

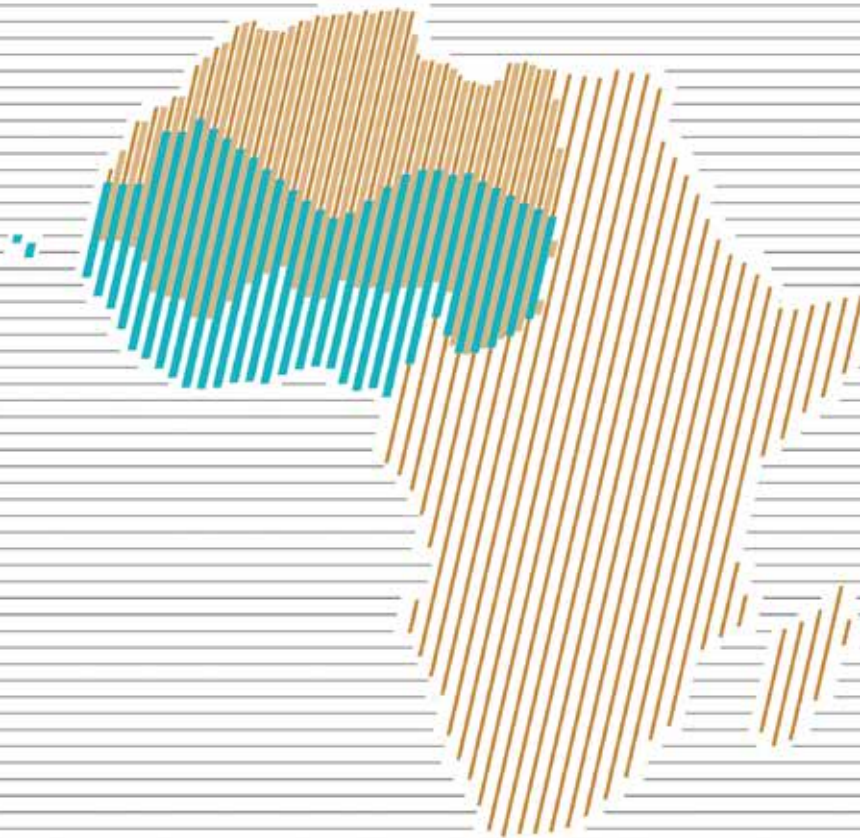


West African Studies

An Atlas of the Sahara-Sahel

GEOGRAPHY, ECONOMICS AND SECURITY

AT A GLANCE



About

The **Atlas** builds on maps and statistics to analyse, from a regional perspective, the challenges facing the Sahara-Sahel. It describes the Sahara-Sahelian space and geography (Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger and Tunisia), reveals some socio-economic indicators of the area and decrypts the various security (terrorism and trafficking) and development challenges linked to mobility (trans-Saharan routes and trade, migration, nomadism, borders and free movement). A strengthened, consolidated and continuing dialogue among North, West and Central Africa is an essential element for the long term stabilisation of the Sahara-Sahel.

Five leading personalities complete the publication by expressing the region's key challenges with regard to their Sahel strategies.

The Atlas is available in English and French, and the analysis is illustrated with more than 100 maps and 30 figures.

This **At a Glance** edition:

- introduces the Sahara-Sahelian space and geography;
- presents some socio-economic indicators; and
- highlights the various links between mobility, networks and security.

The countries analysed in this study



Source: Retailié D., P. Drevet, O. Pissosat, J. Pierson 2014

- | | | | |
|--------------------|-----------------------|---------------------------------------|---------------------------------------|
| • National capital | — Palm grove limit | Adrar Principal physical landscapes | International border |
| • Other city | Cram-Cram limit | ⊥ Equator/Greenwich Meridian crossing | African country not included in study |

Chapters

CHAPTER 1 – SAHARA-SAHELIAN SPACE AND GEOGRAPHY

The characteristics of Sahara-Sahelian space and geography are based on social, economic and spatial mobility. Through a mapping exercise, this chapter describes the Sahara-Sahel through its ancestral networks, route empires, borders and its history, migratory movements, tourism and conflict and instability.

CHAPTER 2 – SOCIO-ECONOMIC INDICATORS WITHIN SAHARA-SAHEL COUNTRIES

The indicators are analysed through population and economic data. Population data show strong growth in Sahel states and stable growth in North African states, accompanied by intense urbanisation. Gross domestic Product (GDP) figures indicate a contrasting picture, with North African economies having significantly higher GDP growth rates and income levels than Sahelian economies.

CHAPTER 3 – PETROLEUM AND NETWORKS OF INFLUENCE IN THE SAHARA-SAHEL

Various oil companies have been established over the years. This chapter analyses the role of Sahara-Sahelian oil in the regional and global economy and market. The oil and gas sector accounted for one quarter of the cumulative GDP of Sahara-Sahel countries in 2013, with Algeria and Libya as the third and fourth largest African producers.

CHAPTER 4 – ANCIENT AND NEW MOBILITY IN THE SAHARA-SAHEL

The different forms of mobility can be understood through social dynamics, namely networks. These networks began developing with trade caravans and have continued to evolve over time. The rationales underlying this activity are based on pastoral mobility and solidarity rather than the relations among states in the region. Political power plays, particularly between Algeria and Libya, interfere in their relations with countries in the Sahel.

CHAPTER 5 – MIGRATION AND SAHARA

The shared human space is centred on economies and migrations, which are both primarily informal. Starting in the 1960s, the development of the sparsely populated Algerian and Libyan Sahara has depended on labour from the North Sahel. This population redistribution, which has since persisted, served as the basis for diaspora dynamics and reinforced regional integration.

CHAPTER 6 – NOMADISM AND MOBILITY IN THE SAHARA-SAHEL

Nomadism and its various forms of mobility and pastoralism connect the Sahara and the Sahel. It has adapted to change through partial, limited sedentarisation and diversified means of livelihoods. This chapter describes the continuity and change of pastoralism, notably social recomposition, migration and the nomadic space.

CHAPTER 7 – BORDERS, CROSS-BORDER CO-OPERATION AND FREEDOM OF MOVEMENT IN THE SAHARA-SAHEL

The cross-border functional dynamics in the Sahara-Sahel are important to understanding borders, cross-border co-operation and freedom of movement. Border regions perform a number of functions in an institutional context, where free movement is subject to the uncertainties of political developments and, more recently, of security concerns. Traffickers' use of border networks and corridors for various activities that feature differing degrees of violence is an added complication today.

CHAPTER 8 – SECURITY ISSUES, MOVEMENT AND NETWORKS IN THE SAHARA-SAHEL

This chapter describes the evolution of regional instability in the Sahara-Sahel since the 1960s. The analysis emphasises that the nature of conflicts has changed over the past decade. Less locally contained and often cross-border and more violent in nature, these modern-day crises require new institutional responses that can adapt to the flexibility of terrorist networks.

CHAPTER 9 – TRAFFICKING ECONOMIES IN THE SAHARA-SAHEL

The nature of trafficking and its geographical scales, as well as its effect in the Sahara-Sahel, are important to the understanding of current mobility and instabilities. The role of trafficking cannot be underestimated both in terms of its structuring or destructuring effects on politics, territories or societies. Trafficking connects the Sahara-Sahel to the world economy, which is an indication of the international scale of national and cross-border issues.

CHAPTER 10 – AN INSTITUTIONAL POINT OF VIEW ON THE CHALLENGES OF THE SAHARA-SAHEL

The insights provided by representatives of the EU, UN, AU and ECOWAS illustrate the development and security challenges faced by the Sahara-Sahel. These initiatives call for the strengthening of dialogue among all actors involved to achieve lasting peace and security for the West African population.

