

# HUMAN SECURITY AND CLIMATE CHANGE. VULNERABILITIES IN THE SAHEL

*Nicolò Sartori\*, Daniele Fattibene\*\**

## **The Different Components of Human Security**

Human security is a broad and multi-faceted concept that includes freedom from violence and war, political repression, poverty and hunger, diseases, and environmental hazards. Protracted crises and conflicts, natural disasters, persistent underdevelopment, epidemic and economic downturns are all considered factors that endanger human security by undercutting prospects for peace, stability, sustainable development and people's dignity.

Most, if not all, of these factors are present and strong across the Sahel, a huge climatic space ranging from the Atlantic Ocean to the Red Sea.<sup>1</sup> The region is among the poorest and least developed areas of the world, with more than 80% of the population in Niger and Burkina Faso living below the poverty line (3.10 USD/day), 77% in Mali, 64% in Chad and 60% in Nigeria (Torelli, 2017). Weak economic performances and high levels of poverty, along with explosive demographic trends – 60% of the population is under 25, most non-educated, unemployed and excluded from basic socioeconomic dynamics – make fertile ground for disenfranchisement, grievance and radicalisation across the region.

New threats to human security emerge in a regional context already characterised by exceptional political instability involving a combination of rebellions, Jihadist insurgencies, coups d'état, protest movements and illegal trafficking. From a security point of view, the Sahel is a laboratory of old and new forms of wars, violence and political conflicts in which

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\*Senior Researcher, Istituto Affari Internazionali

\*\*Researcher, Istituto Affari Internazionali

<sup>1</sup> For the sake of clarity, the present paper refers more specifically to the following countries: Burkina Faso, Cameroon, Chad, Mali, Mauritania, Niger, northern Nigeria and Senegal.

the boundaries between what is local and global, domestic and international, military and civilian, political and identitarian are blurred. Over the past few years a number of conflicts (e.g. turmoil in Libya, profound instability in northern Mali, armed Islamism in Burkina Faso and the escalation of cross-border violence by Boko Haram) have forced millions of people to flee their homes across the Sahel with a devastating impact.

The aim of this brief is to analyse the regional impact of climate change on the different components of human security, by clustering them into three macro dimensions: the environmental, economic and humanitarian dimensions. All these dimensions are deeply rooted and connected to one another and require a holistic, tailored and long-term response.

### **The Environmental Dimension of Human Security in the Sahel**

Covered in large parts by desert areas, the region is already one of the less hospitable spots for human activities, which during the centuries have nonetheless been able to adapt to these challenging weather conditions. However, the relentless expansion of the Sahara that occurred in the last decades, caused by a combination of natural climate cycles and human-made climate change, makes this situation even more critical.

This is why the region is commonly recognised as a hotspot of climate change, a trend that is expected to have an increasingly deeper impact on its future (UN, 2018), as highlighted by the United Nations (UN) Special Adviser on the Sahel Ibrahim Thiaw. The latest 1.5° Report published by the Intergovernmental Panel on Climate Change (IPCC) in October 2018 has further confirmed that the Sahel is exposed to several forms of fragility. According to the IPCC, “the exposure to multiple and compound climate-related risks increases between 1.5°C and 2°C of global warming, with greater proportions of people both so exposed and susceptible to poverty in Africa [...]” (Niang, I., et al., 2018).

In other words, since temperature increases in the region are projected to be 1.5 times higher than the global average, the risks generated by climate change contribute to endangering the already weak human conditions. Increasingly unpredictable and extreme weather patterns, frequent droughts and floods, longer and more frequent heatwaves and land degradation are causing yield losses, damages to crops and livestock mortality across the Sahel. This situation threatens the livelihoods of vulnerable rural and urban communities, with notable implications for their food and nutrition security and more for general health conditions. Based on UN data, out of the 300 million people currently living in the Sahel, 33 million women, children and men are food insecure, while 4.7 million children under the age of 5 suffer from acute malnutrition (UN, 2018).

