ecology ... made soil erosion, desertification, and freshwater scarcity serious problems." He also claims that what he calls "demographic and environmental stress" were important causes of the Touareg rebellion, without presenting any documentation to back up these claims.

It is, however, difficult to demonstrate any "desertification" in northern Mali. Since rainfall has increased over the last 20 years, the forests have grown back and there has therefore been a reversed desertification process or "greening" in this area as in the Sahel in general (Hiernaux *et al*. 2009, Mougin *et al.*, 2009).

A brief look at the political history of this part of the Sahel allows us to assess the variables that have played a role in the conflict dynamics. After Mali's independence in 1960, the new government initiated a policy to modernise agriculture. This policy was associated with the nomadic lifestyle being regarded as old-fashioned and unproductive. The enormous grasslands in northern Mali were referred to as the "useless" part of Mali (Benjaminsen and Berge, 2004).

The Touareg in northern Mali regarded this modernisation policy as a form of neocolonialism – only this time by the authorities in southern Mali, instead of Europe. The policy led to marginalisation of nomads such as the Touareg. This was the main cause of the first Touareg uprising against the Malian state in 1963 (Ag Baye, 1993; Lecocq, 2004), which took place during a wet period in the Sahel. The uprising was suppressed by the Malian army using fighter planes and public executions.

After the coup d'état in 1968, the new government continued the agricultural policies of the previous government. Nomadic groups in northern Mali had little influence on national or local policy, and in practice, the region was governed by a military governor throughout the whole period until the rebellion started in 1990. Many Touareg experienced this as a form of military occupation (Poulton and Ag Youssouf, 1998).

The drought in the 1970s and 1980s also played a role in the uprising, but not in the way the argument about the correlation between climate and conflict assumes. Firstly, the droughts led many Touareg to move to Algeria and Libya. Many of them became politically radicalised by an ideology, which is a melange of Islam and socialism. Many of the Touareg that went to Libya also ended up as professional soldiers in Gaddafi's army and gained practical experience in warfare in Palestine, Lebanon

and Chad. It was these soldiers that started planning a new uprising in Mali in the 1970s (Lecocq, 2004).

Secondly, the droughts led to Mali receiving large amounts of emergency aid. Much of this relief aid intended for northern Mali was allegedly embezzled by government officials. The rumours of corruption further stoked the anger of many Touareg at the Malian authorities (Klute 1995).

Now there is also increasing competition between the Touareg and the settled Songhay over land along the Niger River in northern Mali. The Touareg, who are primarily pastoralists, are dependent on access to the burgu pastures along the river as an important resource in the dry season, while the Songhay want to cultivate as much land as they can to grow rice. The situation is parallel to the one described in the delta farther south. The ensuing competition for land is a constant source of minor conflicts, some of which are violent. However, these types of conflicts had nothing to do with the uprising, which was started by people with roots in Kidal deep in the Sahara a long way from the river. In fact, the uprising came as much of a surprise to the Touareg farther south along the river as it did to everyone else (Poulton and Ag Youssouf, 1998).

Thus the main cause of the Touareg rebellion that started in 1990 was a modernisation policy that led to the marginalisation of nomads, combined with anger at what was perceived as a predatory state. The first Touareg uprising took place in 1963 (in an unusually wet period) against what was seen as a new form of colonisation – this time not from Europe but from the south. The uprising was severely suppressed by the Malian army and increased the Touaregs' bitterness and animosity towards the state. The droughts of the 1970s and 1980s led many young Touareg to move to Algeria and Libya where they became further radicalised and many also gained practical training and experience in warfare in the Libyan army. It was these professional soldiers that started the rebellion in 1990.

« The droughts of the 1970s and 1980s led many young Touareg to move to Algeria and Libya where they became further radicalised.

Conclusions and recommendations

In this chapter, I have presented a critical review of a dominating argument about the climate-conflict link in the Sahel that consists of two elements:

1. Global climate change leads to drought and desertification, which in turn lead to resource scarcity.

The claim that rainfall in the Sahel is decreasing is, however, problematic, because rainfall has increased again since the drought in the 1980s. Instead of desertification, the Sahel has become greener over the last 20–25 years. There is also considerable uncertainty about current and future climate trends in the Sahel and what consequences global climate change will have in the region.

2. This resource scarcity then leads to migration of ethnic groups and new conflicts, or it triggers existing, latent conflicts.

As mentioned in the first case study from Mali, the drought in the 1980s was one of several factors that caused an increase in the conflict level. In both cases, however, the root causes of the conflicts are political and historical. In addition, it is impossible to link resource scarcity in the Sahel in the 1980s to global climate change. However, a correlation of this nature cannot be dismissed categorically as theoretically impossible. Similarly, the link between resource scarcity and increased conflict levels cannot be dismissed, even if empirical results from international research question the validity of this correlation. Quantitative studies undermine the validity of a general link between climate and conflict, while case studies in central parts of the Sahel – like the two I have presented here – indicate that the conflicts have other causes.

The main cause of the two conflicts in Mali is therefore not related to climate change; it has much more to do with the state's policies and legislation, which result in the marginalisation of pastoralists. In the dry parts of Africa where pastoralism and farming overlap as the main forms of land use, there are continuous conflicts of varying scale. These conflicts are caused by politics, not climate change.

But if climate change in the long term leads to drier conditions in the Sahel, this will inevitably also lead to scarcity of resources in some areas. Decreased water levels in the Niger river will lead to continued loss of burgu pastures. In addition, drier conditions in the wet season pastures might lead to further increased dependency on the burgu areas. This might again increase conflict levels depending on the policies of the state.

Pastoralists are probably the group best adapted to climate variability. But at the same time, pastoralists are suffering from state policies favouring settled agriculture in many countries in the Sahel. Even though pastoralists are losing access to land, livestock keeping remains one of the economically most important activities throughout the Sahel and the large export of live animals to neighbouring countries, especially on the West African coast, continues.

A key policy recommendation would therefore be for states and international development agencies to support pastoralists' access and rights to land and natural resources and to assist them in maintaining their flexibility and mobility. Research could help in suggesting how this recommendation could be carried out in practice. Research could also monitor the land tenure situation and conflict level in key hotspot areas in the Sahel. And states could be assisted in better adjudicating conflicts.

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NOTES

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Part III
The “Security and Development” Nexus

Chapter 5

Climate change in the Sahel: A human security perspective

by Philipp HEINRIGS and Marie TRÉMOLIÈRES

Summary

Climate change[1] and speculation over its security implications pervade political and public discourse. Against this backdrop, recent incidents involving terrorism and trafficking in the Sahel which is identified as one of the most vulnerable to climate makes this region a most pressing security concerns of the OECD countries.

As emphasised in Article 1, the climate of the Sahel features extreme variability in precipitation from one season or decade to another. Nevertheless, the scientific community has been unable to reach consensus on the causes of lengthy drought at the end of the 20th century, or on the directions of climate change.

As for the cause-and-effect relationship between climate and security, climatic variables would seem secondary, and often indirect, as compared with political, historical and economic variables. These uncertainties, highlighted by the recent SWAC/OECD study, would suggest that security should be tackled in its expanded dimension (human security), in particular by focusing more on food security and optimising the "management" of climatic variability in future policies.

Introduction

The Hadley Centre UK Met Office study on Sahelian climate and climate projections (Article 1) concludes that:

- The large climate variations observed in the 20th century make it impossible to identify the impact of climate change.
- The disagreement of climate models is particularly pronounced over the Sahel region.

The Sahelian area must address the challenge of variability and uncertainty. Were the major droughts of 1973 and 1984 already signs of climate change? What should be made of the 2007 floods? Will the OECD countries, and especially those in Europe, be the scene of massive migrations

from countries severely affected by the effects of climate change? The analyses are insufficient, and the outcomes and their consequences are too uncertain for reliable anticipation of the risks and/or opportunities arising from climate change.

The growing interest in the correlation between climate change and security can be seen from the multiplicity of national and international studies. By presenting climate change as a threat to national and global stability, these reports give it an international resonance.

Although the outlook of climate in the region is uncertain, the SWAC/OECD study focused on the security impacts of three commonly identified major consequences of climate change: (1) resource scarcity; (2) natural disasters; and (3) rising sea levels. This article makes the assumption, with regard to policy-making and meetings on the subject of climate change and security, that in current discussions security is construed more in the conventional sense, aimed exclusively at territorial protection of the State. The line of reasoning subsequently introduces human security – a notion that seems more relevant when factoring in climatic parameters and defining security policies.

Links between climate change and security from a theoretical perspective

Resource scarcity expressed in per capita can result from either or both of the two factors: a decline in the total volume of resources, *e.g.*, as a result of low precipitation; and/or increased demand as a result of demographic pressure (and/or rising per capita consumption). One initial conclusion would be that numerous conflicts involve control over resources such as mines or oil – whether these resources are scarce or not – and that such conflicts frequently manifest themselves in military combat or civil wars.

