7. MIGRATION AND RELIEF ACTION IN DROUGHT-AFFECTED DARFUR

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INTRODUCTION

Droughts are among those naturally recurring features of climate change that have caused mass migration throughout human history. Archaeologists now agree that drought was a leading factor in the massive migration of early humans 125,000 years ago out of Africa to the rest of the earth. Written records of ancient cultures from all over the world also speak of droughts and their disastrous consequences. The Epic of Gilgamesh speaks of a drought brought on by a Bull of Heaven that ceased only with the slaughter of the bull by Gilgamesh. Scholars now agree that this tale stems at least in part from the story of Joseph, son of Jacob, and the seven-year drought he faced in his lifetime. Egypt was then the only kingdom that had anticipated the drought by stocking resources vital to man and livestock. The Book of Genesis describes massive migrations of unprepared nations "from all over earth" towards this country. However, the severity of the drought is such that all the world's nations go bankrupt, including Egypt (Tanakh, Bereishit-Genesis). Although this story remains a legend, there is certainly some truth in it. If a worldwide drought sounds unlikely, it remains, however, perfectly conceivable that a drought did take place and that it did lead to massive migrations and instability in the region.

In modern times, droughts are still known for causing mass migration. Unfortunately, the drivers of migration are complex and it is difficult to establish causality. Moreover, data on migration induced by environmental changes has always been difficult to obtain (Jonson, 2010). The Darfur case is no exception.

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This case study concentrates on Darfur's drought and its linkages with internal displacement in the region. The environment-migration nexus will be explored to assess how it may be related to conflict in the region. Consequently, the challenges faced by the international community in dealing with the humanitarian crisis will be discussed, highlighting good practices for further steps in the rehabilitation of livelihoods in Darfur.

1. THE CONSEQUENCES OF RECURRENT DROUGHTS IN DARFUR

1.1. Socio-economic background of Darfur and historical migration patterns

The categorization of the different types of communities in Darfur may help understanding the possible tensions rising from their respective use of their environment. Indeed, ethnic groups in Darfur are numerous (over 80 tribes call Darfur their home) and complex, as can be seen on Map 2. Yet, potential environmentally-induced disputes may be understood through the division of the people of Darfur according to their lifestyles.

First, nomadic herdsmen and semi-nomadic farmers are generally Muslims of various Afro-Arabic origins, and originated from Northern Sudan, the Darfur region, and Chad. The second group consists of sedentary and semi-nomadic farmers, often Animists or Christians of sub-Saharan African origin and from Southern Sudan (Burr, Collins, 2008). The ethnic boundaries between these two groups, who have largely intermarried, are not clear-cut. Additionally, nomadic lifestyles in the region have always led to various migration influx.

Historically, nomadic tribes resided in the drier North of Darfur and relied on water holes, oases, wells and subsistence farming for themselves and

Map 1. Darfur, Sudan and neighboring countries

Source: Wikipedia, 2011

their herds. During the dry season, they would travel southward with their animals into the more temperate Southern farmlands and would migrate back North with the onset of the rains. Jonsson (2010) notes that the high degree of mobility of these populations is their strategy to cope with the high variability of the local climate.

Traditionally, only men would travel southward with the herds. Women and children would remain behind to tend the crops. These seasonal cycles corresponded to harvest seasons, historically. However, as drought worsened, the need for agricultural labor in Northern Darfur dwindled. (Burr, Collins, 2006). Indeed, in the 1980s, cyclical droughts began to plague Northern Darfur and its water holes and seasonal rivers vanished. The initial effect was crop failures. Those left behind were unable to feed themselves and their herds. As a result, the population was pushed away from home and pulled south, where they searched for fertile land to pasture. What had started as a traditional seasonal migration pattern involving adult men eventually became a permanent migration involving whole families (Bond, 2005).

1.2. Environmentally-induced migration patterns

Migration in Darfur may indeed obey to the push and pull theory, theorized by Lee (1966). Indeed, Lee's law distinguishes two types of factors that lead to human migrations: push factors involving deteriorated living conditions and pull factors attracting migrants by safer livelihoods. In the Darfur case, push factors would include desertification, famine or drought, natural disasters, and war, all of which were more prevalent in Northern Darfur. Thus, in Darfur, many migrants would have been pulled to the relative peace and prosperity of Southern Darfur.

Over the years, not only did rainfall patterns change, but rainfall also declined drastically.