The contributors to this chapter are:

- Mr Michel Reveyrand de Menthon, European Union Special Representative for the Sahel; Mr. Jérôme Spinoza, Political Adviser to the European Union Special Representative for the Sahel.
- Ms Hiroute Guebre Sellassie, Special Envoy of the United Nations Secretary General for the Sahel.
- Dr Ibrahim Assane Mayaki, Chief Executive Officer of the Secretariat of the New Partnership for Africa's Development (NEPAD).
- Mr Kadré Désiré Ouedraogo, President of the Economic Community of West African States Commission (ECOWAS).

SPACES AND GEOGRAPHY

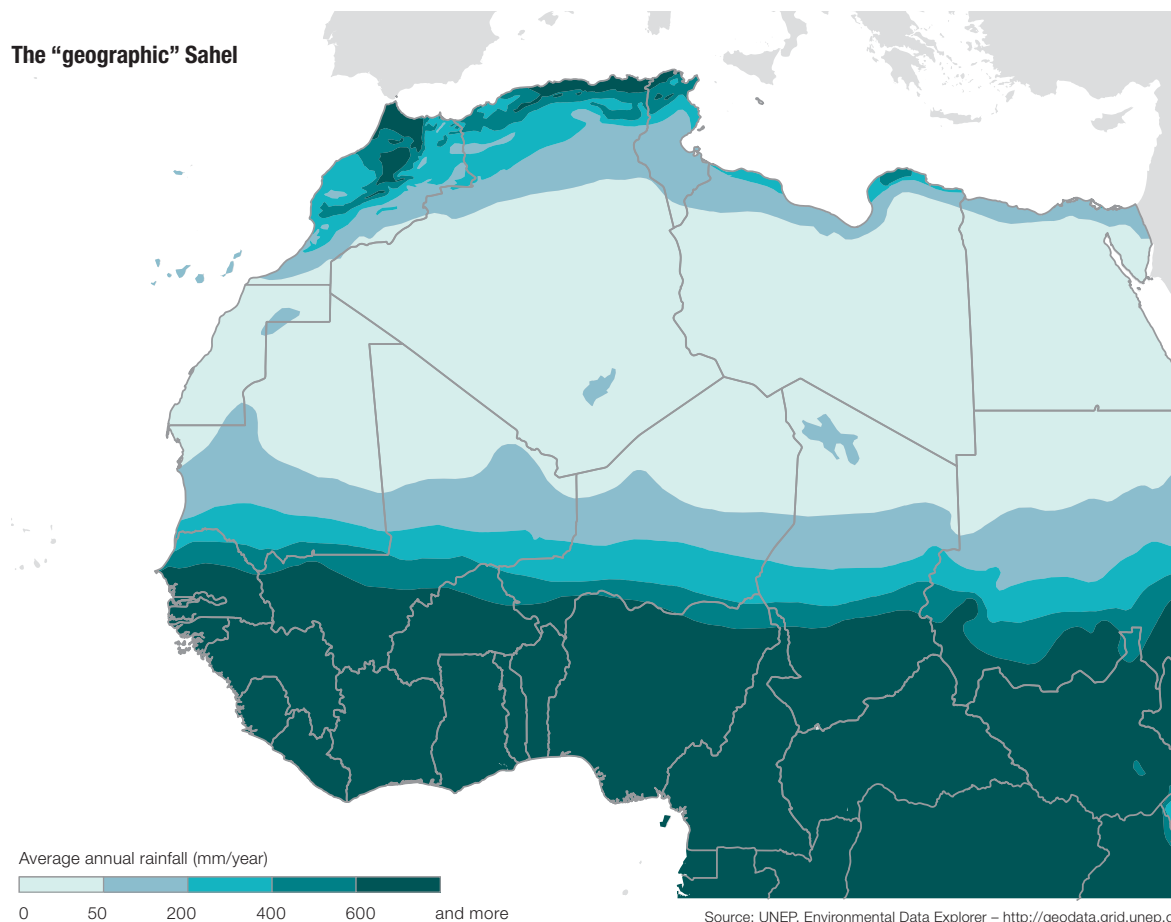
An understanding of the Sahara-Sahel on the basis of its social, economic and spatial mobility can help bring together its two sides and reactivate an area of mobility currently viewed as segmented. The main element of this approach is moving beyond two contradictory ways of thinking about space – as production or as movement.

The production perspective indicates that bioclimatic zones determining production dominate the geographic understanding of the area. In this view, the 200 mm annual precipitation isohyet is defined as the cut-off point for aridity,

below which farming and herding are no longer possible. The annual precipitation isohyet is often used to delimit the Sahara-Sahel. However, this approach does not fully reflect the reality of the Sahara-Sahel, which is characterised by trade, complementarity and movement.

By contrast, the movement perspective indicates that a spatial understanding based on movement or routes sheds light on other opportunities for socio-economic ties and on the vitality of networks.