Virtually all conflicts between States have been triggered by border disputes. At the same time, they have stemmed from the desire of one of the belligerents to control resources in the neighbouring territory. The resources in question may involve energy, as in the conflict between Chad and Libya over the Aouzou Strip, or land and water, as in the crisis between Senegal and Mauritania, the border dispute between Cameroon and Nigeria over Darek Island in Lake Chad and the Agacher Strip war[2] between Burkina Faso and Mali. Another possible cause is control of a strategic position.[3]

No study has truly established a direct causal link between resource scarcity and the most violent form of insecurity – conflicts. Even if there is presumably a cause-and-effect relationship between resource scarcity and parameters often associated with insecurity[4], such as

migration, poverty or violence, the direct link is difficult to confirm, let alone the level of correlation between the parameters cited and conflicts. As shown by the examples taken in the Sahel, resource scarcity parallels economic, social and political factors in combinations that can lead to conflicts. The impact mechanism is therefore difficult to qualify and measure.

Natural disasters can be either geological or climatic. With regard to climatic disasters, there are two types of disasters that have great impact on the circumstances of population groups: floods and droughts. While the first category tends to occur more in regions in the southern part of the study area[5] (e.g., Burkina Faso), it can sporadically affect cities such as Niamey. Despite the destruction of infrastructure, flooding has not triggered episodes of tensions of any significance. As shown by some examples of tensions in Ethiopia, it can be difficult to illustrate the chain of causality between drought and conflict, given the fundamental role played by economic and political factors. Whilst droughts are recurrent[6], how political bodies deal with them is paramount. Moreover, there have been some accusations that the government exploited the climatic situation which occurred in 1984 and 1985. Natural disasters usually prompt substantial material destruction and loss of livelihood, leading to suffering, temporary migration and so on. Even so, the existence of prior tensions seems to be a determining factor in triggering the dynamics of conflict.

Rising sea levels have had no impact on the processes that cause crises in the Sahel, over the last forty years. One third of the countries has coastlines and is at risk. On the coasts of Mauritania and Senegal, creeping erosion can be seen, but the populations concerned seem to have implemented an adaptation process relatively similar to the one already in place for decades; aridification.

Numerous studies have tried to shed light on the link between climate change and security (understood in its conventional sense). These studies diverge in terms of approach and links between variables, and illustrate the difficulty and ambiguity of the task at hand. As stressed by Halvard Buhaug *et al.*, the subjective nature of a State's judgement as to infringements of its national security opens the door to their various interpretations. Robert Kaplan writes of massive migrations degenerating into conflicts because of deforestation, erosion, epidemics or dwindling water supplies. Thomas Homer-Dixon enumerates the security impacts of climate change: genocide, guerrilla warfare, insurrections and terrorism. The findings of the *Fourth Assessment Report* of the Intergovernmental Panel on Climate Change are more moderate, stressing the interactions between climate change, component elements of society and security repercussions.

Buhaug *et al.* looks closely at three processes through which climate change can lead to social instability and conflict: rising sea levels, resource scarcity and natural disasters, the latter via three risks (material destruction, public health risks and losses of livelihood). These authors highlight the scale of adaptability, which depends on the suddenness of the climatic event and the circumstances of the countries affected, as a major criterion in the capacity to respond to a conflictual situation. This research focuses more particularly on armed conflicts, and its conclusions call for great caution in establishing links between such conflicts and climate change, in particular because of a lack of statistical data to support them. For example, a chart juxtaposing trends in temperature and the number of armed conflicts shows, since the 1990s, a rise in the first variable and a decline in the second. Buhaug also uses a matrix of socio-political factors widely acknowledged to be factors that trigger conflicts to show the three main effects of climate change, singly or in combination. The authors draw on numerous sources, which remain essentially theoretical and sparsely illustrated. They show the intermediate mechanisms through which climatic variables[7] impact security. For example, the socio-political factor labelled "poverty and political instability" is affected through food insecurity and losses of livelihood.

« Its conclusions call for great caution in establishing links between such conflicts and climate change.

The March 2008 Solana Report for the European Council tackled the threats linked to climate change in terms of international – and no longer just national – security (with direct repercussions on European interests). The report cited seven threats, explaining that these did not necessarily degenerate into armed conflict: conflict over resources; economic damage and risk to coastal cities and critical infrastructure; loss of territory and border disputes; environmentally induced migration; situations of fragility and radicalisation; tension over energy supply; and pressure on international governance.

Climate change is presented as "a threat multiplier which exacerbates existing trends, tensions and instabilities". These threats or "forms of conflict" extend to all countries. The causal chains are put forward to explain how climate change impacts the threats centre around three factors which Buhaug also acknowledged (mentioned above). In many cases, environmental variables that depend on climate change, such as desertification and dwindling water reserves, are also cited as factors influencing the threats. An initial reading shows that the Solana report does not refer to any prospective or retrospective studies, case studies or statistics that were used to identify the threats. The multiplicity of dynamics at work in the supposed link between climate change and security, and the nature of their interactions, complicate all projections and scenarios. Furthermore, the security threat linked to climate change is heavily dependent on the particularities of each country and other contextual factors. The special

relationships between these variables constitute many potential crisis catalysts as there are different climatic and socio-economic environments. Any examination of the security consequences of climate change would appear limited, given the lack of hindsight and the limited choice of the three processes identified above. The difficulty of characterising and quantifying the security impact of climate change warrants: (1) considering their relation without determinism, not as an interaction[8] or any causal chain; (2) and expanding consideration to climatic elements (which has, in fact, already been the focus of certain analyses). Nevertheless, the Sahel has for many years had to cope with a difficult climate, and its populations have adopted a number of strategies for adapting to droughts, aridification and desertification. Other insights into the relationship between climatic events[9] and security can be gleaned by analysing past episodes and/or extreme or gradual processes illustrating the sharp variability of this alien climate against insecurity events.

The security threat linked to climate change is dependent on the particularities of each country and other contextual factors.

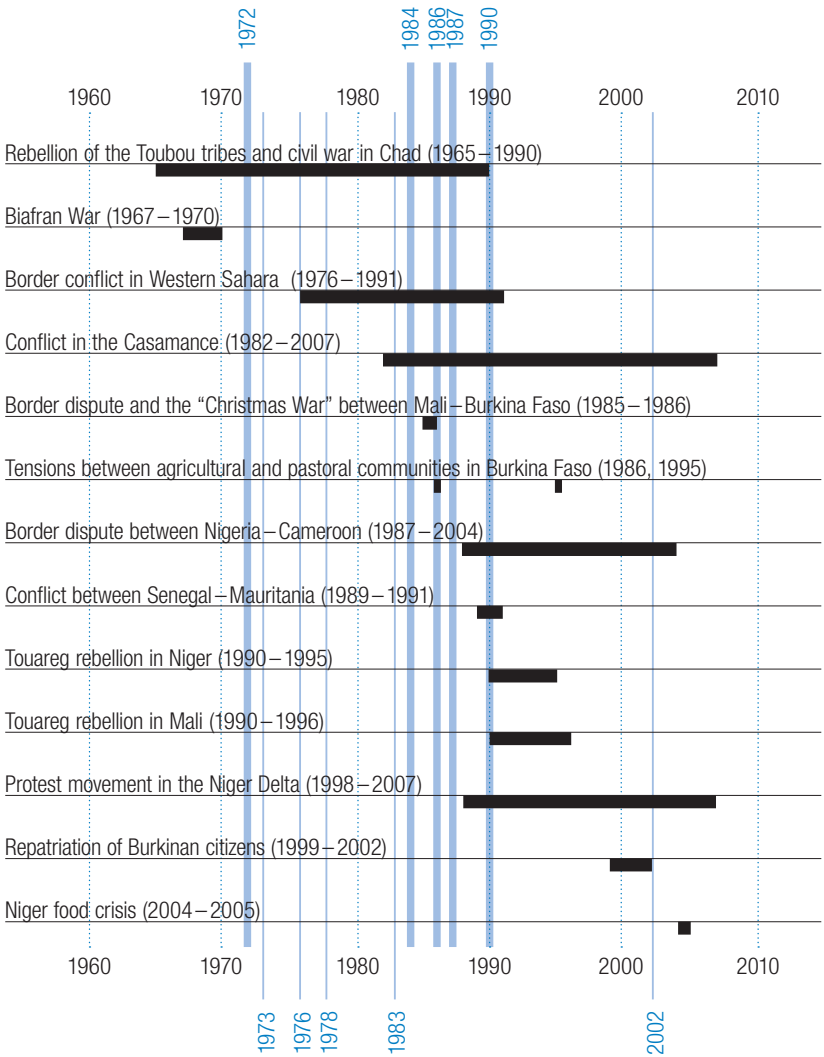
Climatic elements and security events: lessons learned from an empirical and retrospective study

An analysis of security events in the Sahel (between 1967 and 2007), conducted in connection with the study, confirms the absence of a direct and universal impact of climatic elements on security. A number of examples from the study illustrate this contention, showing diverse links between climatic elements and insecurity.