Map 2. Map of Darfur Ethnicities

Source: Miller, 2004.

Repeated years of droughts induced desertification and environmental degradation and damaged the ecological balance, which once existed between sedentary agriculture and nomadic pastoralism (Braun, 2006). Ever since the mid-1980s, reoccurring periods of cyclical drought (1983, 1984, 1985, 1987, 1989, 1990, 1997 and 2000) have caused crop failure, loss of livestock and pastureland, and severe environmental degradation (Morrod, 2003). At the same time, even when the rains do not fail, the rainy season has shrunk from five months (May through September) to three (June to August; Bonde, 2005). By the mid-1980s desertification had become so severe that even the poorest populations migrated to escape starvation – confirming the understanding of migration as an adaptation strategy (Martin, 2007).[34]

Consequently, a snowball effect took place, when the nomadic herdsmen expanded the range of their circulatory migration routes and brought

34. Yet, this linkage is always complex to directly address. Indeed, because of the relationship between agricultural labor and climate, it is difficult to assign these sorts of migrations to "climate" or "economics." Additionally, as droughts are slow-onset events, it is very difficult to assign direct causality between environment crisis and migration. Further complicating matters, migration-related drought does not typically happen at the peak of the drought, but rather just before or after conditions are at their worst (Gemenne, 2009).

along their whole families in search of water. It resulted in over-grazing the little arable soil that remained throughout Northern Darfur and the disappearance of the little plant life that had survived the drought. In turn, this increased erosion and exacerbated the desertification process. Migration snowballed as those who had not yet migrated did so in response to desertification in the North. More migrating pastoralists in turn caused shortages of food and water; herders began to roam hundreds or thousands of kilometers in search of water and pasture land (Teklu, von Braun, Zaki, 1988). Even through the 1980s, however, migration remained highly seasonal: as shown in Figure 1, migration typically peaked in early fall.

Figure 1. Arrival Time of Displaced Populations around Omdurman in 1984

Month	Percentage of Population
March	0.9
July	3.0
August	5.6
September	34.0
October	40.9
November	10.4
December	5.2

Source: Khalil, 1987.

Pull factors that made other parts of Sudan more attractive were partially climate-related: less desertification and more natural resources. As long periods of drought extended over Darfur, the Nomads, originally from the North, lost most of their livestock and sought other employment in the South. However, the dramatic decrease in rainfall in the 1980s resulted in a drastic decrease in crops produced by the Southern Darfur farming community. At that point, Southern Darfur had become overpopulated while its available natural resources had susbstantially diminished (Bilsborrow & de Largy, 1990).

1.3. Drought, Migration and Conflict

Throughout history, different Darfuri ethnic groups had usually cooperated and lived together. However, when resource scarcity became an issue, it led to an upheaval among pastoralists who could no longer maintain their nomadic way of life because of the lack of both grassland and water (Burr, Collins, 2006).

By 1966, when the drought seemed at its worst, migration continued into areas in Southern Darfur populated by Christian and Animist populations. The two groups, even though competing over resources, traditionally depended on each other for survival. Pastoralists relied on the farmers' land and water, and farmers, in turn, relied on the nomads' herds to fertilize their land and carry their crops to market. Nevertheless, as the migrations towards the South continued, local officials imposed heavy taxes on the migrants. This aggravated the situation and led to rioting. Subsequently, tensions escalated as Southern officials fired on the rioters, killing more than 500. Muslim leaders in the North declared jihad against Southern populations in response, and one of Africa's longest and bloodiest civil wars erupted (Teklu, von Braun, Zaki, 1988).

In the 1980s, the government of Sudan suppressed the tribal councils that had for centuries been mediating disputes between the various ethnic groups and replaced them with government programs just at the time a severe drought hit Darfur. In the absence of a legitimate and fair system to resolve conflicts, social tensions escalated (Power, 2004). Furthermore, the Sudanese government dealt with the crisis by forcing relocation of IDPs, often to desert and barren areas (UN, 2005). In 1983, the civil war reignited. A peace agreement signed in 2005 ended this second phase of the Sudanese civil war.

Climate is not solely responsible for the conflict in Darfur. It is safer to argue, as Etienne Piguet does, in his 2009 UNHCR report, that environmental factors were a significant contributor to migration, which in turn was a major factor in causing the conflict. Meanwhile, Jonsson (2010) argues that environmental change leads to migration when it is magnified by underlying social and economic factors. This framework is useful, in that it enables more complex analyses of the phenomenon. This structure also allows for the consideration of migration as an adaptation strategy, particularly (as in the case of Darfur) when few other options exist.