The “geographic” Sahel

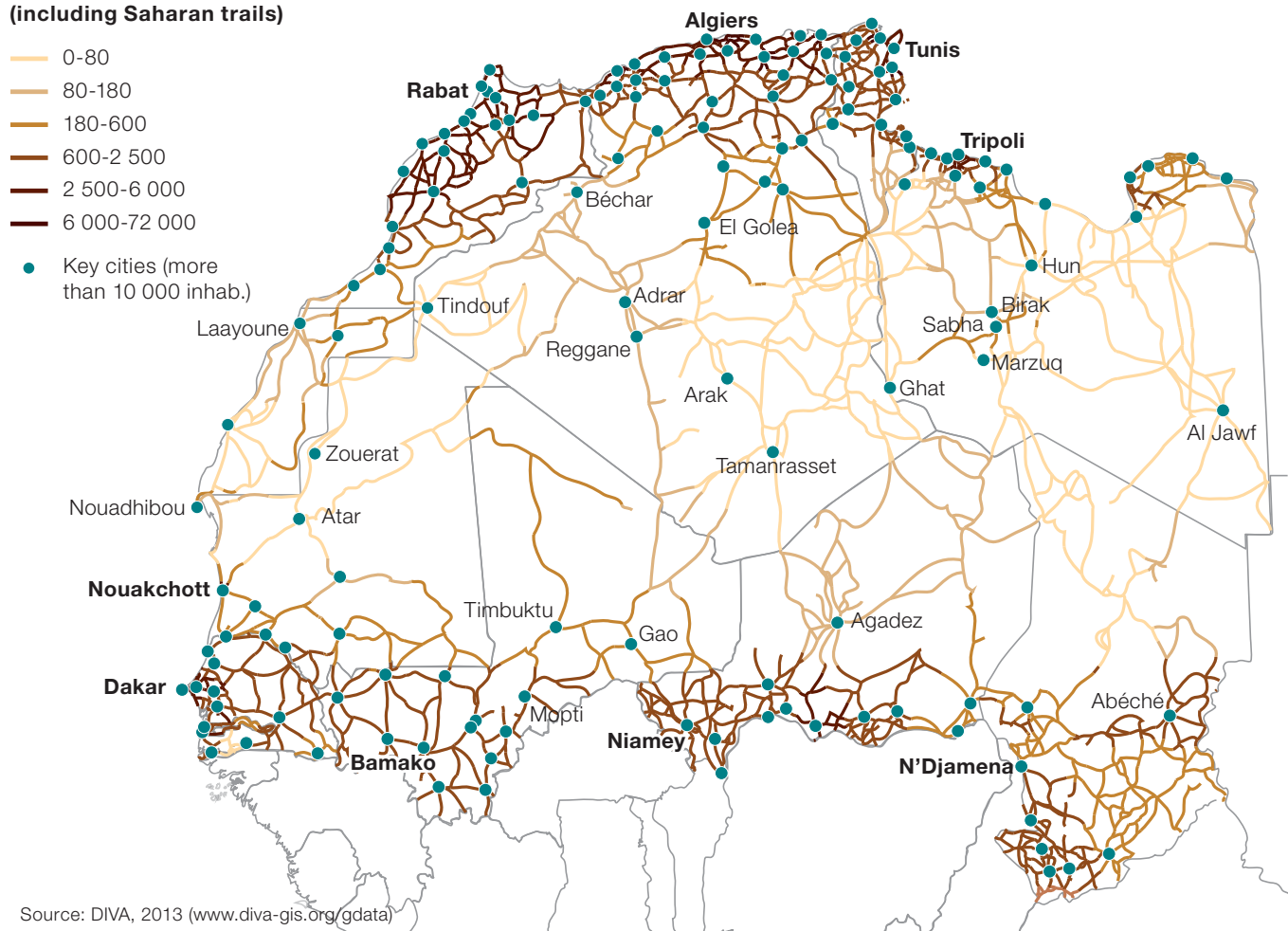


Is the Sahara-Sahel empty, as is often claimed? The answer is yes if we refer to the population density per square km. The Atlas suggests another image in calculating the number of inhabitants per km of road or trail. This illustration shows, in the area thought to be empty, significant population densities along the routes. For Sahara-Sahel inhabitants, the territory is bound to the road. Ultimately,

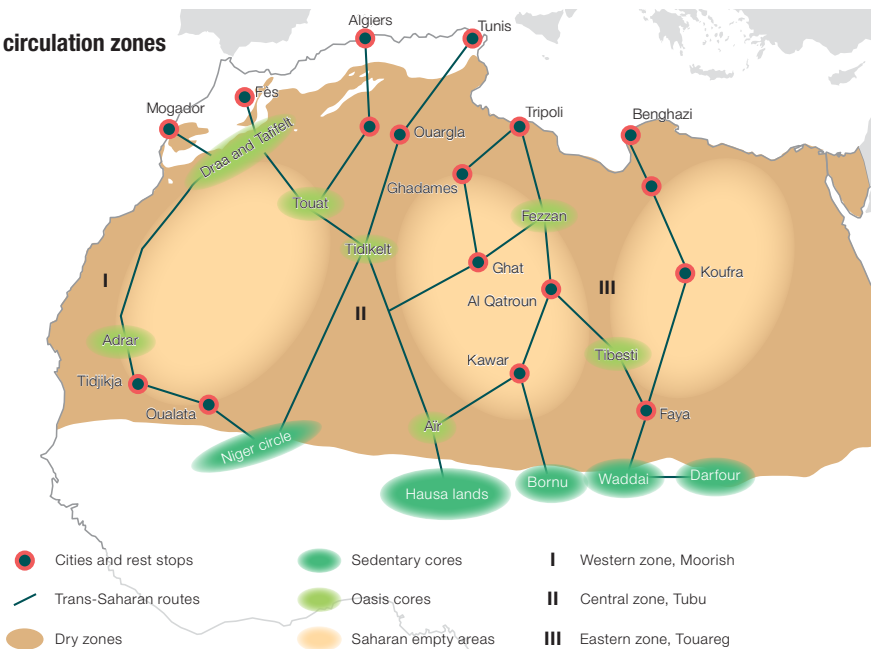
the space between the roads is of very little importance. Along this network of roads we find a large number of towns and we have to bear in mind that most Sahara-Sahel residents are town-dwellers. Often, these towns are oases whose location is determined not by the presence of water, but rather by their function as stopovers, or as transit and trade locations.

Linear density of population

Number of inhabitants by linear km of road (including Saharan trails)

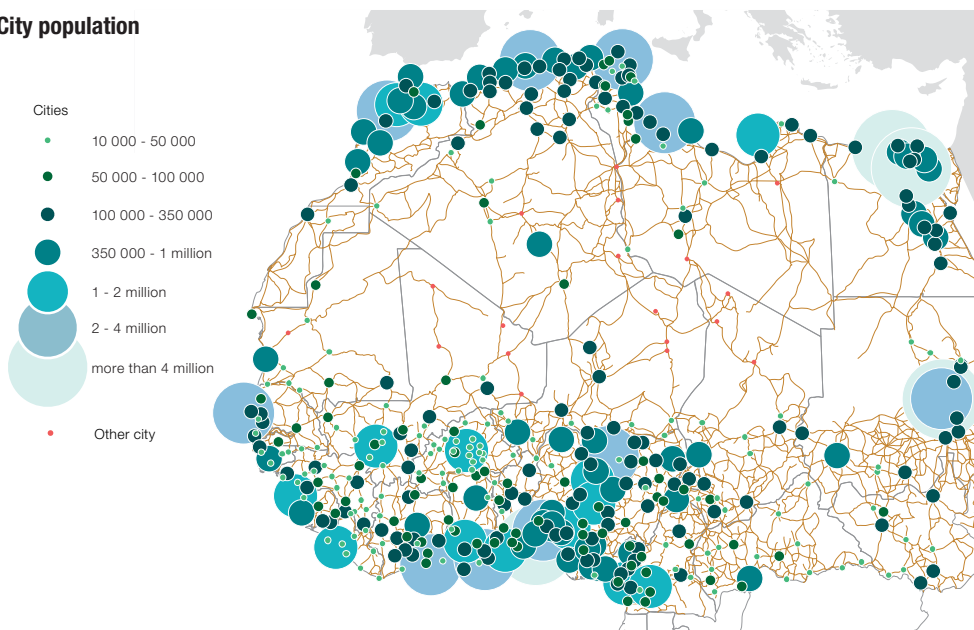


Trans-Saharan commerce according to Monod's circulation zones



Source: Drozd M. 2005, geoconfluences.ens-lyon.fr, ENS-Lyon / DGESCO

City population



Source: Natural Earth 2013 (www.naturalearthdata.com/downloads/10m-cultural-vectors/10m-populated-places/)

THE POPULATION AND THE ECONOMY

The countries of the Sahara-Sahel are classified into two groups:

- North Africa (Algeria, Libya, Morocco and Tunisia), and
- the Sahel (Mali, Mauritania, Niger and Chad).

The population

In 2012, the combined population of the 8 Sahara-Sahel countries was 136 million. The 4 North African countries have a combined population of 88 million, almost double the combined population of its four Sahelian neighbours (48 million).

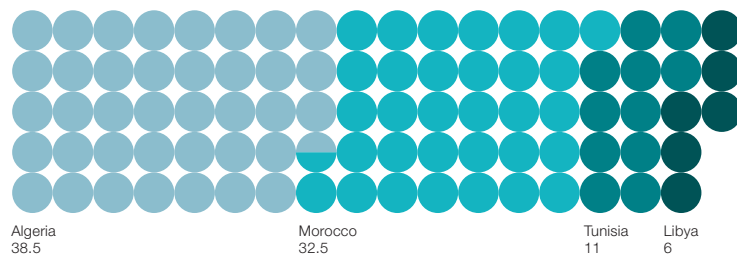
Between 1990 and 2010, the population in the Sahel grew by an average annual rate of 3.3%, almost doubling from 23.7 million to 45.2 million inhabitants. By contrast, growth rates in North Africa slowed down to 1.5% (from 63.3 million to 85.4 million inhabitants) during the 1990–2010 period.

The Sahara-Sahel covers 9.6 million km², more than twice the area of the European Union and representing nearly one-third of the African continent. Since the partition of Sudan, Algeria is the largest country in Africa in terms of surface area, with 2.4 million km². The four North African countries have a combined surface area of 4.8 million km², and Algeria accounts for 50% of this.

