THE SOCIAL AND ECONOMIC ROOTS OF THE WAR IN THE SAHEL

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Monthly reports

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Despite appearances, the agriculture and mining industries have several things in common, not least the race to scale up and up. This is old news in mining. But, contrary to perceived wisdom, the same is true of farming, at least when it comes to supplying global markets. Huge farms supply the agri-food industries and supermarkets' purchasing groups. These farms often focus on producing a single product. They are not scattered randomly but concentrated in a small number of highly specialised agricultural regions.

In the middle ages, Europe was dotted with small lead, zinc, tin, copper and other mines. Having become too small, isolated and unprofitable, these mines and associated industrial units in the Massif Central region of France, Thuringia in Germany and Bohemia in the Czech Republic barely survived the First World War. Despite their glorious pasts, the mines in the coal fields of northern France, Belgium and Great Britain and even the Ruhr were in turn shut down one by one after the Second World War.

The only mines that survive worldwide are gigantic operations in places like Canada, Chile, Mauritania, South Africa and Australia. These are open-cast mines that process enormous quantities at very low production costs. They are linked by railways to specialist ports where large cargo ships dock to load.

The same kind of mergers are now happening in agriculture, albeit a few years after they happened in the industrial sector. Today, the big agricultural production areas supply world markets. They are made up of huge holdings covering tens or even hundreds of thousands of hectares. For example, 47,000 Brazilian farms are more than 1,000 hectares in size (a quarter of them are over 10,000 hectares) and account for nearly half of the farmed area in the country, while 5,700,000 farms of less than 100 hectares farm less than 21% of the farmed area. In Ukraine, one holding manages over 600,000 hectares and several firms in the hands of Russian oligarchs are over 1 million hectares in size. These massive businesses are fully equipped, managed rationally, and obviously employ salaried workers. Harvests are transported to loading ports by water, train or a constant toing and froing of trucks. This happens on the North American plains, via the Mississippi and St Laurence rivers, in the "Black Sea" countries where produce is taken to ports on the Sea of Azov, and in Argentina, where the Rosario terminal on the Paraná River is the destination.

But despite their size, these production areas cover only a fraction of cultivated land worldwide and satisfy only a minority share, albeit a large one, of human dietary needs. The vast majority of these needs are met by hundreds of millions of very small holdings. Of course, these micro-farms play only a very marginal role in supplying world markets. But they are essential for feeding the general populations of rural areas and even neighbouring cities.

The main export-focused agricultural regions

A few large production areas dominate all these international markets, whether for grain, sugar, oilseeds or dairy products. And the same is true of bananas, avocados, coffee, cocoa and tea. This is because each of these large crops comes from a very small number of highly specialised regions able to supply huge quantities of products that comply with strict standards at very competitive prices. It is these precise characteristics that are sought by the large traders, agri-food manufacturers and purchasing groups in buyer countries and ultimately the retail sector.

Of course, consumers benefit in turn, year round, from a regular supply of low-price, consistently high-quality produce. But obviously this produce might come from the other side of the world, because the market decides.

Let's take the case of **wheat**. This grain crop, widely grown and eaten around the world, needs a lot of space. But most of the areas supplying the world market with wheat are located in regions that are particularly conducive to this crop because of their soil and weather conditions and arable production arrangements. This applies to the North American plains between the Great Lakes and the Rocky Mountains (nearly 20 million hectares of wheat fields), the Pampas in Argentina, the black-soil regions of Ukraine and southern Russia, and the plains of the European Union.

In 2019-20, global wheat production is predicted to total 765 million tonnes. Around 175 million tonnes (22.6%) might be traded internationally. Out of this total, the Black Sea countries are forecast to export 60 million tonnes, the US and Canada 24 to 25 million tonnes each, and the EU nearly as much (including 11.7 million tonnes by France). To this we can add Argentina, which exports 14 million tonnes, with a similar amount from Australia, although it is, even more so than other countries, exposed to very frequent unpredictable weather conditions. In total, this handful of countries will export 162 million tonnes of wheat, or nearly 93% of the global total.