2. FACING DROUGHT: POLICY RESPONSES

2.1. Humanitarian relief

The 1968-1973 Sahel droughts had localized impacts throughout Darfur. However, no aid relief was provided. In fact, between the mid-1950s and early 1980s, no institutions whatsoever provided help. The droughts of 1982-84 and the great famine of 1984-85 revealed the inability of the rural population to subsist on its own. The onset of the famine had been predicted by 1983

as northern populations had been moving south on a permanent basis (Teklu, van Braun, Zekly, 1988). In the 1980s, there were three major aid efforts in response to major crop failures. The first significant program was initiated in 1984 and ran through 1986.

Another crop failure in 1987 prompted a second relief operation. In response to this humanitarian crisis, in which over 200,000 people died of starvation, a relief operation in southern Sudan was coordinated by Operation Lifeline Sudan (OLS). Established in 1989, OLS is a consortium of U.N. agencies and three dozen nongovernmental organizations (NGOs) that operate in both government and rebel-controlled territories (Dagne, 2006).

It rained in 1988, the crop was good, but the next two consecutive years involved bad harvests because of severe droughts and necessitated a third wave of aid in Darfur. All these operations were about relief and did not involve much development aid. International recognition with regard to the underlying patterns of drought, migration, livelihood loss, and civil war was also quite low and full awareness did not emerge in the international community until the year 2000 (Blogicus).

The international aid actors faced in the years 2000s the dilemma of a complex emergency. Indeed, NGOs did what they could to face the emergency. For decades, Darfuris were provided with food in emergencies, with NGO actors believing that they would eventually find a viable way of supporting themselves. Analysts now agree that this was a misjudgment: had drought relief been instituted earlier on, it would have prevented the crisis scale of the past ten years (Anderson, 2004; Connell, 2004; Malek, 2005).

By 2006, despite the escalation in the number of climate migrants living in poor conditions, and professed commitments by the international community to help alleviate the suffering, the UN had taken only a few steps. The African Union Mission dispatched a small contingent of approximately 1,500 peacekeepers to deal with the violent conflict. However, due to these limited human resources, they were not able to achieve significant results. Living conditions continued to be appalling for the IDPs who remained targets of violent crimes, often from government officials. The UN Security Council failed to impose serious sanctions on Sudanese officials for their abuses of power. Furthermore, it did not authorize the use of force to protect civilians.

The first step in mounting a humanitarian intervention was UN Resolution 1556, proposed by the United States, which suggested sanctions on Sudan for war crimes, demanded Sudan disarm militants in Darfur, and dispatched international monitors. The problem was that these monitors were sent to watch the conflict, not to tackle its primary causes.

2.2. Adaptation and development strategies

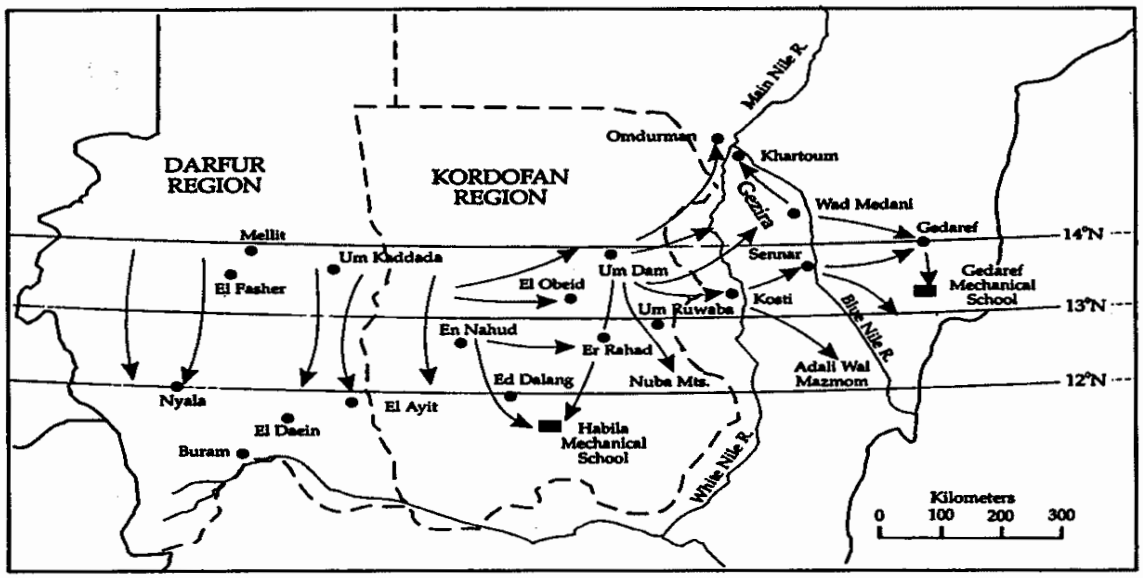
Starting in 1986, the regional government had implemented a rehabilitation project. The primary goals of this project were to restore the degraded natural environment through rehabilitation of forest and natural pasture, improve availability and distribution of the rural water supply, promote agricultural production, and provide support for households targeted for resettlement (Teklu, van Braun, Zekly, 1988).