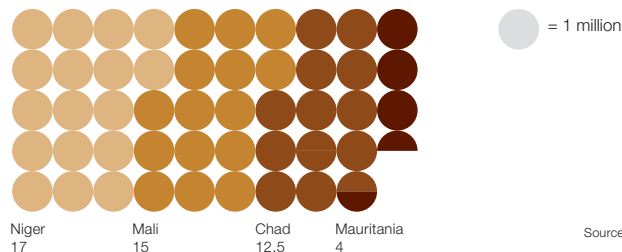
Urbanisation has been the most important manifestation of population dynamics observed over the past half century in West Africa. Although Sahelian countries still have some of the lowest levels of urbanisation in the world, the pace of urbanisation has been astonishing. The level of urbanisation in the Sahel increased from 2% in 1950 to 25% in 2010. The urban population increased 46-fold, from 250 000 to 11.6 million people, at an average annual rate of 6.6% per year.

Population by country, 2012

North Africa (88 million inhabitants)



Sahel (48 million inhabitants)



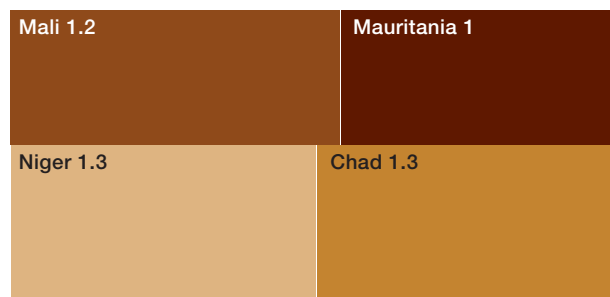
Source: SWAC/OECD based on WDI 2014, World Bank

Surface area by country and region (in million km²)

North Africa (4.8 million km²)

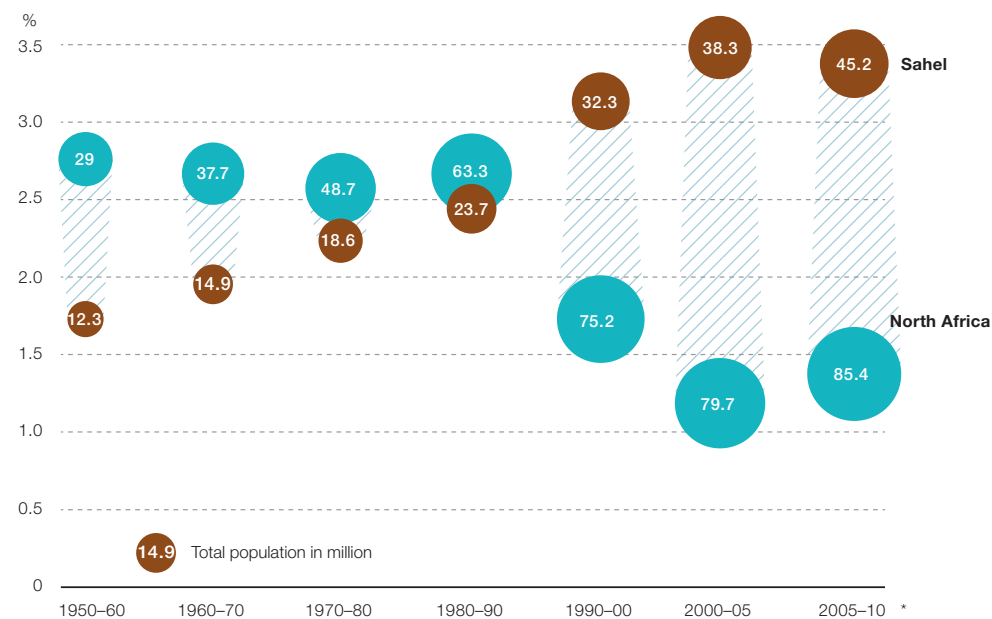


Sahel (4.8 million km²)



Source: WDI 2014, World Bank

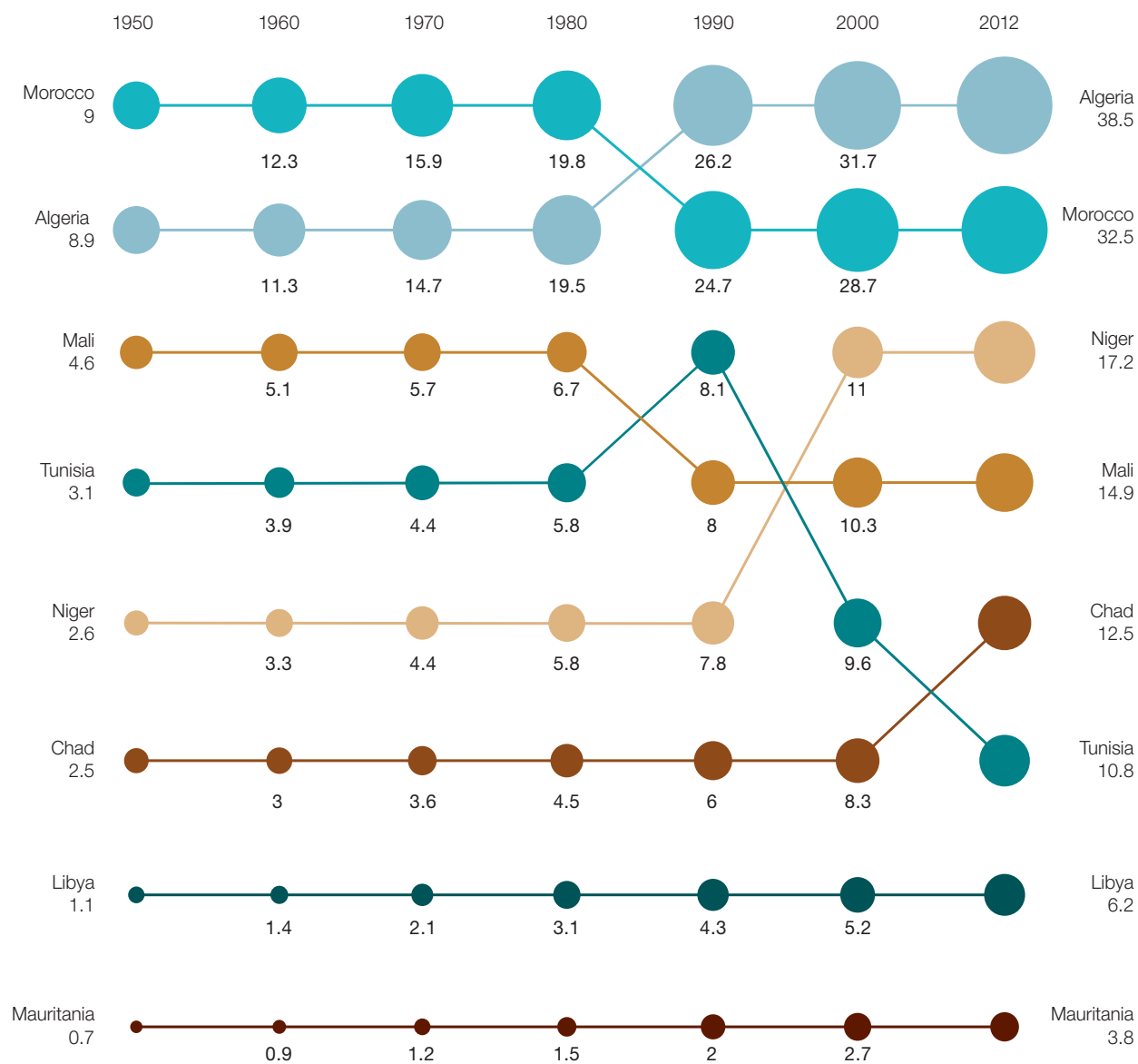
Population growth and total population in North Africa and Sahel, 1950–2012