In the case of the Biafran war (1967–1970, Nigeria), a conflict whose origins were essentially socio-political and economic, was exacerbated in terms of loss of human life because of environmental causes (access to resources and low fertility of the land). Here, the climatic element is an aggravating factor of tensions because of the great vulnerability of the populations.

Climate, was a parameter that contributed to the outbreak of the border dispute between Burkina Faso and Mali (1985–1986, "Christmas war"). The drought cycles of the 1970s and early 1980s, combined with the great drought of 1984, heightened pressures in pasture areas along the border. Nevertheless, in our view the claims over resources correspond more to a conventional matter of territorial security than to concerns of an environmental nature. The same can be said for the border dispute between Cameroon and Nigeria. Tensions were aggravated by the shrinking of Lake Chad for climatic reasons and by uncertainty over the border; claims that were resolved successively before the International Court of Justice (ICJ). Moreover, these disputes did not degenerate into conflict.

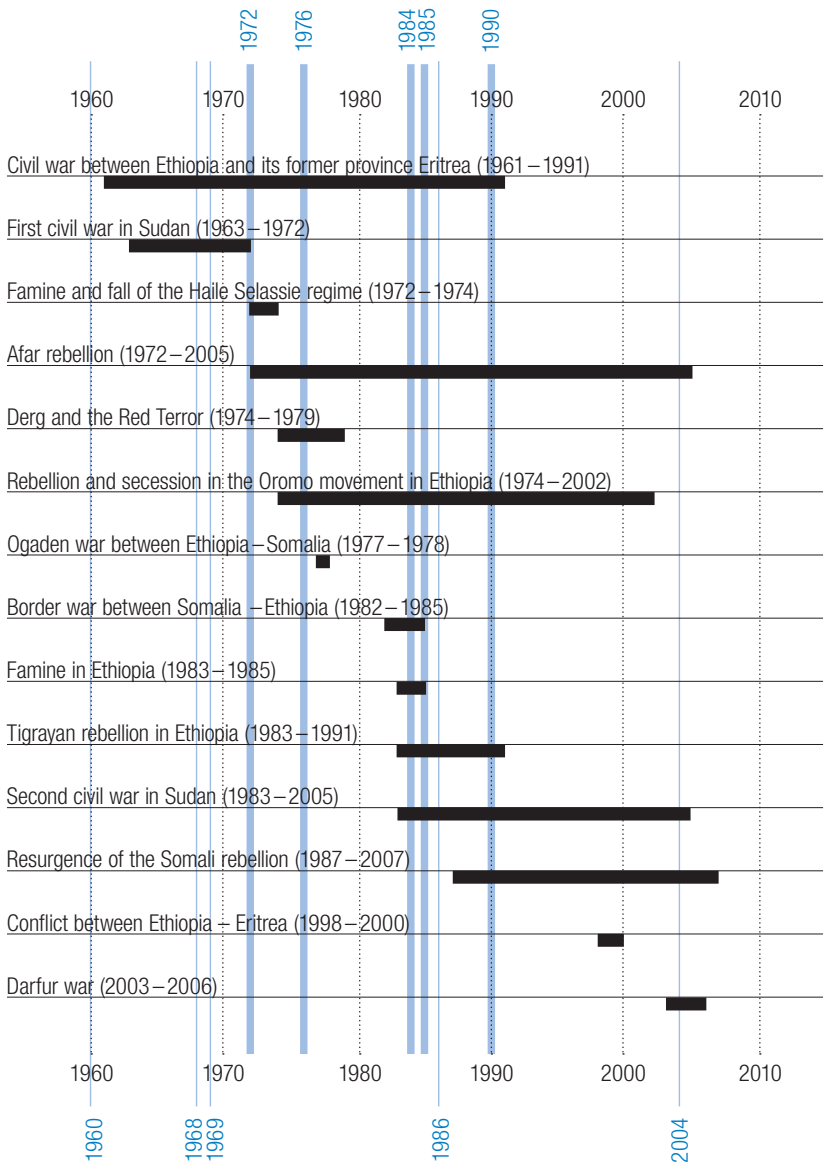
Figure 1
10 worst droughts between 1970–2007 (West Sahel)



Exacerbated by territorial and political issues, the problems raised by the South, having greater oil and agricultural resources, became one of the major parameters of the South Sudan conflict (second war, between 1983 to 2005). Gradual aridification was compounded by the 1984 drought and the consequences of El Niño between 1997 and 1998. This accumulation of climatic shocks played an aggravating role in both the duration of the conflict and its intensification. A dual relationship comes into effect: first, a combination of climatic, economic and political variables triggered a war, with the last two factors weighing the heaviest; and second, the

economic and political variables were exacerbated because of climate. This conflict, based on a power struggle revolving around the appropriation of resources within a geographical entity not universally recognised, was heightened by climatic variables but was nonetheless a military or civil conflict.

Figure 2
10 worst droughts between 1970 – 2007 (East Sahel)



The tensions between pitting farmers and ranchers in Burkina Faso's Comoé province (1986 and 1995) resulted from a combination of factors such as demographic pressure on fertile land (installation and settling of herders because of drought), the co-existence of economic models, human-induced soil depletion, land policies and weak regulatory bodies. Climatic elements were integrated alongside other variables, although it would be impossible to contend that any one of them had played a preponderant role. The same holds true for the triggering events: two are commonly cited; the dry season and thefts of livestock. Nonetheless, it is difficult to gauge the extent to which these actually aggravated tensions.

Along with demands for autonomy, organised crime and political divergences, climate is another factor that helps aggravate tensions between Touaregs and the governments of Mali and Niger. The 1984 drought triggered conflict and contributed to the opening of refugee camps in 1989, which were subsequently accused of taking in certain opposition forces. Nevertheless, it is difficult to define a horizontal relationship between the various parameters that trigger rebellions. Climate is an element that would appear to be rather secondary, even though it is omnipresent in the geographic context.

Ethiopia has been affected recurrently by droughts since the 13th century, the worst years in the eastern Sahel being 1972, 1976, 1984–85, 1990 and 2002. Ethiopia has also suffered from five food crises: the famines in Tigray (1958), Way Lasta (1966) and Wollo (1973), followed by those affecting the entire country in 1984–85 and 2001–03. The 1977 (Red Terror) episode carried out by the head of State, Mengistu Hailé Mariam, was accompanied by measures affecting agriculture (grain prices set by the government at a very low cost; "travel permits" to dissuade farmers from engaging in non-agricultural activities; and the collapse of State farms and grain wholesaling declared illegal). The famine of 1984 and 1985 stemmed from two simultaneous food crises: one in the south and a second, more severe, in the north. In the south, the famine was associated with the insurrection of the Oromo Liberation Front, and in the north with the insurrection of the Tigray People's Liberation Front and the governmental counter-insurrection. It then spread to other provinces. Insurrections are considered the main causes of these famines. In 1983, harvests were among the very best, except for the Tigray. In mid-1984, a new drought, along with famine, affected large swaths of the country's north. The shortages were accentuated by the fighting taking place in Eritrea province and the surrounding areas, which *inter alia* blocked the way for supplies. These events highlight the major role of political and economic circumstances on the impact and aggravation of drought, and their potential to weaken stability. Governance capacities play a paramount role. For example, when Ethiopia suffered a

« These events highlight the major role of political and economic circumstances on the impact and aggravation of drought.

severe food shortage due to insufficient precipitation in the spring of 2008, no political disorder ensued because of a rapid and co-ordinated response by the government and humanitarian organisations.

From these examples, the security impact of climatic elements appears to be only indirect and rarely isolated. A reservation might be lodged concerning water, even though history has never seen a conflict that worsened to the point of violence for that reason alone (Buhaug *et al.*, 2008). A study on shared river basins shows, however, that the probability of low-intensity conflicts is doubled as compared to unshared basins, but this relationship does not hold true for wars (Gleditsch *et al.*, 2006).