In 1988 and 1989 a project to replant gum-arabic trees and other forest plants was undertaken by UNDP in villages with little tree cover. This project was intended to reverse the effects of drought, desertification, and overuse of tree products on the tree population. By 1989, the project had helped over 12,000 farmers, but the demand was much higher still. Not enough acacia trees were planted due to lack of funds. Also, the local population used them for cooking purposes before the trees had reached maturity, a period that averages between six to eight years (Teklu, van Braun, Zekly, 1988).

UNICEF and Oxfam also targeted additional programs at low-income, female-headed households with no livestock. Women were chosen because they have the most impact on child nutrition. By 1989, 400 female-headed households had each received two breeding female goats under the condition that they would use the goats to feed their children and not for sell. The project had positive economic effects and again there was great demand from other women to participate in the program; however, there was not enough money to meet such demand (Teklu, van Braun, Zekly, 1988). Other projects in this program included home garden development, irrigated culture, and grain storage. However, the NGOs again had a limited capital budget for the projects and could only offer them to a small portion of female-headed households. These projects were also put in jeopardy due to the persistent droughts (Teklu, van Braun, Zekly, 1988).

In 1986, the Sudanese government called for a broad-based strategy for sustainable growth in traditional, rain-fed agriculture. Again, drought, famine, migrations, and conflicts impeded the development of this program. Finally the military coup of 1989 put a stop to most development programs in the region (Teklu, van Braun, Zekly, 1988).

Map 3. Migrations trend of peasants farmers in the semi-arid and central parts of Sudan



Source: IFRI, 1998.

3. ASSESSING INTERNATIONAL AID

3.1. A conflict that was not forecast

Droughts are slow onset events whose impacts are difficult to forecast. Still, early warning systems could have helped anticipating the crisis. According to Burr (2008), many of the subsistence farmers of Darfur had already noticed the effect of droughts on their oases in the 1970s. Had a better information system been in place, it might have been possible to monitor the situation and mobilize the response at earlier stages, which would have saved lives and prevented the worst environmental impacts. By the time the UN acknowledged the civil war, in 2003, 300,000 people had already been killed and 1.9 million people displaced.

3.2. A failure of (non-governmental) organization(s)

Despite these efforts, capacity building in Darfur has also remained slow, in part because the crisis is considered ongoing. As Dr. Rony Brauman, MD, former head of MSF (Doctors without Borders), points out, notwithstanding good faith and laudable intentions, humanitarian NGOs are often overwhelmed by the quantity and urgency of work that remains to be done and must often satisfy themselves with basic "patch-up" jobs. Dr. Brauman also draws attention to the difficulty in dealing with slow-onset events as humanitarian NGOs have much more experience in dealing with the immediate effects of disaster. Again, this shows the urgent need for implementing new frameworks and policies to deal with climate change since it often takes the form of slow-onset events.

Fear of sanctions did force Sudanese officials to allow humanitarian NGOs to come to Darfur, but this authorization did not last. On March 4, 2009, authorities in northern Sudan ordered the global humanitarian organization ACF International to leave Darfur along with CARE, MSF, Oxfam, Mercy Corps, Save the Children, the Norwegian Refugee Council, the International Rescue Committee, Solidarities, and CHF International. These ten organizations provided 60-80% of the total amount of assistance reaching Darfur at that time (ACF, 2009). Later on, other humanitarian NGOs were expelled on the grounds they were acting against the Khartoum regime, which said it would handle most humanitarian aid from that point on.