Source: SWAC/OECD based on DESA UN, *World Population Prospects: the 2012 Revision*

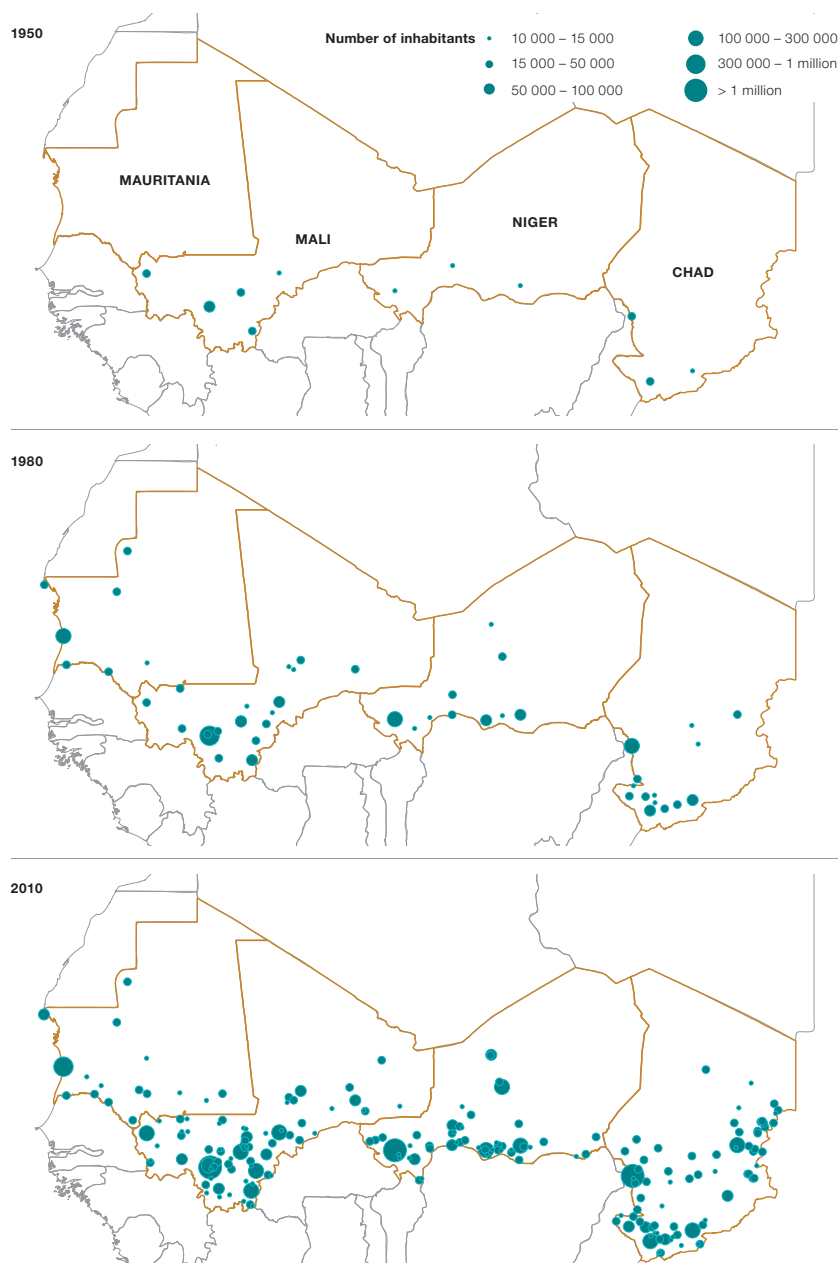
* The population figures correspond to end of period values.

Evolution of country population (in million)



Source: DESA UN, *World Population Prospects: The 2012 Revision* and WDI 2013, World Bank

Urban areas in the Sahel, 1950 – 1980 – 2010



Source: *Africapolis* - SWAC/OECD 2014

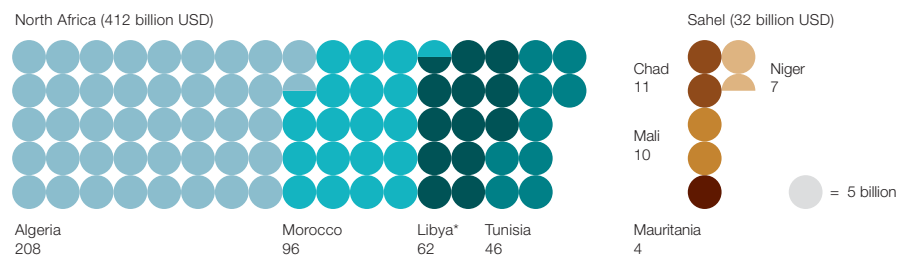
The economy

The Sahara-Sahel encompasses economies that are of diverse sizes and levels of development. In 2012, the combined GDP of Algeria, Morocco and Tunisia surpassed that of its southern neighbours (Chad, Mali, Mauritania and Niger) by a factor of 11. Chad, Mali and Niger are low-income countries, whereas Libya is a high-income country. Morocco is the only North African country that is still a lower-middle-income country,

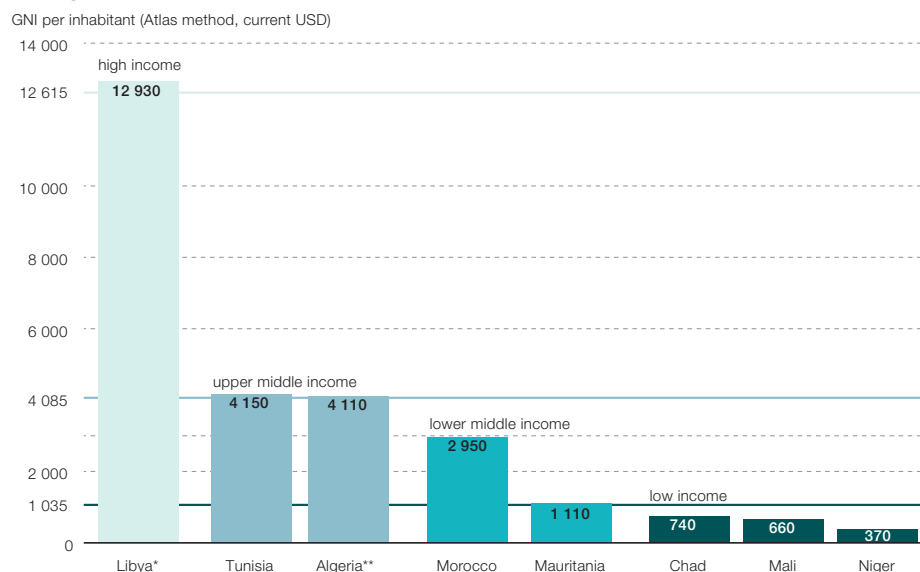
although its GNI per capita exceeds that of Mauritania by 260% (and those of Chad and Mali by 400%).

Over the last two decades, the real GDP growth rate of Sahelian countries exceeded that of North Africa. Since 2000, GDP growth has further accelerated in the Sahel and averaged 5.5%. With the exception of Niger, all Sahel countries grew faster than their North African neighbours.