Climatic variables therefore play a secondary role as compared with political, historical and economic variables. It emerges from case studies and literature that the variables on which there is consensus as to a direct impact on security are: the level of economic development; the background to the conflict; ethnic domination or polarisation; geographical criteria; and non-democratic regimes and power imbalances (Buckland, 2007). The endemic nature of tensions in the Sahel has been often stressed. While a decline in armed conflicts has been observed, there are still numerous areas of recurring tension: ethnic and religious clashes, strains between farmers and herders, illegal trafficking, access to resources (and especially to land) and weak governance. These tensions results from a combination of factors which, if they persist, may trigger conflicts. Crises related to access to resources, such as Libya's 1973 occupation of the Aozou Strip, have much in common with "conventional" military conflicts (Salliot, 2010). In other cases, climatic elements combine with a set of socio-political variables, such as land occupation, resources, ethnicity, governance, etc. in the dynamic of the conflict. It would therefore seem that the climatic "variable" is not distinct from other dependent variables, which calls for a customised and integrated strategy. These findings are confirmed by the econometric model formulated in the study to estimate the security impact of precipitation variability. Based on the Met Office Hadley Centre data, monthly precipitation observations between 1901 and 2006, and a review of security events, the sensitivity of transmission variables and the role of socio-economic variables vis-à-vis vulnerabilities emerge. The results underscore the importance of socio-economic variables in determining security vulnerabilities.

The reasoning would suggest to focus on more-gradual changes in climate and climatic variability impacts on security.

Although our analyses have not provided proof that climatic elements have a determinant impact on security, the assumption of general links between security and climate change cannot be discarded, given the insufficient number of empirical analyses and case studies.

At this stage, the reasoning would suggest to focus on more-gradual changes in climate and climatic variability impacts on security, more than

a one-off climatic shock; to better explore the interactions between all variables including climatic that also influences the triggering of a conflict or tensions.

Expanding the scope to human security

There are two major schools of thought: according to the first, environmental security is a dependent variable (globalist vision of relations between States); in the second, this is considered an independent variable (Homer-Dixon, 1989), and security of the State is the dependent variable. Looking more closely at the second school of thought, Michel Frédérick puts forward two types of links: "The first [link] deals with environmental problems as the main insecurity factor. The scenarios are based either on confrontations arising from local or regional ecological conflicts (trans-border pollution, overexploitation of a common resource, etc.) or on a transformation of power relationships within a region – or among several regions – as a result of major environmental disturbances (climatic changes, desertification, ecological accidents and the like). The second [link] deals with environmental problems as an ancillary insecurity factor. In such cases, environmental antagonisms threaten a State's national security indirectly, by exacerbating pre-existing political, economic, social or military tensions or conflicts or by adding a new dimension to them" (Holst, 1989).

In most of the recent discourse and policies, in European countries in particular, the environment is considered an independent variable, whereas the security of the State, which is at risk, behaves as a dependent variable. The expression "environmental security" thus takes on the meaning of an environmental component of "national security" (Frédérick, 1993). Most of the studies and processes described in the article thus far draws on the concept of environmental security, as explained above. The notion of security introduced here is commonly considered "conventional".

Certain decisions taken by States are in line with that vision. Thus, when the authorities evoke national environmental problems – but problems that can affect other States as well – as detrimental to the population's security[10], the climatic migrations that could strike a Sahelian country could appear in their discourse as a threat to the OECD countries. These "shortcuts" also reflect inadequate consideration of analyses of the mechanisms of migration itself. The existing case studies (Findley, 1994; Tacoli, 2009) do in fact tend to demonstrate short-distance and relatively localised migration during extreme droughts, and migration in response to an adaptation strategy for climatic events that are more gradual (such as desertification and aridification). Even if quantitative and qualitative studies are still rare, they do have the advantage of presenting various scenarios and of balancing the approach favoured by a great many security policies, but without disregarding the fears that have been expressed.

This dimension is more pronounced insofar as, while the awareness is international, the mechanisms for managing environmental issues remain primarily national because of the lack of multilateral regulation and powers of intervention. "The precariousness of existing environmental management mechanisms adds an element of uncertainty into the international system, spurring states to closely monitor their environmental interests themselves. As a result, it is through the prism of their own national security that states analyse the impact of global environmental problems and the government behaviours likely to improve matters or make them worse. In such a situation the concept of environmental security assumes as much importance as states are willing to give it." (Frédérick, 1993).

These arguments suggest that climate should be factored in, relating it more to human security, rather than to State security alone. "As change dictates, a number of security issues are no longer framed in the same terms. Strategic analysis specialists have in fact noted that non-military dimensions of security were now playing a very major role in the behaviour of States. (…) This prompted them, in the 1980s, to redefine the concept of national security in order to broaden its scope" (David, 1989).

Human security is a paradigm of the comprehension of vulnerabilities taken as a whole. The traditional notion of national security is questioned by the contention that the focus for security should be separate rather than with the State. Human security encompasses interdependent aspects such as economic security, political security, food security, environmental security, personal security, community security and health security (UNDP, 1994).

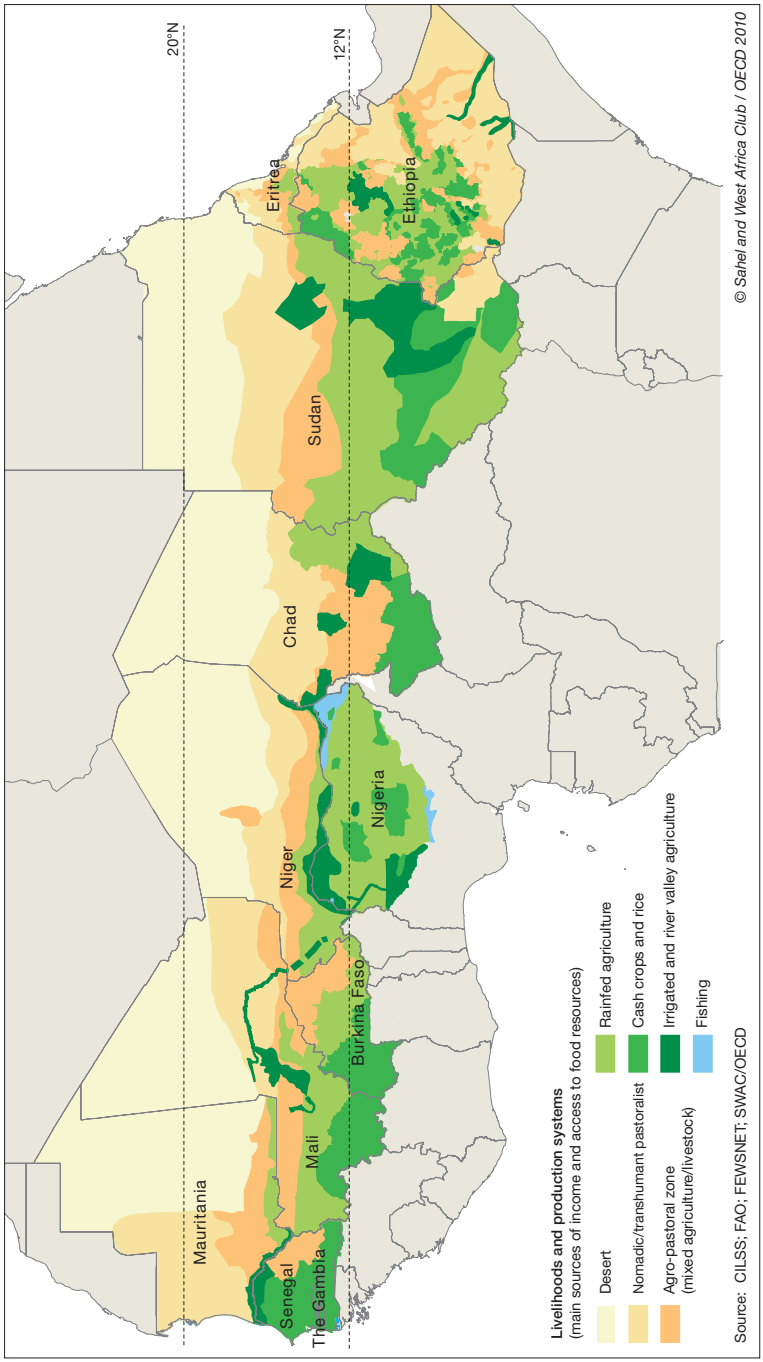
The analyses would suggest that it is more instructive and constructive to incorporate the concept of human security: first, it opens up a more relevant scope of the security dimensions linked to climate change in the Sahel; and second, it refocuses the policy debate on environmental, economic and development aspects.

Seen from this perspective, food security is one of the major transmission mechanisms between climatic variables and security. It is characterised by a direct impact of climate and climatic variability (in particular of precipitation) on food security; and sensitivity to sudden events.