On the other side of the scales, there are many more importer countries. And some have large trade deficits as a result of growing needs and structurally weak harvests. For example, in 2019-20, the five North African countries will likely import 28 million tonnes of wheat. But the Middle East, Indonesia, South Korea and Japan are also big importers, while sub-Saharan Africa's wheat imports are growing rapidly.

If we move on to all grains except rice, we need to add to this small group the major corn exporters, who are, essentially, besides the US, Brazil and far behind it South Africa.

The **soya** market is even more concentrated because three countries, the US, Brazil and Argentina, account for almost all production and exports. China takes in 60% of these, and the EU

a good proportion of the remainder. The same is true for **palm oil**, which is essentially produced in Indonesia and Malaysia, and mainly imported by China and India.

The market for **dairy products** is dominated by New Zealand and the EU, with the US a distant third.

The production of exotic fruit, vegetables and flowers is also very concentrated. Take **bananas**. They are consumed in large quantities in the US and Europe and are produced by huge plantations in the small, rich coastal plains of four Central or South American countries (Costa Rica, Guatemala, Colombia and Ecuador). If we add the Philippines, these five countries account for 83% of international banana production. The plantations and trade are controlled by large consortia such as Chiquita, Dole and Del Monte, which each cultivate tens of millions of hectares.

Ghana and Ivory Coast, meanwhile, account for 60% of **cocoa** production, while **coffee** production is dominated by Brazil, Vietnam and Ivory Coast.

This concentration of agricultural production therefore offers major and obvious advantages for big farmers, middlemen and processors, but also, at least in the short term, for consumers. However, it also presents serious drawbacks.

A very fragile global balance

According to the FAO, our food system now relies on just nine plants, from which most of our everyday foods are derived. That is a very small number when you consider that there are so many other plants on the planet that have been cultivated in the past, but are now being grown less and less or not at all. Of course, these nine plants have been the focus of all the research intended to improve varietal characteristics. The yields achieved for others are poor and are scarcely improving. This is true of millet and sorghum, despite the appeal of these crops in drought-affected regions, and of numerous legumes and tubers.

Humankind would therefore be at the mercy of a large-scale health incident were one of these plants to be ravaged by some devastating parasite.[1] Without even imagining such a catastrophe, the concentration of sources of supply of major agricultural products increases the risks resulting from routinely unpredictable weather conditions. A severe drought in Russia or Ukraine, for example, would cause prices to spike on the grain markets, to the great misfortune of disadvantaged populations in importer countries. Speculators would of course profit, as was the case when prices rose sharply in 2008.

This fear of soaring prices explains the importance of the grain stocks that China and India constantly maintain. But there is another source of consumer protection in the event of a prolonged crisis. This is the 375 million tonnes of grains (more than 10% of the global harvest) that is used to produce ethanol every year, largely in the United States. This choice currently helps to support domestic prices in America, but also globally. If necessary, a change of allocation in favour of human consumption is always possible.

[1] In the livestock sector, the swine fever that has been sweeping through Chinese and Vietnamese farms in recent months has pushed up the price of pork on Chinese markets by 65%, and by almost as much on international markets.

A bipolar global agricultural sector has taken root

The agricultural world is now divided between two large and totally opposed segments:

- On the one hand, a small number of huge agricultural holdings which are clustered in highly specialised production areas and are mainly focused on exports.
- On the other hand, hundreds of millions of micro-farms headed by an overabundant, under-trained, unproductive family labour force that consumes most of what it produces but nonetheless meets the food needs of nearly 80% of the world population.

It is true that in Western Europe, Quebec and southern Brazil, for example, there are still plenty of mid-sized farms. With the help of cooperatives, they are trying their best to escape the duality that reigns everywhere else. But at a global level, they are exceptions which are struggling to grow and in many cases even to survive.