The direct effects of climate change are exacerbating the already fragile human security context, acting as a powerful threat multiplier. Indeed, during the last decade a spike in

armed conflict and violence in the region has caused growing human suffering and humanitarian needs, forcing the displacement of entire communities and disrupting livelihoods (UN OCHA, 2018a). At the regional level, 24 million people are estimated to be requiring humanitarian assistance while, only in 2018, 4.9 million people have been displaced throughout the area (a three-fold increase since 2015) (UN OCHA, 2018a). In such a situation, the combination of poverty, competition over scarce agricultural resources, land and water degradation, and demographic growth creates an explosive mix heavily affecting the political stability, socioeconomic development and environmental sustainability of the Sahel region, with deep implications on the overall security of human beings. Thus, climate change will contribute to exacerbating other forms of grievances and insecurity that overall threaten the human security of millions of people living in these countries (“UN: Climate Change Must Be Addressed to Achieve Security in Sahel”, 2018).

All these trends have a powerful impact on agricultural productivity, a fundamental factor for the sustainability of economies and societies which are almost entirely reliant on basic rural activities. Land degradation and soil erosion, along with the decreasing availability of water, is causing yield losses, damage to crops, livestock mortality across the Sahel, increasingly threatening the food and water security – and more generally the health standards – of local communities, paving the way for people migrating from their villages in search of better living conditions.

### **The Economic Dimension of Human Security in the Sahel**

The Sahel region is one of the poorest areas in the world, with per capita gross domestic products (GDP) ranging from 300 USD to 800 USD a year, based on the different national realities. The World Bank (WB) 2018 Doing Business report ranks the Sahel countries among the least business-friendly (as all are in the last 50 out of 190 countries analysed), due in large part to poor human capital, weak governance, shrinking foreign investments, lack of infrastructure and a history of political instability (World Bank, 2018). The effects of climate change contribute to exacerbating this situation, limiting for instance the proactivity of local economic players, in particular the local small and medium-sized enterprises (SMEs), whose businesses are negatively affected by extreme weather events (i.e. droughts, floods, infrastructure endowments) and by the uncertainty determined by the rapid changes in place in the region.

The economy is essentially based on rain-fed agriculture, which contributes 40% of the combined regional GDP, employing more than 70% of the labour force in Niger, Burkina Faso, Mali and Chad, and slightly more than 50% in Mauritania. Other basic subsistence rural activities, such as livestock herding, represent up to 15% of the GDP of these countries, with the exception of Mauritania, where this share is larger. Despite being a fundamental input to the regional economies, the agricultural sector remains highly underdeveloped for a number of reasons. On the one hand, it is almost totally dependent

on very unpredictable rainfall levels per year, a condition that is expected to further deteriorate under the current climate change patterns; on the other, the use of external inputs such as seeds and fertilisers has worsened land degradation (Doso, 2014), whereas the absence of mechanised processes and the lack of access to markets make it very troublesome for rural small-holders to improve their resilience to external shocks. So far, more than half of the labour force and 78% of the working poor rely on agriculture for their livelihoods.<sup>2</sup> Therefore, there is huge potential for accelerating poverty reduction by boosting agricultural productivity. This does not necessarily mean expanding agricultural land but rather investing in small-scale irrigation technologies (e.g. motor pumps, treadle pumps, communal river diversions, and small reservoirs), infrastructures and access to finance. A study by the International Food Policy Research Institute (IFPRI) has highlighted that these small-scale technologies are highly cost-effective in semi-arid zones and could allow expansion of irrigated areas from 1 to 3 million hectares for the Sahel region (Xie et al., 2014).

The heavy reliance on an undeveloped rural sector not only has deep economic implications but is increasingly contributing to exacerbating the security dynamics in the region. For instance, competition between farmers and herders over scarce resources, coupled with mounting economic, environmental and demographic pressures, in the last few decades has turned mutually benefitting forms of rural cooperation into deadly violence, transforming marginalised herders into fighters in most African conflicts, including those in Chad and Mali (Tall, 2018).

International remittances represent another fundamental economic input for the region, as they largely contribute to the sustenance of communities at home, and often drive patterns of local development and the provision of basic services. This is for instance the case of Senegal, where migrants' remittances represent the first source of foreign currency in the country, or of Nigeria, where the estimated value of diaspora remittances is worth more than 20 billion dollars per year, which is around 8% of Nigerian GDP (Raineri & Rossi, 2017). The contribution of remittances to local development opens a debate on the drivers and patterns of economic mobility within and from the region, and on the countries that effectively benefit from these financial flows. Although in the mainstream public discourse, local underdevelopment and massive poverty are considered key drivers for migration from the region, deeper analysis shows that higher levels of economic performances do not automatically result in a reduction of people migrating but, rather, might be associated with larger migration patterns. This seems confirmed by the fact that the largest proportion of migrants arriving irregularly in Europe does not leave the poorest countries in the region – Niger, Chad and Burkina Faso – but originate from more developed countries such as Nigeria, Senegal and the Ivory Coast. In these conditions,

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<sup>2</sup> Interviews conducted by the authors with the International Food Policy Research Institute's staff.

the poorest areas of the Sahel represent more a key hub for migrants directed to Europe rather than the epicentre of migration flows northward, a situation that exacerbates the state of underdevelopment of these areas.