In addition, humanitarian help in refugee camps acts as a magnet; it unconsciously adds incentive to migrate by populations in need of help. This increases migration flows, blurring the differences between war refugees, climate migrants, and economic migrants, and making it difficult for aid groups to satisfy demand. In addition, ethnic tensions in the region are seldom solved by NGO aid. Basic needs may be met, but underlying social tensions remain.

Lastly, capacity building is meant to let Darfur better handle its own affairs once the NGOs leave; however, it only reinforces the imbalance between different regions. By incentivizing migration into

camps, NGOs are undermining the capacity of those who do not or cannot migrate. Eventually, such people may be forced to leave their homes, as well.

3.3. A failure of the international community

What's more, the UN Security Council's action was only focused on the conflict itself, rather than on root causes. Efforts to address the conflict more thoroughly were stonewalled by UN Security Council members with economic ties to the oil-exporting central government, including France, China, and Russia.

Prunier (2007) acknowledged the failure of the international community, mentioning how "powerless in the face of this disaster" the UN and the AU (African Union) had been. They had only been able to produce "symbolic measures and stalling tactics" (ibid.) He then went on to explain how "totally ineffectual" the "under-equipped" African Union Mission in Sudan (AMIS) had been. He pointed out that "at least 35,000 men" would have been needed considering the size of Darfur, roughly that of France (ibid.).

That same year, UN Secretary Ban Ki-moon himself used the word inertia in describing a conflict that "claimed more than 200,000 lives during [the last] four years of diplomatic inertia." He wrote this when "Sudanese President Omar al-Bashir accepted a plan to deploy, at long last, a joint United Nations-African Union peacekeeping force in Darfur." (Washington Post, 16 June 2007). UNAMID, which was established in 2007, was in August 2011 the largest UN peacekeeping operation in the world involving 23,000 uniformed personnel and an annual budget, up to June 30, of more than $1.8 billion. However, it has since had to withdraw from the north, following the government's refusal to allow a temporary renewal of its mandate, despite concerted international pressure to do so.

In June 2011, Kyung-wha- Kang, UN Deputy High Commissioner for Human Rights, visited the Darfur Zamzam IDP camp. She described herself as "shocked" by the living conditions (in spite of her experience in such camps), and said that "the UN system, protection cluster, and humanitarian assistance" were "trying as best as they can" but admitted they are rather powerless considering the "enormous challenge presented by the high level of migration" (UN News Service, 24 June 2011).

4. STEPS FORWARDS: IMPROVING THE INTERNATIONAL RESPONSE

Migration is, for many Darfuris, the only viable adaptation strategy. NGOs and international actors should make migration one of several adaptation options. For example, by sharing seed technology that is more drought-resilient, NGOs can provide alternatives to migration for Darfuri farmers. Enhancing options for adaptation is much easier when interventions start early. In Darfur, much of the response came after a heated conflict was already underway. As a result, aid was limited to immediate and short-term assistance, instead of offering training on coping with drought. Such interventions trap refugees in a vicious circle where they grow dependent on the humanitarian groups and become more vulnerable and less autonomous.

1) Pre-emptive resettlement in anticipation of the drought could have been another adaptation strategy that could have helped mitigate the crisis. Indeed, most voluntary migration does not occur at the peak of a drought, but before or after (Gemenne, 2009). By encouraging people to move before conditions hit rock bottom, it may have been possible to move vulnerable populations out of harm's way and reduce ecological pressure. However, policymakers should be careful not to confuse such resettlement with the abusive forced displacements practiced in many parts of the world.

2) Two NGOs present in Darfur, Oxfam and the Danish Refugee Council (DRC), were involved in "peace-building linked to water and other basic services" until they were expelled (Bovey, 2008). Oxfam and DRC set up inter-tribal committees "to reinforce the local traditional authorities' capacities to solve and prevent local conflicts linked to basic necessities" (Danish Refugee Council, 2009). Prior to colonization, and until about some 60 years ago, the relationship between Arab nomads and African farmers was friendly and, as mentioned earlier, tribal councils addressed major issues of social conflict. The Oxfam/DRC project was geared at reviving these vital social organs. And it worked: local councils settled many conflicts, receiving help from the NGOs only when an additional mediator was needed (DRC, 2008). Local partnerships are more effective: Oxfam's IDP camps, for example, met basic water and sanitation needs in less time, with fewer resources and staff, than many other international actors, thanks to their community partnerships and their highly sustainable model of hiring national staff.