Competitive global agriculture tends to be concentrated in the large, fertile, well-watered or easily irrigable plains. As the markets they supply grow, this agriculture needs ever more space. The reclamation of land farmed by small farmers is possible, but it is a slow and complex process. It is easier to clear forests, as is happening in the Amazon, the Gulf of Guinea and south-east Asia.

In southern and eastern Asia, Africa and the Andean countries, large agricultural regions are still farmed by hundreds of millions of small farmers. They consume their own produce or sell the surplus on local markets, and are largely excluded from international trade, partly because the quantities available are tiny and of very uneven quality.

However, there are exceptions. For example, production of cotton, coffee and cocoa is still largely controlled by small farmers provided they have enough space to devote, in addition to their subsistence crops, to one or other of these cash crops. This is true of cotton from southern Mali to northern Cameroon, cocoa in Ghana and Ivory Coast, and even coffee in Mexico, Ivory Coast and Ethiopia. But this produce is nevertheless bought by traders or large agri-food companies like Nestlé. Companies with de facto monopolies. The buyers set their price, as low as possible of course. Having no control over prices and mediocre levels of productivity, these small producers' revenues are very low, so they achieve only a very modest additional revenue stream and cannot modernise.

Most of global trade in (and processing of) agricultural produce is controlled by four international traders: the main one, ADM (Archer Daniels Midlands Company), followed by Cargill, Louis Dreyfus Négoce and Bunge Limited. These companies own hundreds of ships (300 in the case of Cargill) and factories around the world (270 in the case of ADM plus 420 buying facilities). They have hundreds of thousands of employees (Cargill has 143,000, Bunge 25,000). Only

multinational companies like Unilever or Nestlé can, in part, do without the services of these giants.

Ineffective agricultural policies

How can a coherent agricultural policy be implemented when the sector may encompass a small number of huge capitalistic operations but also millions of micro-farms that often scarcely exceed one or two hectares in size? Governments waver between contradictory or unsuitable measures. The situation is especially complicated when these two types of agri-business co-exist in one country. Faced with this dilemma, the Brazilian government even ended up creating two ministries, one for the big farms, the other for small producers.

But most often, agricultural policies favour industrial farming because the big operators have lots of lobbying clout, but also because their farms are significant cash cows. This is the case in Brazil of course, but also in Argentina, Russia and Indonesia, for instance. Even in countries where small farms are very dominant, governments openly favour the big industrial plantations.

It is true that international organisations like the IMF and World Bank have long operated like this. They have forced countries in financial difficulties to eliminate subsidies for small farms. In contrast, these organisations have recommended the development of plantations aimed at international markets.

Conversely, a **policy of food sovereignty** could enable countries suffering shortages of basic products to improve their self-sufficiency rates and partly escape the conditions imposed on them by the big traders. Such a policy is defined as an international right allowing a country, or a group of countries, to adopt a policy of aid to its farmers (especially small farmers) and protection at its borders. It entails a complete overhaul of the rules of the World Trade Organisation (WTO), which forbids these practices. Of course, exporter countries are vigorously opposed.

A shake-up of a large country's economic policy might disrupt conventional trade patterns. The trade war between China and the US has led the Chinese government to source its soya from South America, thereby undermining the prospects and revenues of North American farmers. Similarly, after Russia's invasion of Crimea, an embargo was placed on European agricultural products, disrupting trade patterns even though they were profitable for both parties.

Environmental protection is the elephant in the room

Eager to increase their profits and encouraged by steadily growing international markets, the bosses of large farms are striving to expand their cultivated areas wherever possible. The various methods at their disposal include appropriating land cultivated by neighbouring small or medium-sized farms[2], clearing forests as in Brazil or south-east Asia, returning abandoned land to cultivation in Russia, and repurposing grassland in Argentina.