Focus on the impact of climate on food security

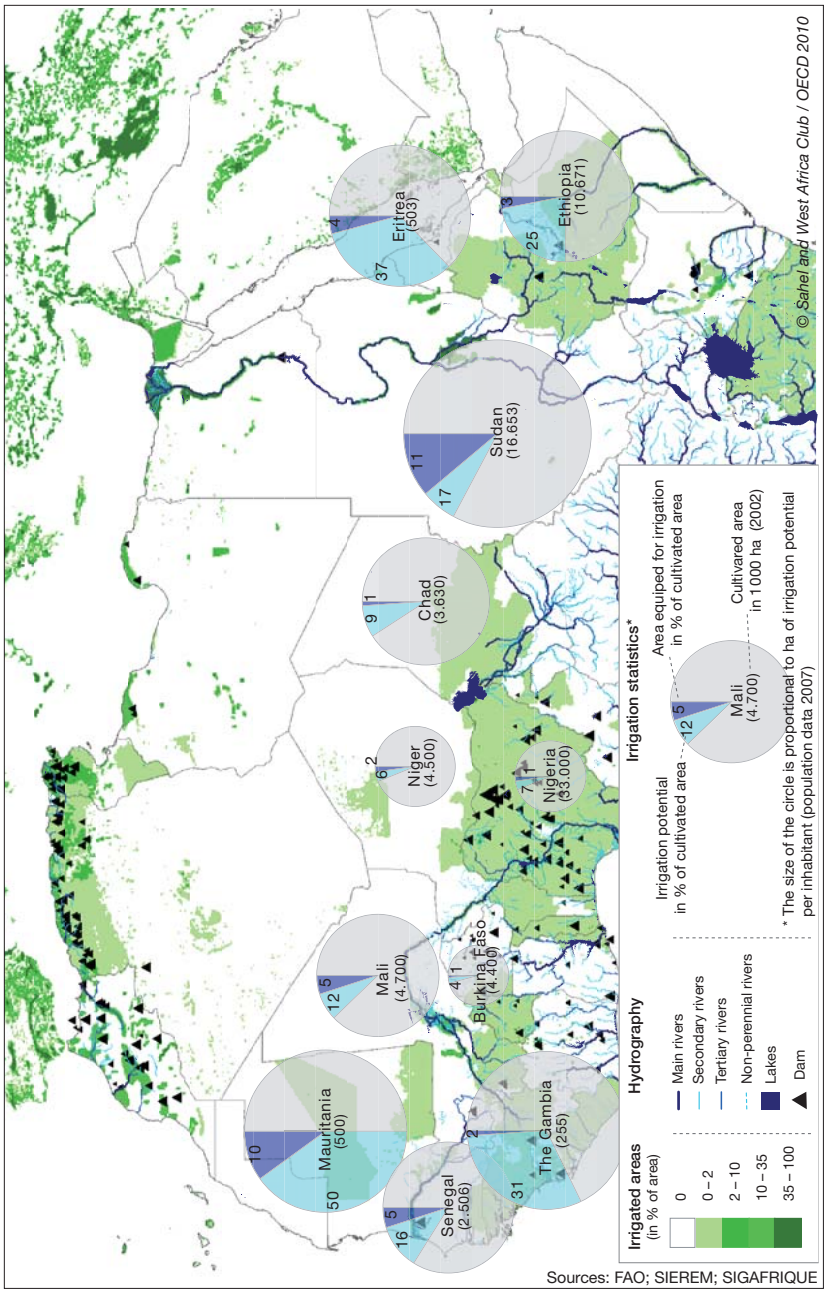
In the Sahel, production systems are heavily dependent on precipitation: food crops are essentially rain-fed, and livestock farming is nomadic[11], which explains the direct impact of climate variability on food security (Map 1). This dependency is strengthened by the predominance of farming activities as a livelihood. Approximately two-thirds of the population depend on agriculture, with little if any diversification of income sources.

Map 1
Livelihood systems in the Sahel



Map 2

Irrigated areas, major dams and irrigation potential



The fact that an event and its impacts are sudden and unpredictable shapes the population's ability to cope with it and adapt. Extreme events such as droughts or floods can trigger a sudden loss of livelihood and/or food insecurity. The effects can be especially serious – as in the case of famine – and long-lasting. From the standpoint of human security, these sudden events deserve special attention.[12]

A number of possibilities would seem relevant. While their primary objective is to do a better job anticipating climate's impacts on food security, they have the added effect of improving other dimensions of human security, including policy-making and community. Among the examples of the interdependence of these dimensions: in addition to the direct impact of climatic variability on food security, analysis of food crises and minor localised conflicts[13], and especially agro-pastoral conflicts (between sedentary and nomadic herders), would suggest a relationship between food security, climate and security in the narrowest sense of the word (SWAC/OECD, 2010). Progressive and sudden changes in systems of livelihood may, when combined with economic, social, religious and political variables, create tensions. In the case of agro-pastoral conflict, the triggering event may be changes in the migratory cycles of herds seeking pasture land, or in the availability and access to watering holes[14], land-rights problems or other socio-economic factors. Although socio-economic and political variables are acknowledged as the determining factors in the emergence of tension, climatic factors[15] affect the security of territories and populations by transmission chain through food security.

Among the recommended approaches:

- Governments should develop agricultural production strategies and techniques that are more resilient to the vagaries of climate.[16] Given the low level of investment in agricultural production, the expected potential of techniques to expand yields and resistance to climate variability is vast (pedological techniques, irrigation systems, livestock watering and feeding, etc.) (see Map 2).
- National and international early-warning mechanisms for famines are well developed throughout the region. They remain a crucial tool for preventing and managing food crises. A better quality of seasonal weather forecasting and dissemination of information would help reduce the population's vulnerability to climatic variability and to climate change effects in the future.
- Intra-seasonal precipitation forecasting is an essential tool by which populations and governments can improve their control over precipitation-dependent activities. In the Sahelian countries there are operational climate-forecasting centres.[17] Even so, improvements to current capacities are urgently needed, as are access to and dissemination of information.[18]

- The World Meteorological Organization has recently stressed the fact that Africa has only 300 operational weather stations (out of 744), while optimal coverage is estimated at 10 000. In the Sahel, the coverage is between one and four stations per 10 000 sq. km, whereas the high climatic variability would warrant far more, in particular for local forecasting.
- For the correlation that has been pointed out between food security, climate and security, it would be relevant to incorporate environmental variables into the early warning mechanisms for conflict prevention. Most of these mechanisms, which are often based at regional or continental inter-governmental bodies, are set up on purely military foundations.[19] Integrating available climate-forecasting and food-security data would enlarge the gamut of insecurity signals, in particular with respect to low-level local tensions.

A co-ordinated approach to the climate's impacts on human security and especially food security

The lack of multilateral mechanisms therefore prompts States to manage environmental challenges unilaterally. This is especially true with regard to security impacts. By definition, the latter have a strong national dimension. This is why it is important not to forget that "the subjective nature of a state's judgment of attacks on its national security leaves matters open to interpretation" (Buhaug ., 2008) and that "each state's perceptions of environmental pressure are also highly subjective, but figure in political choices and thus in national development strategies" (Frédérick, 1993). It would seem that the primary concerns of Sahelian States regarding the links between climate change and security are more oriented towards defining climate change adaptation strategies in the context of broader development objectives than towards a military approach to security. To institute effective multilateralism, dialogue must be in line with the concerns of each stakeholder in the OECD and African countries. Food security could be a relevant area for collaboration that would lead the way to other dimensions of the encompassed vision developed through human security.

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NOTES

1 *Climate change corresponds to a lasting change (over periods ranging from decades to millions of years) in the statistical parameters (average parameters, variability) of weather patterns for the Earth as a whole or its various regional climates. Such changes may be due to intrinsic planetary processes, outside influences or, more recently, human activities. In the IPCC[3]'s work, the term "climate change" refers to any change over time, whether it be attributable to natural variability or human activities. In contrast, in the United Nations Framework Convention on Climate Change, the term refers solely to changes that are due to human activities. The Framework Convention uses the term "climate variability" to designate climate changes of natural origin.*

2 *Also known as the "Christmas war".*

3 *Such as access to the port of Asmara in the war between Ethiopia and Eritrea between 1998 and 2000.*

4 *This point will not be addressed here, even though it opens the door to numerous discussions and interpretations.*

5 *For this study, the Sahelian area is defined as the strip between 12° and 20° north.*

6 *The four main humanitarian crises analysed coincided with a sharp drop in rainfall during the year before they were triggered. Those crises were: the famines in Ethiopia in 1972–1973 and again in 1983-1984; the famine in south-eastern Sudan, in northern Eritrea and north-western Ethiopia in the wake of El Niño in 1997; and the famine in southern Niger in 2004–2005. SWAC/OECD.*

7 *Variables directly affected by climate.*

8 *Reciprocal reactions of the two phenomena.*

9 *Characteristic of climate or related events.*

10 *One of the other reasons cited for the "securitisation" of discussions on climate change is the desire of certain players to put climate change on a priority policy agenda so that the real operational decisions get taken. The fact that climate change has a more brutal impact on the areas already considered vulnerable because of their scant capacity to adapt (such as the Sahel) strengthens the urgency argument.*