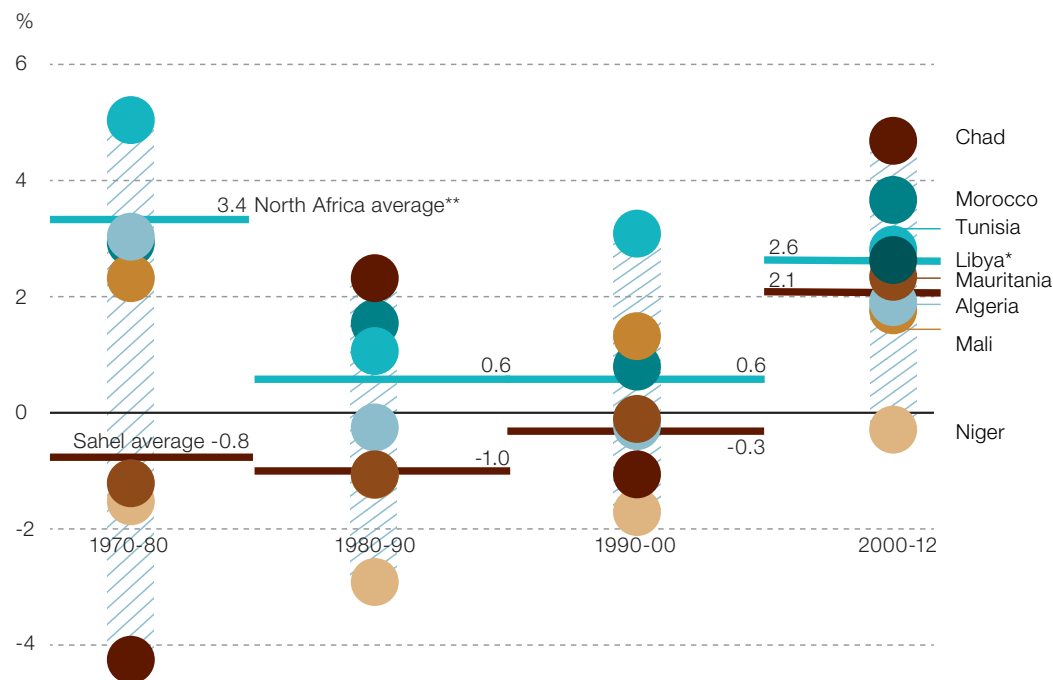
The Sahara-Sahelian GDP divide



Per capita income



Per capita real GDP growth rates over the past four decades (annual average)



* Data for Libya 2000–2009

** North Africa average excluding Libya

Source: SWAC/OECD based on WDI 2013, World Bank

TWO IMPORTANT CHALLENGES

Mobile and flexible criminal networks and trafficking at the regional scale

For a long time, geographers have identified the complex relationship between mobility and territory. Social networks have played a major role in enhancing mobility and exchanges as well as erasing the very notion of borders. Historically, the Sahel and the Sahara were linked by networks of pre-colonial empires founded on movement or, more accurately, on the control of roads and trade. Today, the spatial organisation of the Sahara-Sahel captures the new

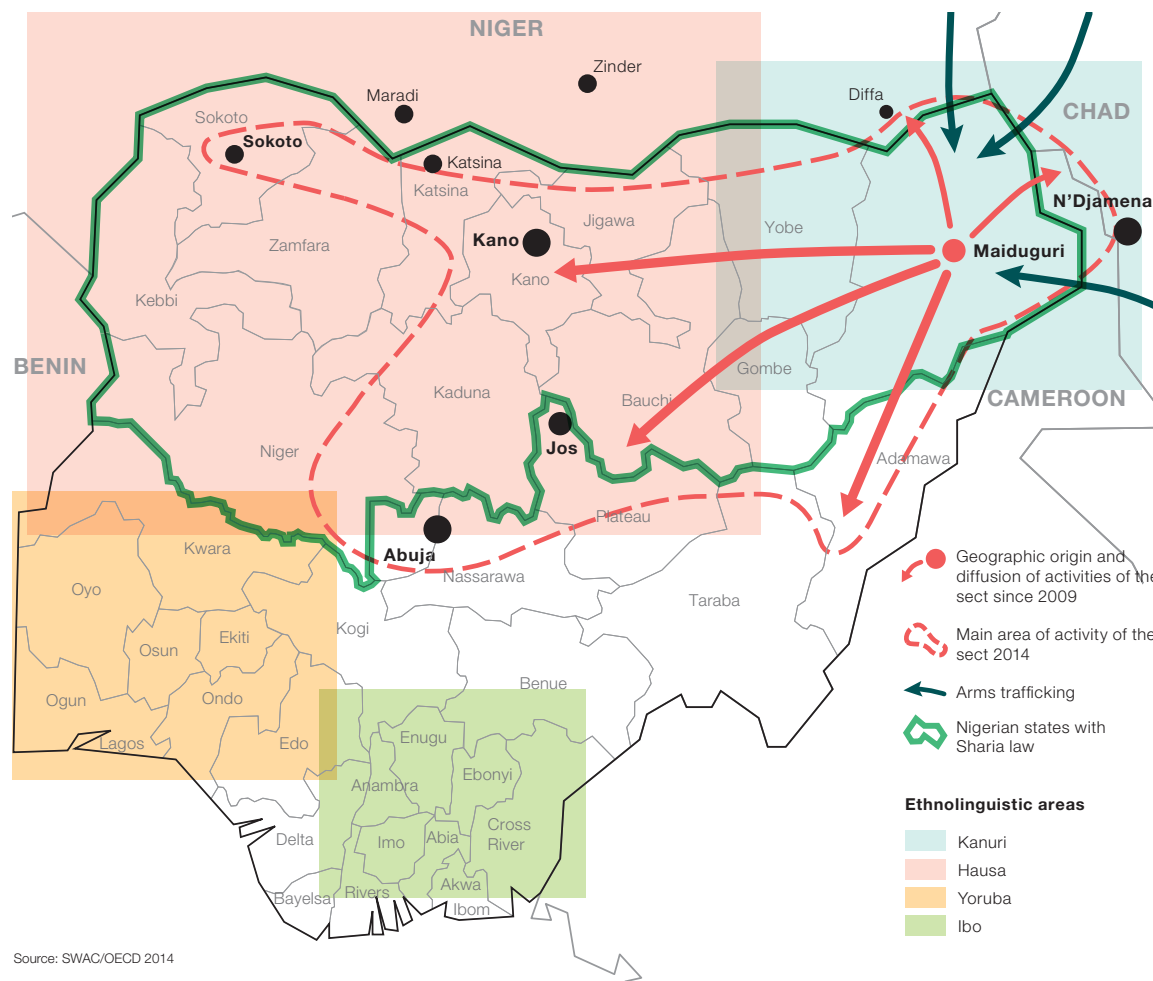
conditions of the globalised world where places primarily function through the intersection of flows, such as the flow of goods and people. The development of urban centres, social networks and traders is at the nexus of all these flows. Criminal networks – terrorism and the trafficking of arms, drugs and human beings – are taking advantage of this spatial and social structure.

Trafficking in the Sahara-Sahel has been facilitated by intense spatial mobility and continuous circulation relying on old influential networks. In some cases, trafficking has even enjoyed the support of local communities. The crisis in Mali has made the effect of trafficking visible, particularly its link with the financing of Salafi jihadists. Trafficking also raises questions regarding economic ties on both sides of the Sahara. The Maghreb is the point of origin and reception

of trafficked products, which take place along traditional trans-Saharan trade routes.