The same opportunities are rarely available to small farmers because very often all the available land is already cultivated. Conversely, many are forced out of business, in particular by

[2] It is known that in sub-Saharan Africa in particular, some governments have "granted" foreign investors the right to farm land previously occupied by small collectives of sedentary farmers or nomadic breeders, without worrying about the opinions of the interested parties.

prolonged drought. In addition, many nomadic herders have seen their grazing land deteriorate to such an extent that they are having to give up livestock farming and their ancestral ways of life. If small farmers abandon these lands, they will end up as wasteland, desert, or in the best case scenario, forest. There are probably tens of millions of hectares of land facing uncertain, if not definitively compromised, futures.

Whether as a result of profit-seeking by large companies or overpopulation in rural areas, a growing number of large one-off or incremental land clearances are occurring wherever possible. Neither large companies nor small farmers worry about protecting wooded areas or natural grazing land. On the contrary, deforestation is gradually destroying large forests and high-quality grassland is being replaced by cash crops, as sub-standard grazing land is abandoned.

In their routine business activities, large operators and small farmers alike overlook environmental protection, the fight against climate change, or biodiversity. Given this situation, it will be very difficult to make any of them change their behaviour in the immediate future in order to combat climate change. The agriculture and agri-food sector is responsible for 30% of greenhouse gas production. It is unthinkable that it should not contribute to efforts made by society as a whole. But so much remains to be done to force the various stakeholders to play their part.

As small farming struggles to modernise, if it is not being marginalised entirely, large capitalistic agriculture is booming. Holding sway in large production areas, it supplies the majority of solvent markets, and international markets in particular. Yet these are booming precisely because population growth, increasingly variable weather conditions and rising living standards in some countries are combining to keep demand for agricultural produce growing.

In the 1980s, the United States in effect imposed their "green power" on the rest of the world. Should we fear the prospect of other future attempts to establish agricultural hegemony? For example, if the Black Sea countries consolidate still further their position in the arable sector, will they be satisfied with leveraging their low production costs to gain a little extra market share? And what might the consequences for international trade be of a far-reaching agreement between two giants like China and Brazil?

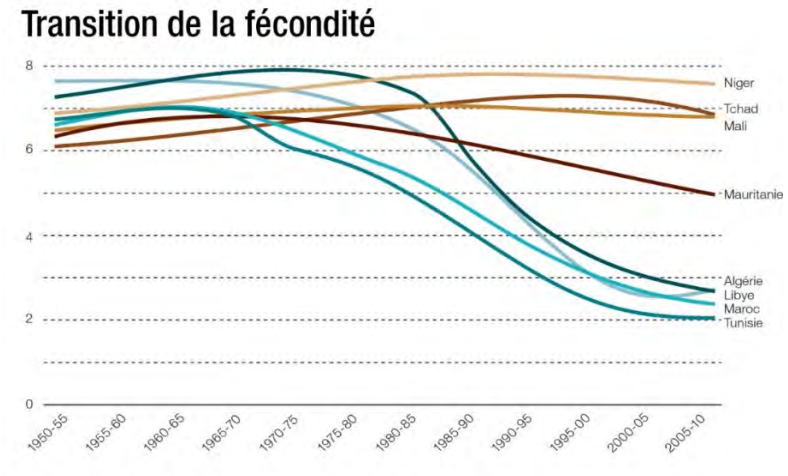
More generally, will industrial agriculture alone, in other words without the input of small-scale farming, be able to meet the inevitable future rises in demand? The answer is probably "yes" in the short term, but it is much less likely to do so in the longer term.

At the start of this decade, France has been at war in the Sahel for seven years, and it is difficult to see a way out of the conflict. The objective of this analysis is to issue a reminder that, after the desert war in the north of Mali, the Jihadist expansion southwards and the rapid proliferation of armed incursions over the past three years into agricultural areas in central Mali, northern and eastern Burkina Faso and the north-west of Niger, are taking place within a context of poverty, fragility and poor local governance. Agriculture in these regions is fragile, with low yields. It is also at threat from global warming and food insecurity. The analysis will focus on the three countries which are at the heart of the war: Mali, Burkina Faso and Niger.