11 *Known also as nomadic pastoralism, or nomadic herding, which features seasonal herd movements in search of pasture land.*

12 *Numerous studies show that anticipated and gradual impacts of climate change on environmental factors, such as a reduction in agricultural yields or increased water scarcity rarely trigger conflicts: Hendrix, C.S. and Glaser, S.M., 2007, "Trends and Triggers: Climate Change and Civil Conflict in Sub-Saharan Africa", Political Geography No. 6; Raleigh, C. and Urdal, H., 2007, "Climate Change, Environmental Degradation and Armed Conflict", Political Geography No. 6.*

13 *SWAC/OECD (2011) Security implications of climate change in the Sahel Region.*

14 *Migratory patterns for livestock and access to watering holes can also be influenced by non-climatic factors such as land rights, land cultivation, legislation, etc.*

15 *For example, in reports by the CEWARN group on pastoral conflict, the "environmental pressure" variable does not explain episodes of violent incidents.*

16 *The term "climate-proofing" is used in connection with measures to increase the resistance to climate change and to the impacts of climatic variability.*

17 *AGRHYMET Regional Centre of the CILSS, the African Centre of Meteorological Application for Development and the Climate Prediction and Applications Centre (ICPAC).*

18 *Improving the current seasonal forecasting capacities of the regional and national climate and weather centres. In particular, there should be continued improvement in models and their resolution (importance of accurate and reliable observed data, see below); co-operation between national and regional centres (including between the various regional centres); South/South co-*

operation; and access to internationally available data and the capacity of observation. (1) Improve access to information, as well as dissemination. Many persons whose livelihood depends directly on this information live in vast, isolated areas. It is critically important to develop mechanisms for reaching these populations, so they will have timely access to climate-related information. Pastoral communities warrant special attention insofar as some of their activities are located in known climatic hotspots. Moreover, this information should also be made available to decision-makers and international partners so that they can prepare for any crises, such as food shortages.(2)

19 The IGAD Conflict Early Warning and Response Mechanism (CEWARN), which monitors cross-border agro-pastoral conflicts in East Africa, is a notable exception. It incorporates an "environmental pressure" variable into its periodic reports.

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Chapter 6

The securitisation of climate change in the European Union

by Rafaela RODRIGUES DE BRITO

Summary

The securitisation of climate change has entered the international agenda creating concerns about the appropriateness of security responses to an issue such as climate change. Nevertheless, the European Union (EU) has identified climate change as an international security issue and is seeking to take the lead in shaping international response to the security implications of climate change.

This chapter addresses the securitisation of climate change in the EU and analyses the policy implications of such a process. It argues that contradicting predictions of militarisation as well as the causes and consequences of climate change are being addressed through mitigation and adaptation measures. Moreover, at the international level, the EU is enhancing dialogue and co-operation with key partners and countries most at risk.

The chapter further addresses the specific case of the African continent and in particular the Sahel region, demonstrating how climate related conflicts and climate induced migratory pressures are issues of main concern to the EU. Although acknowledging the possible negative implications of such a narrow focus, it is argued that as current EU policy for the region emphasises development assistance, there is no strong evidence that securitisation will have a negative impact for the region.

Overall, it is argued that although the securitisation of climate change did not result in the adoption of traditional security measures, it instead reinforced environmental measures. As these were invested with a security purpose, it can be argued that the securitisation of climate change is contributing to the transformation of security practices.

The environment–security nexus

From the late 1970s, conventional security discourse and practice came under criticism for its inability to manage environmental risks to national and international security. Authors such as Lester Brown (1977), Richard Ullman (1983), Norman Myers (1989), Jessica Tuchman Mathews (1989) and Arthur Westing (1989) called for a new conception of security that moved beyond military security.

The end of the bipolar confrontation enabled a more significant consideration of potential non-military threats to security, and notably environmental threats. One of the most influential approaches regarding the environment-security nexus is one that concentrates on the causal links between environmental change and conflict. This approach owes a lot to the work developed by Thomas Homer-Dixon and his colleagues in the early 1990s. Working with selected case studies, they demonstrated that the degradation and depletion of environmental resources interacts with population growth and unequal resource distribution to cause violent conflict (Homer-Dixon, 1991, 1994; Homer-Dixon and Blitt, 1998).

Another significant approach focuses on environmental challenges to human security. Rather than focusing on violent conflict, this people-centred approach focuses on how the environment affects the needs, rights, and values of people and communities (Barnett *et al.*, 2010: 17). According to this approach, the goal of environmental security is to enable individuals and communities to respond to environmental stresses, whether by reducing their vulnerability or by challenging the drivers of environmental change (O'Brien, 2006: 1).

The divergences in approaches to the environment and security led Rita Floyd (2008) to argue that, rather than a concept, environmental security is a debate, with different approaches to environmental security at odds with one another. According to the author, "different traditions within security studies conceive very differently of environmental security; differing vastly in terms of who or what is to be secured, what is to be secured against and also the nature of the threat itself" (Floyd, 2008: 51).

There were, however, opponents to the establishment of any connection between the environment and security. Daniel Deudney, for example, classified such link as dangerous and self-defeating (1990: 474). Deudney challenged the idea that environmental degradation leads to interstate violent conflict because the features of the international system are not directly connected with environmental issues (Deudney, 1990: 474). Given the common association of security with nationalism and militarism, various scholars have argued that national security thinking is not appropriate when addressing environmental degradation (Matthew, 1995: 8).

More recently, climate change became the focus of the environment-security debate. Climate change increasingly dominates the international agenda as it is viewed as one of the most pressing issues facing the world, not only because it intensifies existing environmental problems, but because it also creates new ones. Climate change is seen as a cross-cutting issue, with predicted impact that range from the aggravation of resource scarcity to the disappearance of entire coastal areas. In this context, a language of security has pervaded the discourse on climate change, with a number

« Another approach focuses on environmental challenges to human security.

of actors from the political, academic and public spheres now classify climate change as a threat to security.

A number of reports have drawn attention to the security implications of climate change. In 2003, in a report prepared for the United States (US) Department of Defence, Peter Schwartz and Doug Randall outlined the implications of an abrupt climate change scenario for US national security. According to the report, such a scenario could de-stabilise the geopolitical environment leading to violent conflicts due to resource constraints (Schwartz and Randall, 2003: 2). A military advisory board counselled the U.S. government to fully integrate the consequences of climate change in national security and national defence strategies (The CNA Corporation, 2007). Also in 2007, the German Advisory Council on Global Change (WBGU) published a report were climate change is clearly identified as a threat that could overstretch the capacity of many societies to adapt, thereby jeopardising national and international security to an unprecedented degree (2007: 1).

In April 2007, the United Nations Security Council (UNSC) held its first-ever meeting on the impact of climate change. In the full-day debate, called by the United Kingdom, the relationship between energy, security and climate was discussed. Although no statement or resolution was adopted, it was a symbolic first-step towards the acknowledgement of climate change as a security issue, since the UNSC has primary responsibility, under the UN Charter, for maintaining international peace and security (Brito, 2010: 44).

More recently, on July 2011, the UNSC held a second meeting on the impact of climate change. A statement was issued from the meeting item entitled "Maintenance of international peace and security", in which the Council expressed its "concern that possible adverse effects of climate change may, in the long run, aggravate certain existing threats to international peace and security" (United Nations Security Council, 2011: 1). Moreover, acknowledging the importance of contextual information on the possible security implications of climate change for matters related to maintaining international peace and security, the UNSC requested that the Secretary-General ensure that such information be contained in his report to the Council. (United Nations Security Council, 2011: 2).

The climate–security link was also acknowledged by the United Nations General Assembly (UNGA), where a resolution (A/RES/63/281) on the possible security implications of climate change was adopted. In this resolution, the UNGA declares its deep concern that the adverse impacts of climate change could have security implications and invites the relevant UN agencies to intensify their efforts in considering and addressing the security implications of climate change (United Nations General Assembly, 2009: 2).

Recognising the negative impacts that climate change can have on the security of mankind, the Norwegian Nobel Committee attributed the

2007 Nobel Peace Prize to the Intergovernmental Panel on Climate Change (IPCC) and Al Gore, Jr. for their efforts to build up and disseminate knowledge about climate change and the measures needed to counteract such change (Nobelprize.org, 2011).