Some small NGOs have programs that could be implemented in Darfur. CARI (*Centre d'actions et de réalisations internationales,* Center for

International Actions and Achievements) for instance, helps African populations in arid areas in Sub-Saharan Africa and North Africa using agro-ecology. It works in desertification control, protection of oases, and access to water and sanitation (Burget, 2011). Again, as seen with Oxfam and the DRC, CARI works with local partners, as well as national and international actors, to implement the UN Conventions to Combat Desertification (UNCCD). Its expertise would benefit the Darfur region. But due to safety concerns, political tension with the Khartoum regime and the presence, often overwhelming, of international instances and major NGOs it is difficult for small NGOs first to be present, and when they are, to be heard as most are often kept out of meetings.35 Though such programs have a direct impact on environmental change (and therefore, on migration and displacement patterns in the region), their technical expertise has not been part of the international response (CARI, 2011). Similarly, designs for a "Great Green Wall" of trees along the Sahel-Sahara border are promising from an ecological perspective, but remain unimplemented politically in some places, including Sudan, which suffers from some of the region's fastest rates of deforestation.

CONCLUSION

The recent famine crisis in the horn of Africa reveals that the international community has learned little from Darfur: intervention is again happening only after the crisis is well underway, despite the consensus of experts that early action is essential. While vast sums are spent on humanitarian aid, little of it is being spent efficiently, in part because of this "crisis" mindset; a lack of coordination and collaboration is also problematic. Most of all, the entire humanitarian enterprise fails to account for deeper social processes of famine, drought, and migration in Northeast Africa, processes that in many cases do not adhere to national boundaries but are regional.[36]

In June 2011, the UN-backed International Conference on Water for Sustainable Peace in Darfur opened in the region. This conference was sponsored by the UN-AU peacekeeping mission in Darfur (UNAMID). Officials from the Sudanese government and the UN Country Team (UNCT) were involved. A $1 billion appeal was launched for 65 water projects across Darfur. So far this year, UNAMID has distributed 3,000 rolling water carriers to villages across Darfur. In the past year, it has procured 150 recycling waste-water treatment plants, drilled 43 wells throughout the region, and plans on developing 192 water sources (UN News Service, 24 and 27 June 2011). However, these resources are tiny compared with the region's vast size and population.

For all of the expert consensus about the causes and consequences of the conflict in Darfur, changing global mindsets remains elusive. "Crisis" brings international attention and funds, while sustainable development programs, many of them driven by smaller, less politically-powerful NGOs and civil society organizations with a community-based model, remain sidelined. The result is that the root causes of the conflict in Darfur remain. The land remains degraded by climate change and ecological disaster. Migration remains the only adaptive strategy for many households. Social tensions remain in place and methods for mediating conflict are few and far between. Considering such a situation, it seems likely that Darfur will continue to experience environmental pressure, no-choice migration, and weak social capacity for adaptation in the face of global climate change. To avoid such a fate, local, national, and international actors must change their paradigmatic understanding of the environment-society-migration nexus.

35. Interview with M. Persichino, over the academic year 2010/2011.

36. Ibid.

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-Map of ethnic groups in Darfur: http://africa.berkeley.edu/Sudan/Darfur/DarfurResources/HRW-MapDarfur.pdf

-View on slow reaction of international community to Darfur situation: http://www.blogicus.com/archives/the_slow_reaction_to_genocide_in_darfur_sudan.php

-The Great Green Wall: A sustainable development mechanism from Dakar to Djibouti: http://www.grandemurailleverte.org

-OCHA: Media Center for the UN Office for the Coordination of Humanitarian Affairs, Darfur Profile: http://ochaonline.un.org/SituationReports/DarfurHumanitarianNeedsProfile/tabid/3368/language/en-US/Default.aspx

-Behind the UN SC resolution: Chinese, Russian and Indian oil interests in the Sudan by Mikhaïl Zygar: http://www.globalresearch.ca:articles/ZYG409A.html

-Understanding risks and impacts of drought: http://drought.unl.edu/risk/impacts.htm

-CARI (French NGO specialized in agro ecology in dry areas). English site: http://cluster010.ovh.net/~cariasso/?lang=en

-IOM (International Organization for Migration). Migration in Sudan, A Country Profile 2011: http://www.iomdublin.org/mp_sudan%5B1%5D.pdf