The war in the Sahel is taking place as much in central Mali as in Burkina Faso, extending beyond its Jihadist trappings to encompass a range of rural insurrections[1] and inter-community conflicts. These conflicts are linked to unchecked population growth, massive under-employment, environmental degradation, land tenure disputes, and economic and social issues which better local governance and well-designed development programmes may have been able to defuse. This entire Sahel region is a victim of its own lack of infrastructure connections to the outside and the weakness of its industry.

Out of control population growth is becoming a ticking social timebomb

Population growth is completely out of control with extremely high fertility rates (around 7). These rates are virtually unchanged since independence and are imprisoning these countries in a poverty trap. The most worrying case is that of Niger, where the population has grown from 3 million, at the time of independence, to 21 million today. And population growth rate is still increasing, reaching 4% per year - a world record. Projections for 2035 in Niger (with at least 40 million inhabitants) are very worrying in terms of agricultural or industrial potential. In all the countries, this population growth is leading to unmanageable social costs, particularly when it comes to healthcare and education.



Fertility transitions

[1] *For more on this, see: "Les violences armées au Sahara- du Djihadisme aux insurrections" ("Armed Conflict in the Sahara - from Jihadism to Insurrections") Mathieu Pellerin, IFRI, Nov 2019.*

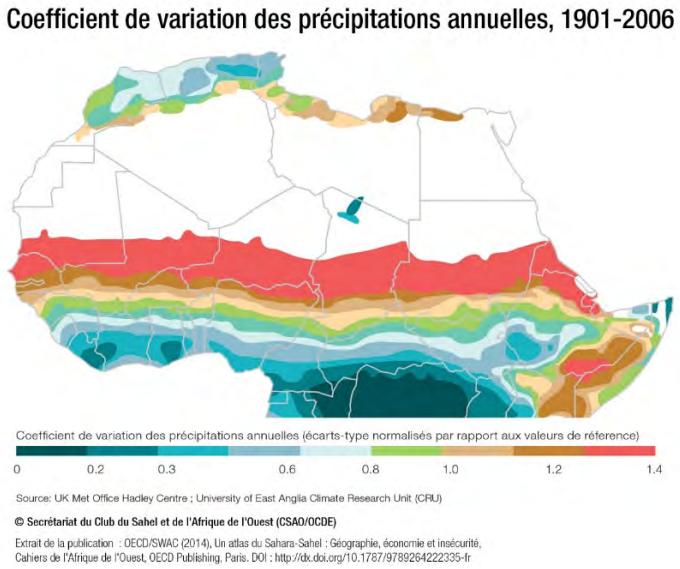
A fragile and very low-yield agriculture

Niger is the least well-equipped country when it comes to agricultural production capacity. Only 8% of its land is farmed. Mali, however, has good irrigation potential in the Inner River Niger Delta. In Burkina Faso, the question of land tenure is becoming particularly fraught. It is fuelling a conflict seen locally as a confrontation between Mossi farmers and Fulani herders (this is a very reductive understanding, however). The entire region suffers from a very low-productivity economy, essentially based on extensive agriculture which is subject to recurring climate shocks. This agricultural sector, on which 70 to 80% of the population depends for a living, remains very unreliable. Because of climate-related uncertainties, the intensification of rainfed agriculture is currently very risky and unlikely to generate much profit outside of the outskirts of urban areas, and consumption of chemical inputs is very low (6 to 10 kg/ha).

A very unreliable agriculture

Despite these disadvantages, agricultural production in these three countries has, overall, met the needs of a rapidly growing population, which is remarkable given the poor agro-climatic conditions. Apart from their immediate effects on the sector's levels of production and the consumption of agricultural households, the impact of these shocks continues to be felt for several years, through decapitalization of farms, depriving them of their productive tools, through loss of tax base and a weaker currency for the country (due to decreases in exports and increased imports of foods) and through the need to divert substantial financial resources towards managing crises instead of financing the development of the country.