Individual states have also started to address the security implications of climate change. The United Kingdom, for instance, has included climate change in its 2008 national security strategy. The document states that climate change is potentially the greatest challenge to global stability and security, and therefore to national security (Government of the United Kingdom, 2008). Also the French White Paper on Defence and National Security portrays climate change as a new risk, whose security impacts need to be calculated rapidly. The document acknowledges climate change's potential contribution to violent conflict (Government of the French Republic, 2008). Germany's 2006 National Security Strategy already referred to climate change's potential for exacerbating security problems. The most recent Defence Policy Guidelines from the German Ministry of Defence, identifies climate change as a risk that can have consequences for German security (German Ministry of Defence, 2011).

« Individual states have also started to address the security implications of climate change.

The Pacific small island states, have also extensively considered the threat climate change poses to their security and survival. These states, which are threatened to be entirely submerged by the rise in sea-level, have actively worked to raise the profile of climate at the international level, by introducing climate change in the United Nations Security Council agenda.

These developments generated a debate on the implications of converting climate change to a security issue. On the one hand, it is acknowledged that security attributes a sense of urgency to climate change that might be able to speed action to address the issue (Brown *et al.*, 2007: 14; Barnett, 2003). On the other hand, there is concern that securitising climate change will place the focus on violent conflict, generating military responses to address the impacts of climate change (Barnett, 2003: 14; Brown *et al.*, 2007: 1153).

Fears of militarisation are to a great extent connected to the link between climate change and violent conflict, which has been the focus of a large proportion of academic debate on climate and security. The effects of climate change, many argue, will add further pressure on scarce resources, exacerbating existing tensions and fuelling violent conflict (Klare, 2007; Mazo, 2010; Podesta and Ogden, 2007). However, such link has also been criticised for being largely unsubstantiated by evidence and for focusing excessively on the climate dimension, neglecting other

« The securitisation of climate change is transforming security practices.

factors that contribute to conflict (Nordås and Gleditsch, 2007; Brown *et al.*, 2007; Salehyan, 2008).

Although the climate-conflict debate is a central part of the climate–security debate, this is not the only focus. A significant part of the debate focused on climate change as a threat to human security and well-being. These two distinct conceptions yield different policy recommendations (Detraz and Betsill, 2009: 308), with the latter privileging policy responses that focus on issues of vulnerability, justice and adaptation (Adger, 2010; Barnett, 2003; Buckland, 2007).

Analysing governmental discourses on climate change and security in Europe and the US, Maria Julia Trombetta (2008) argues that these emphasise the relevance of preventive, non-confrontational measures, rather than the reactive measures that the system tends to rely on. Consequently, she argues, the securitisation of climate change is transforming security practices, creating new roles for security actors and different means of providing security (Trombetta, 2008: 586).

Trombetta argues that the securitisation of climate change has succeeded in mobilising political action and in institutionalising the debate at the international level, being decisive for the development of a common energy policy in the EU (2008: 598). Denise Garcia also argues that the link between climate change and international security added a sense of crisis that gave impetus to the evolution of the climate regime, as shown by the re-engagement of the United States or the decision of a long-term goal for a post-Kyoto scenario (Garcia, 2010: 275).

To summarise, the connection between climate change and security has generated both concerns of militarisation of the management of its negative effects, as well as an expectation of effective change due to the fact that security constitutes a high politics matter *par excellence*. In order to assess the implications of securitising climate change, the next section will address the process of securitisation of climate change in the European Union (EU). The subsequent section will seek to identify some implications for Africa and the Sahel region in particular.

Climate as a security issue in the European Union

The EU has extensively examined the implications of climate change for European security and claims to be taking the lead in shaping the international response to the security implications of climate change (Council of the European Union, 2009: 2).

The 2008 joint-report entitled *Climate Change and International Security,* by the High Representative for the Common Foreign and Security Policy (CFSP) and the European Commission (EC) initiated a process of securitisation of climate change in the EU. The report identifies potential security impacts of climate change, including resource conflicts, border disputes, risks to coastal cities and infrastructures, environmentally-induced migratory movements and tensions over energy supplies (High

Representative for CFSP and the European Commission, 2008). It concludes that climate change is a threat multiplier that compromises international, European and human security.

Following the joint-report, the High Representative presented a follow-up report in December 2008, which contained further recommendations. The document states that "the EU is well suited to taking forward the climate security agenda" (High Representative for CFSP, 2008: 2). It advocates that climate change should be mainstreamed in EU foreign and security policies and institutions. The three main recommendations in the report refer to more detailed analysis at a regional level; integration of these analyses into early warning mechanisms; and an intensified dialogue with third countries and organisations (High Representative for CFSP, 2008: 2).

« The EU confirmed climate change as a major security challenge.

The Climate Change and International Security report and the recommendations of the High Representative, initiated a process – often referred to as the CCIS process – by which EU institutions and Member States are attempting to translate the CCIS agenda into practical action. A Roadmap to implement the joint-report, covering the period from March 2008 to December 2009, was developed in close collaboration between representatives of European Commission, the Council Secretariat and representatives of the EU Presidency Troika and Member States (European Commission, 2009).

On November 2009, a joint progress report evaluated the progresses in the implementation of the Roadmap, which included activities such as the promotion of CCIS at the UN, the launching and promotion of dialogue with third parties, capacity building on CCIS within the EU and abroad, and the anchoring of CCIS in the EU.

To anchor CCIS, lines of communication and interaction between key stakeholders were established. Significantly, the EU confirmed climate change as a major security challenge by including it in the review of the European Security Strategy (European Commission, 2009: 6). Although the 2003 security strategy already identified global warming as an alarming element (European Union, 2003), the 2008 review added climate change to the list of key threats to European security (European Union, 2008: 5). Hence, the core document of European security and defence policy, which defines the Union's strategic objectives, has since placed climate change alongside traditional security threats such as the proliferation of weapons of mass destruction (Brito, 2010: 43).

A securitisation of climate change?

Overall, security has pervaded European debate on climate change, and the progressive inclusion of climate change in strategic thinking and security planning suggests that climate change is being re-framed as a security issue in the EU.

The securitisation framework has been used to explain the emergence of non-conventional security issues, including climate change.[1] Developed by Ole Wæver, Barry Buzan and others, the theory of securitisation provides a framework for a structured analysis in the process of constructing security.

According to this framework, securitisation occurs when an issue is successfully moved from the politicised level, where it is part of the public policy sphere, to the securitised level, where it is presented as an existential threat, thus calling for emergency measures. This elevation of issues to the security level occurs in a two-stage process, where in the first stage a securitising actor presents something as an existential threat to a referent object. For the issue to be securitised, it then needs to be accepted by the relevant audience as such (Buzan *et al.*, 1998: 23-25).

The analysis of the rhetoric used to address climate change by political actors in the EU, clearly shows that it follows the rules of securitisation. The CCIS process, mentioned earlier, demonstrates that, at least some, European institutions are attempting to securitise climate change. Reports, policy papers initiatives and speeches[2] present climate change as an existential threat to the standards of living in Europe and elsewhere, to international stability and the stability of the EU itself.

Although the "relevant audience" is not clearly defined in the securitisation framework,[3] given the nature of the EU one can say that there are multiple audiences regarding the securitisation of climate change. In the case of CCIS, the Member States, through the European Council, were the primary audience. The High Representative and the European Commission initiated the process of securitisation by producing the CCIS joint paper that was submitted to the European Council. The European Council welcomed the report and, shortly after, adopted the revision of the European Security Strategy, which added climate change to the list of key threats for the EU.

The Member States have also taken individual action to acknowledge the security implications of climate change, namely the inclusion of climate change in their respective national security strategies and the commissioning of studies on the links between climate change and security.

The EU civil society is also a relevant audience to consider. As European media extensively framed climate change as a cause for violent conflict and other sources of insecurity, the securitising move has reached a wide European audience.[4] Moreover, opinion indicators reveal that European public opinion is increasingly aware of the security implications of climate change, identifying it as a severe risk facing Europe and the World. It also indicates that European citizens are progressively more willing to accept the adoption of exceptional measures to address climate change, namely concerning resource allocation and policy prioritisation.[5]

Additionally, EU discourse makes it clear that the EU is attempting to persuade the international community to recognise the security

implications of climate change. More specifically, the UN and key global players such as the USA, China, Brazil, and India are an intended audience for EU securitisation of climate change.

The EU believes it has achieved some success at the level of the UN, as consultations are taking place to share views and information on security implications of climate change with the aim of identifying synergies and linkages for co-operation on CCIS (European Commission, 2009: 4).

Regarding individual states, the EU considers that, despite the novelty of the issue and the reservations of some countries, a successful bilateral and regional dialogue on CCIS was initiated and platforms for interaction with stakeholders were created (European Commission, 2009: 5).

The consequences of securitising climate change

The securitisation of climate change in the EU has generated both concerns of a militarisation of the response to the issue, as well as an expectation of effective policy change due to the fact that security issues take priority. In light of this, it is necessary to address the implications of handling climate change through a security perspective, namely in terms of the policies to address the issue.