### The Humanitarian Dimension

Conflict is already one of the main drivers of humanitarian emergencies in the Sahel, in particular in Mali and the Lake Chad Basin. Increased hostilities risk further worsening the humanitarian situation in the region. In recent years, armed groups like Boko Haram have exacerbated the situation, displacing people from their land, and similar events have been registered in Burkina Faso and Niger-bordering Mali. Protracted violence has exposed civilians, including internally displaced persons (IDPs), refugees and host communities to risks and violations such as limitations on freedom of movement and arbitrary and extended detentions. Sexual and gender-based violence (SGBV) is widespread in communities affected by crises but is underreported due to fear of reprisals and stigmatisation. Women, girls and boys are the most vulnerable to SGBV. Children are also exposed to risk of recruitment, violence and exploitation (UN OCHA, 2018a).

Against this backdrop, hunger is one the major challenges increasing the Sahel's vulnerability and instability. The different droughts that have hit the region approximately every three years since 2011 have left dozens of millions people facing hunger and malnutrition. A joint report by the Food and Agriculture Organization (FAO), UNICEF and the World Food Programme (WFP) highlighted that these droughts coupled with other factors such as irregular rainfalls, local deficits in agricultural production, border crossing restrictions, market disruptions caused by food prices spikes or fluctuations, armed attacks, banditry and intercommunity conflict are worsening the food and nutrition security situation of specific livelihood groups in all countries. The disruption of provision of basic social services has affected especially vulnerable groups of the population such as children, women and IDPs, with more than 750,000 IDPs in Burkina Faso, Chad, Mali, Mauritania and Niger (FAO, UNICEF, WFP, 2018).

The latest State of Food Insecurity in the World by the FAO (FAO, 2018) highlights that there are more than 26 million undernourished people living in the Sahel,<sup>3</sup> with more than 4 million children under five stunted.<sup>4</sup> Against this backdrop, the food security situation is alarming in many areas of the Sahel region, with 24 million people in need of emergency food assistance (FAO, UNICEF, WFP, 2018). The report clearly states that conflicts and climate change are set to remain among the key drivers of food insecurity in the next decades, impeding the achievement of the ambitious goals set in the UN Agenda 2030. It is no coincidence that food (in)security is higher in those countries coping with internal

<sup>3</sup> Eritrea is not included as data was missing

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political instability or conflicts (von Grebmer et al., 2014) with a proportion of undernourished people that is almost three times as high as in other developing countries (FAO, 2016). Additionally, in another report, the FAO has pointed out that post-conflict countries with high food insecurity are 40% more likely to relapse into conflict. The Arab Spring has epitomised the interesting linkage between food security, social unrest and migration flows. “Food riots” (Barbet Gros & Cuesta, 2014) blew up in many countries in the region, especially as a result of food price spikes as well as the removal of food and fuel subsidies. What is even more dramatic is that in the case of wars, humanitarian agencies struggle to access and reach the most vulnerable people, hence it is very likely that these figures represent only a portion of the entire picture.

These trends will remain and be further exacerbated in the coming years. Poor rainfalls have already provoked pasture and water shortages in Burkina Faso, Chad, Niger, Mauritania and Senegal, by also forcing pastoralist groups (who represent almost a third of the Sahel’s population) to flee their regions and communities. This has led to an increased competition of already limited resources, fuelling inter-community tensions and increasing food prices (UN OCHA, 2018a). In this context, food and nutrition security is also further deteriorated by poor access to basic services such as healthcare, sanitation or education. The higher rates of children dropping out of schools are particularly worrisome, as education can play a decisive role in boosting food and nutrition security of the different communities (UN OCHA, 2018a). Providing school meals not only helps children in need but also teaches parents about nutrition, so they do not choose negative coping strategies. During humanitarian crises, many households sell off assets, eat less or migrate in search of jobs or food, while others consider joining terrorist groups that offer a monthly stipend or protection, taking advantage of people’s desperation (Nallo, 2018).