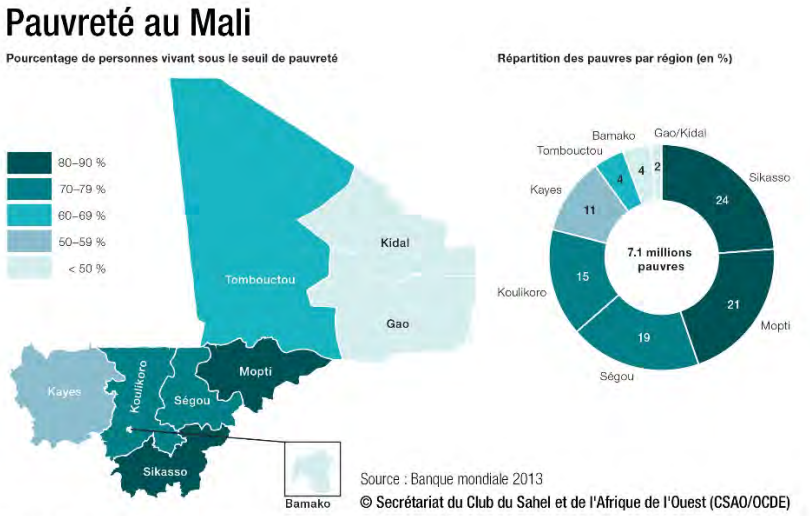
Coefficient of variation for annual precipitation, 1901-2006



Poverty accentuated by population growth

Despite these good levels of agricultural growth, poverty has increased in absolute terms in these three countries, even though it has fallen in percentage terms. In Mali, it is astonishing to note that poverty is more severe in zones of high agricultural potential (clearly poorly exploited) such as Mopti or Sikasso than in semi-desert regions such as Kidal and Gao which mainly rely on various forms of trans-Saharan trade and trafficking or the Kayes region, which benefits from significant migrant remittances. In Niger, nine out of ten people on low incomes live in rural areas.

One of the deciding factors in rural poverty levels seems to have been the strong increase in population density in the south, which has reduced the sizes of farms and thus agricultural production and revenue for each household. [2] It should be noted that the regions where the incidence of poverty is highest are those in which the greatest proportion of the population depends on agriculture, and in which family size and dependency ratios are also high.



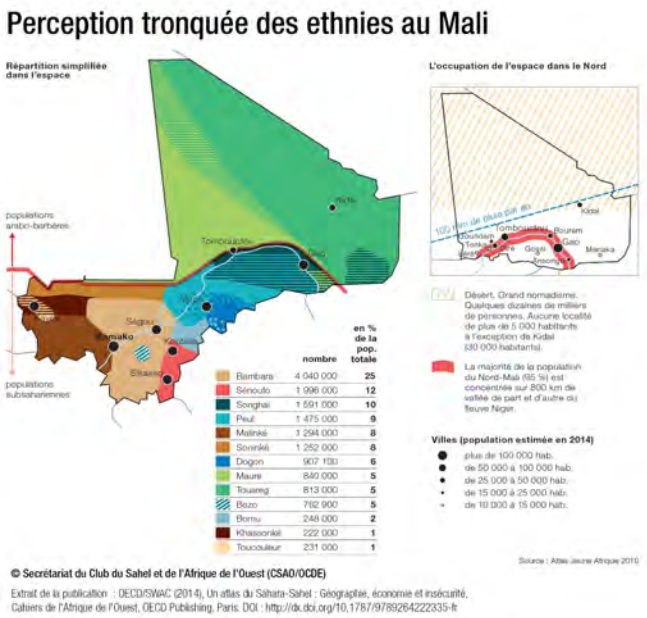
Extrait de la publication : OECD/SWAC (2014), Un atlas du Sahara-Sahel : Géographie, économie et insécurité, Cahiers de l'Afrique de l'Ouest, OECD Publishing, Paris. DOI : http://dx.doi.org/10.1787/9789264222335-fr