The EU identifies dialogue with third parties as one of the priorities in the implementation of the CCIS process. According to the joint progress report, the EU successfully initiated bilateral dialogue on CCIS with more than 40 countries. At the regional level, the EU has engaged in a dialogue on CCIS with North America, the Mediterranean and Middle East Region and Southeast Asia, through the ASEAN (European Commission, 2009: 5). The EU has also supported initiatives in the African continent and in Latin America (Council of the European Union, 2009: 6).

Regarding capacity building on CCIS, the report indicates that the EU is reviewing and strengthening its own capacities and tools. As regards external assistance, CCIS is now an integral part of the mainstreaming of climate change into development co-operation and disaster risk reduction (DRR). The European Commission has launched several projects on DRR and is planning to increase its efforts further (European Commission, 2009: 7). Additionally, a framework has been set in place to enable resources to European Security and Defence Policy (ESDP)[6] tools in support of EU disaster response (Council of the European Union, 2009: 8).

> The EU measures emphasise dialogue, co-operation, development assistance and disaster response.

The analysis of the EU CCIS process shows that, although climate change is being securitised in the EU, the measures that are being defined to address its implications are not traditional security measures. Instead, they emphasise dialogue, co-operation, development assistance and disaster response. Contradicting predictions of militarisation, causes and consequences of climate change are, at the moment, being addressed

through mitigation and adaptation measures, which remain the overall goals of EU climate policy.

Nevertheless, framing climate change as a security threat added a sense of urgency to the issue, resulting in higher targets for emission reductions and in a higher priority for adaptation measures (Brito, 2010: 47). As the European Commission acknowledges, climate change challenges conventional thinking and approaches to development, security, disaster response and other areas (European Commission, 2009: 7). Hence, whereas mitigation and adaptation measures remain the basic policy instruments to address climate change, they are invested with a security feature, thus acquiring a level of urgency in their implementation.

Africa and the Sahel

The African continent is identified as priority for EU action on CCIS. Africa is considered one of the continents most vulnerable to climate change given the multiple stresses that interact on the continent and the low adaptive capacity in most African regions. Furthermore, geographical proximity with Europe makes the region a main concern, since climate-induced migratory pressures are expected to affect the European Union's borders (High Representative for CFSP and the European Commission, 2008: 6).

The EU predicts that climate change will further aggravate existing tensions in various African regions. Land degradation, negative effects on health, in particular due to the spread of vector-borne diseases, among other negative effects of climate change, are expected to add further pressures. Climate change, it is believed, is already having a major impact on the conflict in Darfur (High Representative for CFSP and the European Commission, 2008: 6).

In the Sahel region, the report on CCIS predicts that "increasing drought, water scarcity and land overuse will degrade soils and could lead to a loss of 75% of arable, rain-fed land (High Representative for CFSP and the European Commission, 2008: 6). The High Representative warns that "further desertification in the Sahel could lead to more regional instability and migration northwards, to the Maghreb and Europe" (High Representative for CFSP, 2008: 3). He cautions this could happen within a very short timescale if current rainfall patterns continue.

The EU is already working with the African Union (AU) to establish a common position on climate change issues. Consultations are being held between the EU and African security and environmental specialists, and co-operation between the AU Situation Room and corresponding EU structures is being enhanced (High Representative for CFSP, 2008: 3).

With the goal of promoting dialogue on climate change and international security with Africa, the EU has supported the establishment of the African Climate Policy Centre, created in 2010 to serve as the policy

arm of the Climate for Development in Africa Programme (Council of the European Union, 2009: 6).[7]

In his follow-up report on CCIS the High Representative recommended that the EU should build on the EU/Africa Strategy, which also covers climate change and security, to develop further action (High Representative for CFSP, 2008). The EU/Africa partnership for peace and security already stipulates co-operation to address the transnational security threats posed by climate change in an integrated and comprehensive manner (African Union and European Union, 2011: 2).

The partnership for climate change and environment identifies the development of the Great Green Wall of the Sahara and the Sahel Initiative (GWSSI) as a priority. This enterprise aims to address land degradation and desertification in the margin of the Sahara. According to the pre-feasibility study commissioned by the European Commission and the African Union Commission, the GGWSSI should help catalyse the EC and EU Member States financial support, which is critical for long term sustainability, peace and security. The study argues that, without such support, environmental migrants will be forced to abandon the degrading lands and move north towards Europe (HTPSE, 2009: 28).

In October 2010, the Madariaga – College of Europe Foundation and the Folke Bernadotte Academy, in co-operation with the Council of the European Union, initiated a Dialogue Process on "Africa, Climate Change, Environment and Security" (ACCES). The initiative aims to address the security implications of climate change in Africa from a development and security perspective.[8] According to Gyorgy Tatar of the Council, ACCES is a process where the EU "would like to bring together the various actors […] in order to work out "fundable" projects which will have positive impact on the well-being and security of individuals in the context of climate change" (Tatar, 2010).

Overall, the documents and initiatives analysed indicate that EU policymakers are convinced that addressing the security implications of climate change on the African continent is necessarily interconnected with addressing development issues.

Conclusions

The EU predicts that climate change will aggravate existing tensions in various African regions, including the Sahel. Such developments would threaten the EU by increasing regional instability, triggering violent conflicts and migration northwards. Given that migration is already a securitised issue in the EU,[9] a new type of migration – generated by the consequences of climate change – is seen as an element of additional pressure.

« While the links between climate change, conflict and migration are highly uncertain, focusing on such links can have negative implications.

While the links between climate change, conflict and migration are highly uncertain (Adger, 2010: 279), focusing on such links can have negative implications. By evoking a traditional conception of security, it can generate a policy shift from mitigation and adaptation to military solutions, namely to secure resources and contain large-scale migration (Brown, *et al.*, 2007; Buckland, 2007). Such responses could undermine efforts to link climate change mitigation and adaptation to development (Hartmann, 2010: 239).

Although such an anticipated shift in policies cannot be fully dismissed by current evidence, until now EU policy for the region has emphasised the intersection between the security aspects of climate change and development. The EU fears that, by undermining human security, climate change will compromise years of development efforts (High Representative for CFSP and the European Commission, 2008: 5). Consequently, the mainstreaming of mitigation and adaptation to climate change in development programmes is seen as the main avenue to address the security implications of climate change.

Instead of resulting in the adoption of traditional security measures, the securitisation of climate change has so far reinforced the urgency of environmental measures. As these are invested with a security purpose, it can be argued that the securitisation of climate change – as the securitisation of other non-traditional threats – is contributing to a transformation in security practices.

In the longer term, an excessive focus on climate related conflict and migration can be a negative development, as it could lead the EU to divert its response towards traditional security measures. However, should the EU response remain focused on development issues, securitisation could be a positive path as it invests development assistance with further urgency. As Oli Brown, Anne Hammill and Robert McLeman so appropriately put it:

"A 'securitised' climate debate might be able to marshal sufficiently compelling arguments to encourage the politicians to do something about reducing emissions and investing (carefully) in adaptation. These are things the international community should be doing anyhow and, done well, are consistent with enhancing security and reducing the potential for conflict at all scales. So if securitisation speeds their implementation, it will serve a useful purpose" (Brown *et al.*, 2007: 1154).

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NOTES

1 *For some examples see Brauch (2008), Brito (2010), Brzoska (2008) and Trombetta (2008).*

2 *President of the European Commission, José Manuel Durão Barroso, for example, stated that "the disruption of our climate (…) will severely compromise peace, stability and security in the world." (Barroso, 2009).*

3 *Matt McDonald suggests that the 'audience' is so under-theorised in the securitisation framework as to ultimately remain outside the framework itself (2008: 564).*

4 *Research based on media analysis that compounded relevant climate related news, extracted from nine newspapers with Europe-wide diffusion and distinct political backgrounds. The results were presented in the author's Masters Dissertation (Brito, 2009).*

5 *Research based mainly on Eurobarometer surveys. The results were presented in the author's Masters Dissertation (Brito, 2009).*

6 *Currently known as Common Security and Defence Policy (CSDP)*

7 *The Climate for Development in Africa (ClimDev-Africa) Programme is a joint initiative of the African Union Commission, the United Nations Economic Commission for Africa and the African Development Bank. The programme, which is being developed since April 2006, aims to improve climate observations and services in Africa.*

8 *The initiative has been implemented in co-operation with the UN system, the World Bank Group, EU institutions and Member States, the European Investment Bank, the International Organization for Migration, the African Union, the African Development Bank, the Global Water Institute, the Institute for Environmental Security, and the Parliamentarians Network for Conflict Prevention and Human Security.*

9 *For a discussion on the securitisation of migration in the EU see Munster (2009).*

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