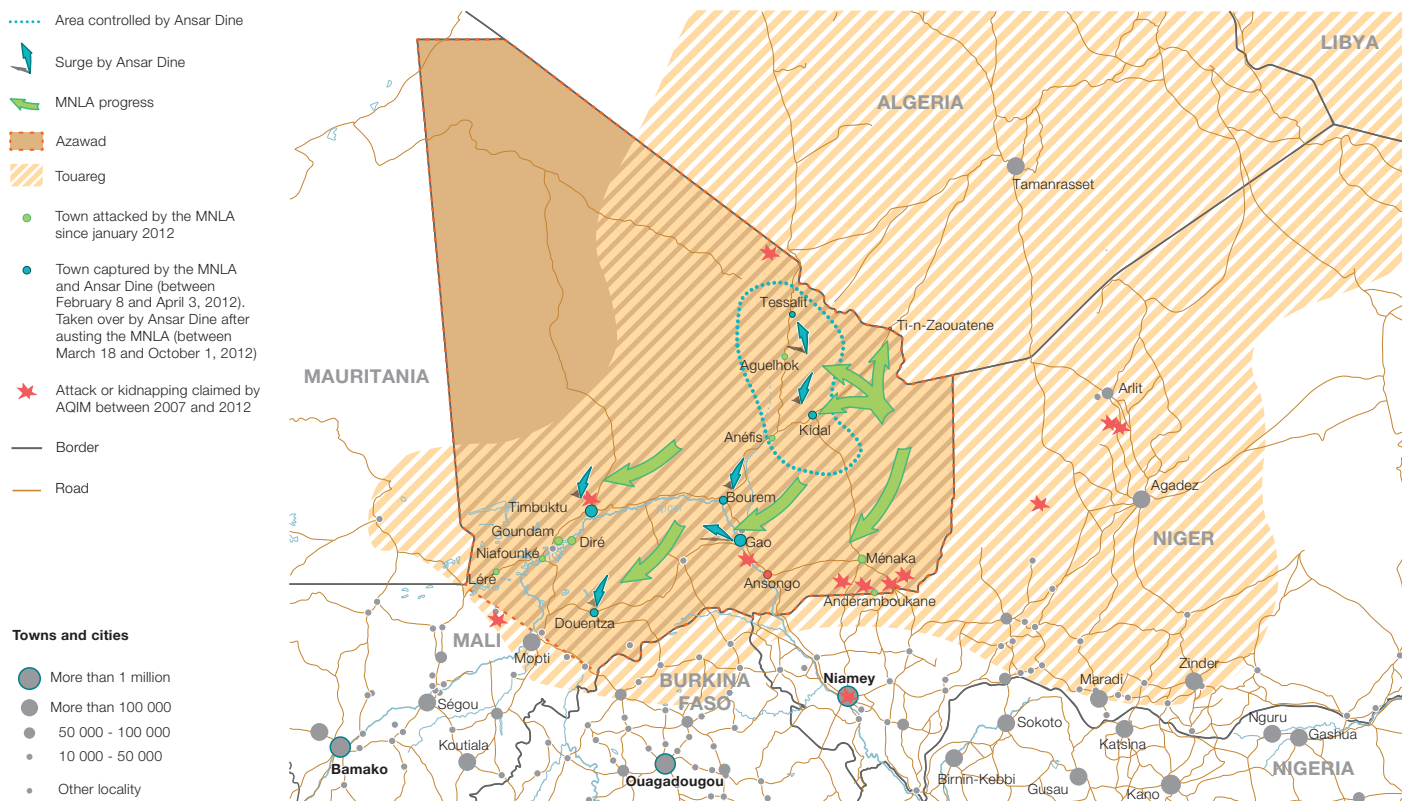
Adapting policies and strengthening co-operation among neighbouring states, securing borders, preventing criminal development and formulating appropriate responses to flexible and mobile criminal networks to control national territory are particularly important challenges for the region.

Boko Haram



Source: SWAC/OECD 2014

The ephemeral Azawad



Sources: Retaille D. and O. Walther, *New ways of conceptualizing space and mobility* 2012; *Africapolis - SWAC/OECD* 2014; *Natural Earth* 2013

Transnational nature of instability and the responses

Identifying responses to the security challenges undermining the stability of the Sahara-Sahel must be done in a transnational manner through strong regional co-operation and co-ordination. Security challenges affect not only North, West and Central Africa but also the international community.

Institutional cross-border and/or regional responses should be based on a thorough understanding of the nature of terrorism and trafficking in the Sahara-Sahel.

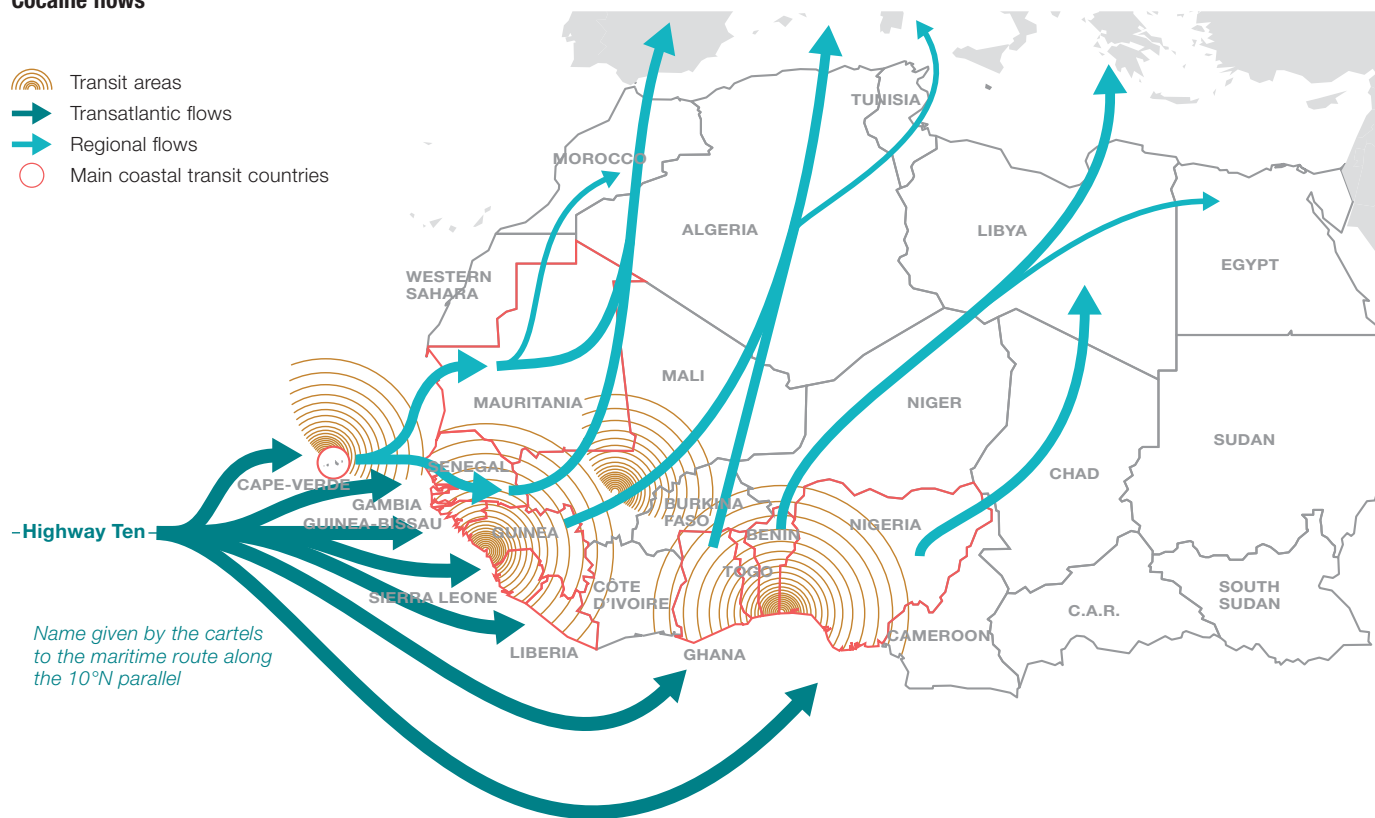
There are numerous initiatives. The United Nations, the African Union, ECOWAS and the heads of state of 5 Sahelian countries – Burkina Faso, Chad, Mali, Mauritania and Niger (G5 Sahel) – have formulated regional strategies aimed to stabilise and develop the Sahara-Sahel. Many multilateral institutions are committed to working alongside them, with the European Union at the forefront along with the main development banks (World Bank, African Development Bank, Islamic Development Bank, etc.).