Poverty in Mali

Social and inter-community relations weakened by population growth

The extensive farming system relies on rotations with long fallow periods traditionally fertilised by transhumant herds. It was well-adapted to (and probably optimal within) a low population density context. It was still viable for densities of around 40/km2. But in regions in which levels of rainfall make rainfed agriculture possible (over 350 mm), population density is frequently in excess of 100 or even 150/km2. Within these conditions, because of lack of space, fallow periods are becoming shorter, and in the most densely populated areas, they are disappearing altogether, to the detriment of soil fertility. The shortening and disappearance of fallow periods is now a constant source of conflict between farmers and herders whose routes are blocked by the extension of farmlands.

[2] *Analysis by Jean Paul Chausse - appendix 7 of the "Niger 2035 Une stratégie durable et inclusive" ("Niger 2035 A Sustainable and Inclusive Strategy") report, Ministry of Planning, Nov 2016*

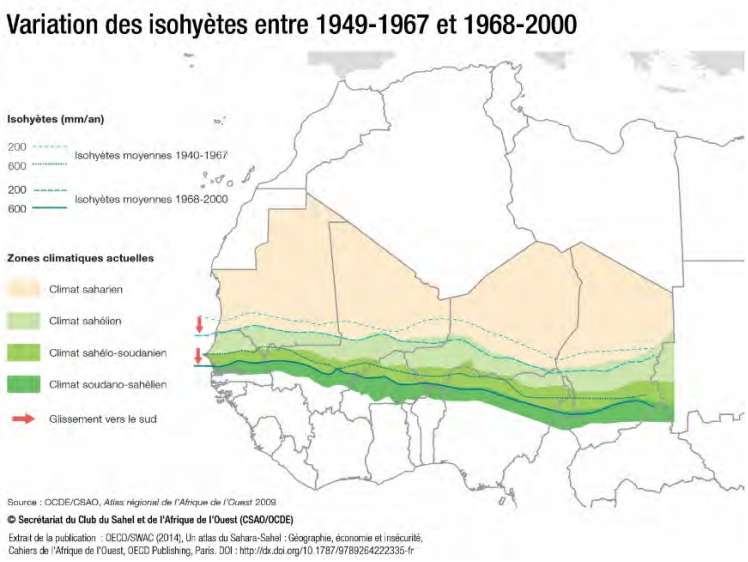


Truncated perception of ethnic groups in Mali

An agriculture under threat from global warming

Within these conditions, it should come as no surprise that living conditions in rural areas have become particularly harsh. Villages rarely have access to electricity[3] and suffer from poorly maintained access tracks. Yet, excluding cotton production which, in Mali and Burkina Faso, is a success, there are no mechanisms or institutions which are able to rapidly make a widespread difference to living conditions in rural areas. One particularly worrying point is the southward movement of isohyets and global warming, which will represent a threat to this agricultural system by 2035 by making rainfall less reliable. Yield losses in the range of 20 to 30% are thus expected for millet and sorghum.

[3] *Less than 0.2% of Niger's rural population has access to electricity.*



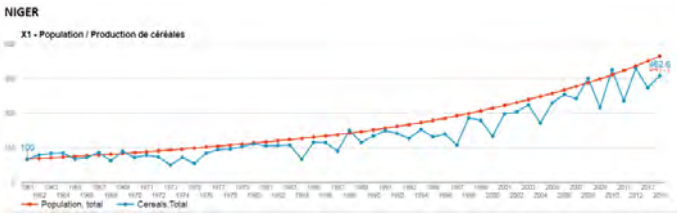
Variation in isohyets between 1940–1967 and 1968–2000

A precarious food security situation

Niger is the country most at risk from food insecurity. It is the most cut off and has the smallest amount of farmland. Its cereal production is essentially made up of millet (75% of total cereal production) and sorghum (22%). The rest is rice. Overall in Niger, the growth of the main food crops remained slightly below population growth over the 1980-2018 period, with a regularly growing deficit made up by imports from Nigeria and Benin, or Asian countries for rice.