Against this backdrop, the FAO, UNICEF and World Food Programme (WFP) have identified some key immediate joint actions to be taken to effectively improve the food security of the region. First, it is essential that all Sahel countries have effective response plans and contingency plans to cope with emergencies and increase national and local resilience. Second, more data is needed to assess and monitor at country level by the pastoral and livestock situation. Third, all countries need to implement the UNICEF/WFP approach for integrated management and prevention of acute malnutrition among children of 6-59 months and pregnant and lactating women and girls. In order to achieve these goals it is essential to support national and regional structures to design and implement appropriate policy actions as well as to have better coordination among humanitarian and development actors on the ground, for instance by establishing active clusters or technical working groups.

## Future Challenges

The sections above have highlighted the different forms of fragility that are affecting the Sahel region by posing serious threats to the human development of its inhabitants. Climate change is dramatically set to become an increasingly stronger threat multiplier by exponentially increasing the catastrophic effects of global warming on human beings and other forms of life. The increasingly unpredictable and extreme weather patterns, (i.e. persistent droughts and diminishing rainfalls), the vulnerability of the agricultural sector due to poor infrastructure and land degradation, the fragility of state structures, and the spread of violence are likely to continue in the future and to mutually reinforce one another. These dynamics risk bursting into further instability, especially in urban areas, where local authorities will have to meet the demands of a growing mass of new citizens moving from ever poorer rural areas.

According to the Climate Risk Index (CRI) published by German Watch, most of the Sahel countries rank at the very bottom of the list (meaning they are characterised by higher climate-related vulnerability), with only Niger unexpectedly exempt from major climate threats (Eckstein et. al, 2018).<sup>5</sup> Yet, these trends are destined to become even more critical. Despite being useful in assessing the impact of climate change in the area, CRI is not able to fully assess the impact of climate-driven environmental degradation in the region. Not covering key parameters such as long-term decline in precipitations, it fails to evaluate the effects of climate change on important human security factors, like soil erosion, agricultural outputs, and the availability of drinking water.

In this context, the international community is called on to work closely with the Sahel countries in order to provide a coordinated and effective response to all these challenges. In the short-term, it is pivotal to create mechanisms that enable quick intervention during humanitarian crises by working together with the humanitarian actors present on the ground and who can alleviate the suffering of the most vulnerable groups of the population. In the long term, it will be essential to work on several angles.

First, it is important that international donors and regional organisations (i.e. the European Union [EU], the African Union [AU]) help local governments and communities to develop the needed human, administrative and financial capacities to address the root causes of human security, including climate change-led disasters, and to respond promptly on the ground. Second, it is essential to increase the resilience of the agricultural sector to prolonged external shocks. The Sahel countries need to be supported by international donors to launch more modern irrigation systems as well as less invasive fertilising

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<sup>5</sup> The analysis is based on the effects of weather-related events (i.e. droughts, storms, floods) on four different parameters: the number of total losses caused, the number of deaths, the insured damages, and the total economic damages.

techniques that allow smallholder farms to work more than three months during the year, hence boosting agricultural productivity without producing further land degradation.<sup>6</sup> The creation of the right enabling environment is key to attracting investments from the private sector, in particular road, energy and communications infrastructure, as well as access to micro-credit. In this respect, it is worth mentioning the role that can be played by the so-called Sahel Alliance, launched in July 2017 by France, Germany and the EU, soon joined by the WB, the African Development Bank (ADB) and the UN Development Programme and other single countries (Denmark, Luxembourg, Italy, the Netherlands, Spain and the United Kingdom). The Alliance will implement over 600 projects by 2022, with global funding of 9 EUR billion (Alliance Sahel, n.d.). Finally, it is essential to take advantage of stronger concerted efforts at the regional level, by fully exploiting the potential of some already existing instruments such as the AU's Comprehensive Africa Agriculture Development Programme (African Union, 2018), as well as the G5 Sahel. In this respect, the international donor conference held in December 2018 to fund the G5 Sahel Plan of Priority Investments is an important step to embrace a broader vision of human security that is not linked merely to security but includes the fight against poverty, youth unemployment and climate change, by attaching strong importance to economic development (G5 Sahel, 2018).

<sup>6</sup> An interesting example of sustainable agricultural intensification in the region is represented by the FAO-led programme entitled Farmer Field School. For further information, please see [FAO.fao.org/farmer-field-schools/it/](http://FAO.fao.org/farmer-field-schools/it/)



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