The bearers of these strategies meet regularly, but operational and co-ordination challenges remain immense. The difficult question of how to distribute tasks among the institutions has not yet been decided.

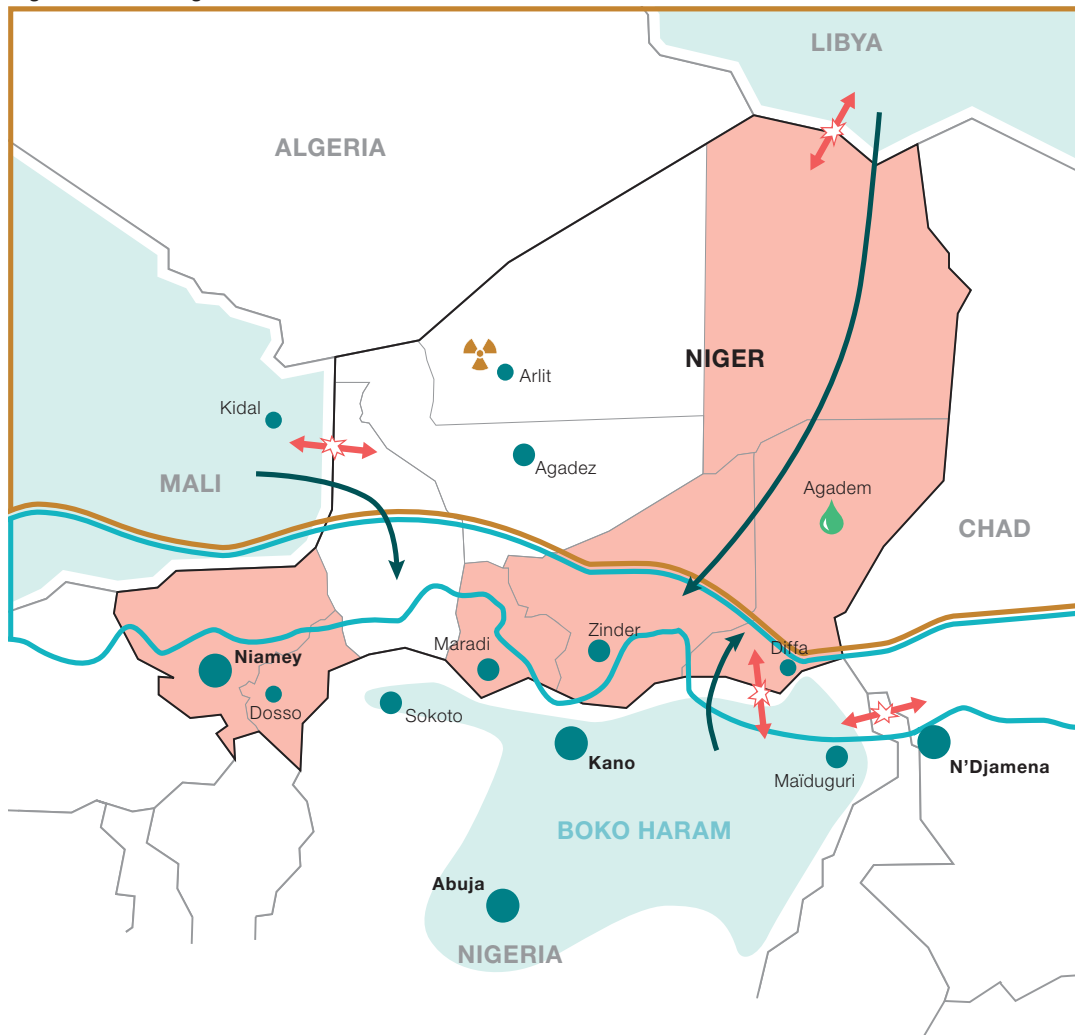
Is the geographic scope of responses well suited? How can Nigeria especially be well considered in these strategies?

Nigeria is taken into account only accessorially. How can the necessary co-operation between Maghreb and Sub-Saharan countries be developed? Last, there is the complex issue regarding the simultaneous implementation of security and development actions.

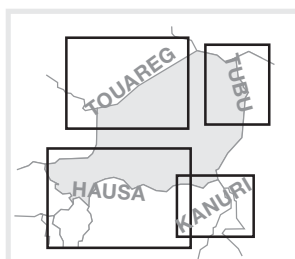
Cocaine flows



Niger faced with regional threats



Ethnolinguistic groups



Saharan zone: less than 200 mm of rainfall per year; approximately 600 000 km² and less than 0.5 million inhabitants in its Nigerien part. Uranium mines and oil.

Sahel's vulnerable zone: the inter-annual variation of the length of the rainy season exceeds 30%. Approximately 5 million rural inhabitants in its Nigerien part, predominantly agro-pastoralists.

Area regularly food and nutrition insecure

Area of conflict / instability

Regional diffusion of instability

Involuntary migration

THE CLUB: WORKING TOGETHER FOR REGIONAL INTEGRATION

WE ARE the only international platform entirely dedicated to regional issues in West Africa.

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- ▶ Facilitating dialogue, information-sharing and consensus-building;
- ▶ Providing independent, factual and forward-looking analysis;
- ▶ Devising guidelines and policy tools.

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- ▶ **Regional governance of food & nutrition security (FNS)**, a permanent networking effort: We facilitate consensus-building and help improve co-ordination.
- ▶ **West African Futures (WAF)**, a two-year thematic cycle promoting innovative approaches for policies and international co-operation strategies: In 2015-16, we focus on cross-border co-operation.

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West African Studies

An Atlas of the Sahara-Sahel

GEOGRAPHY, ECONOMICS AND SECURITY

While the Sahara-Sahel region has experienced recurrent episodes of instability, the recent crises in Libya and Mali have increased the level of violence. These two crises have reshaped the region's geopolitical and geographical dynamics. The current crises are cross-border and regional, and addressing them requires new institutional responses. How can the countries that share this space – Algeria, Chad, Libya, Mali, Morocco, Mauritania, Niger and Tunisia – in collaboration with other countries of the region, such as Nigeria, work together towards its stabilisation and development?

Historically, the Sahara plays the role of intermediary between North Africa and Sub-Saharan Africa. Even before Roman times, the area was criss-crossed by roads, principally serving a military use in this period. Today, commercial and human exchange is vibrant, founded on social networks. These networks have more recently been used by traffickers. Understanding the nature of this trafficking, the geographic and organisational mobility of criminal groups, as well as migratory movements is of strategic importance. This work aims to contribute towards this objective and to help inform the Sahel strategies of the European Union, United Nations, African Union and ECOWAS (Economic Community of West African States) in their attempts to forge a lasting peace.

This Atlas proposes a cartographic and regional analysis of security and development issues. It provides objective information for the necessary dialogue between regional and international organisations, states, researchers and local stakeholders.

Part I. Reactivating a space of fragmented circulation

Chapter 1. Sahara-Sahelian space and geography

Chapter 2. Socio-economic indicators within Sahara-Sahel countries

Chapter 3. Petroleum and networks of influence in the Sahara-Sahel

Part II. Securing the Sahara-Sahel by integrating its social and spatial mobility

Chapter 4. Ancient and new mobility in the Sahara-Sahel

Chapter 5. Migration and the Sahara

Chapter 6. Nomadism and mobility in the Sahara-Sahel

Chapter 7. Borders, cross-border co-operation and freedom of movement in the Sahara-Sahel

Chapter 8. Security issues, movement and networks in the Sahara-Sahel

Chapter 9. Trafficking economies in the Sahara-Sahel

Chapter 10. An institutional point of view on the challenges of the Sahara-Sahel