Throughout the entire subregion, many rural households suffer from considerable levels of food insecurity. It is estimated that over 50% of the population of Niger suffers from food insecurity: seasonal, temporary (following a shock) or chronic. Although the situation has improved over the last decade, extreme chronic food insecurity (daily calorie intake below 1,800 calories/day) still affects over 20% over the population of Niger. In the three countries studied, many rural households cannot produce enough to meet their own food needs and therefore have to purchase a proportion of their food.

Comparative development of population and cereal production in Niger



Major risks ahead

The cereal markets in these three countries are highly integrated (both with one another and with markets in neighbouring countries). This integration plays a major role in food security in regions with low production potential or suffering from insufficient rainfall. The current system therefore works relatively well, but the shortfall in cereal production in Niger during years of regular rainfall can become a major issue in the event of a drought hitting not just a limited area, but the entire subregion, as was the case in 1974 and 1984. Niger remains the weakest link in the Sahel in the event of a major drought hitting the entire subregion.

A food crisis caused by insecurity

Today, food security problems on a subregion level are essentially the result of more general insecurity. Since 2015, rural populations in insecure areas have been moving to urban areas which seem better-protected to them. Farmers are no longer farming their land because harvests are pillaged. Markets are abandoned for the same reason. Traders, who are subject to extortion and threatened with kidnapping, are fleeing. People are taking refuge in cities and refugee camps. They are fed by their extended families or by the PAM.

Young people without jobs or opportunities

As rural areas continue to fall behind urban areas, where basic services are available (primary and secondary education, healthcare, electricity, drinking water, etc.), the rural exodus and emigration will only continue to accelerate. But urban population growth within the context of stagnation in the formal job market and low productivity in the informal sector has led to a ticking urban timebomb. This bomb exploded for the first time in Burkina Faso during the 2014 riots.

These risks are amplified by the backdrop of particularly active Salafi and radical Islamist movements in rural areas. They are also increased by opportunities offered to young unemployed people to join the organised crime networks which control regional trafficking with the Maghreb and by temporary or permanent enrolment in armed groups.

Cocaine flows

Dysfunctional administrative and public institutions

There are many reasons why public authorities are ineffective. However, they are generally related to recruitment and human resource policies which do little to take into account merit or efficiency. This situation is particularly worrying because these three governments do not have access to the resources or institutions able to define and implement public policies and plans of action to meet the challenges which these countries face.

An extensive farming system which is reaching its limits

Throughout this entire subregion, growth in agricultural production has relied on an expansion of farmland. Until now, an abundance of land made extensive farming sustainable. With population growth leading to a decrease in available land, the pressure on farmland is now very high. The surface of farmland per family is small (4 hectares on average) and is gradually shrinking. It is now impossible to imagine a rapid reduction in rural poverty and growth in job opportunities without a full-blown agrarian revolution.

And yet, there is no lack of solutions

Intensification is starting to happen around cities, with an increase in the use of inputs (selected seeds and, to a lesser degree, fertilisers). But this initial phase is limited to zones in close proximity to urban markets or served by roads and maintained tracks. Outside of cotton-producing areas, and various one-off operations financed by international aid, there are no ambitious agricultural intensification programmes with crop-livestock integration, feedlot operations and animal manure

No end in sight for the war

This is the context in which the war in the Sahel is developing. The Jihadist movement is expanding within a context of massive under-employment and such a lack of opportunities that, for many young people,

joining an armed group has become a rational decision from an economic perspective. In such a context, it is fanciful to think that military action alone should be able to bring back peace and security. It is also unrealistic to think that development aid could offer an effective solution without political authorities first addressing questions of local governance and conflict resolution, in particular in relation to land rights.

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