

# No peace and stability in the Sahel without electricity

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*October 9*

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# Insecurity is now becoming a major concern for Africa

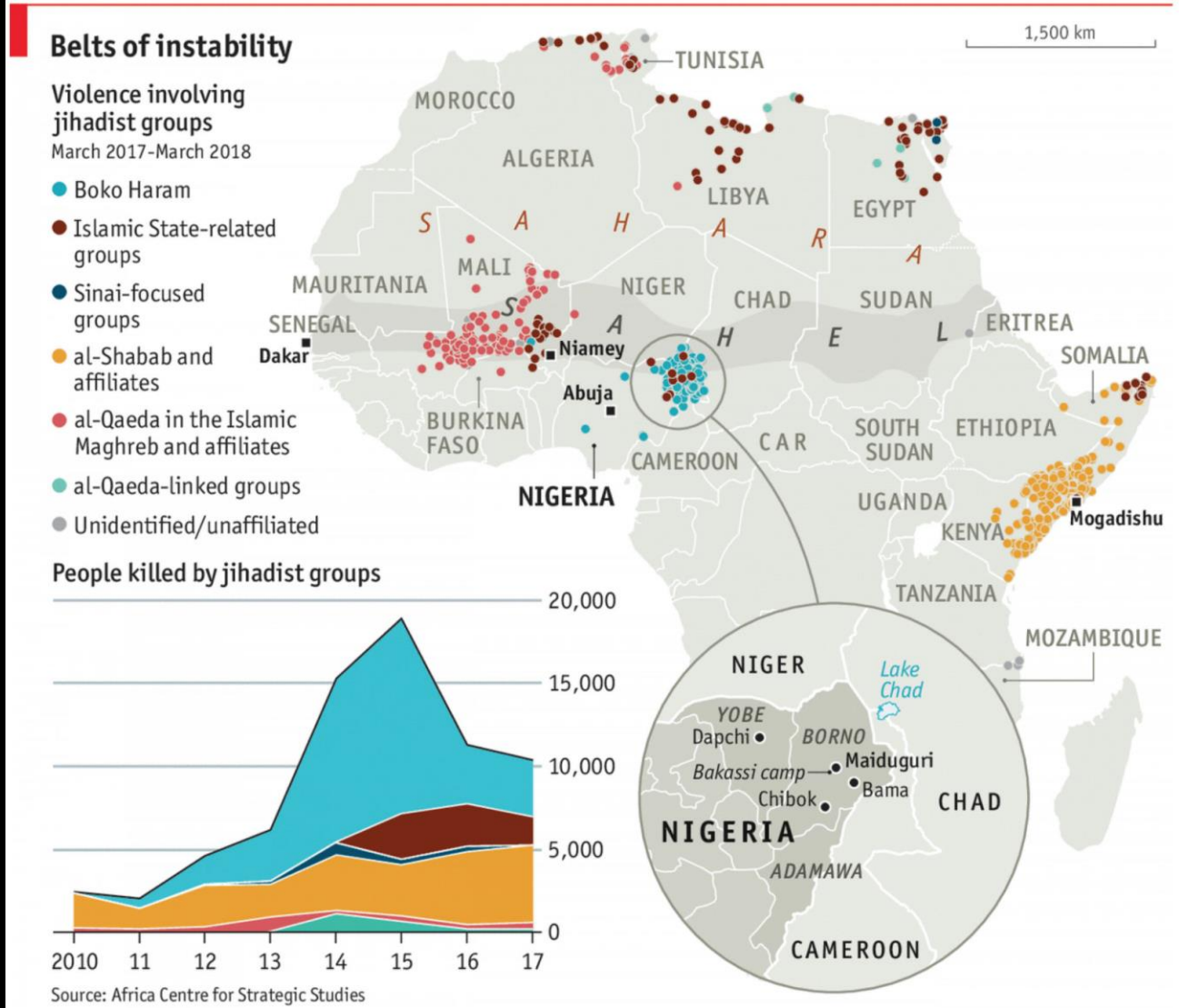
When linked to jihadist activity it is problematic in three main regions

1- Somalia and the Horn of Africa

2- Northeast Nigeria

3- French-speaking Sahel around Mali.

Let's have a closer look at the Sahel and NE Nigeria



# In North East Nigeria, Boko Haram has spread like a cancer

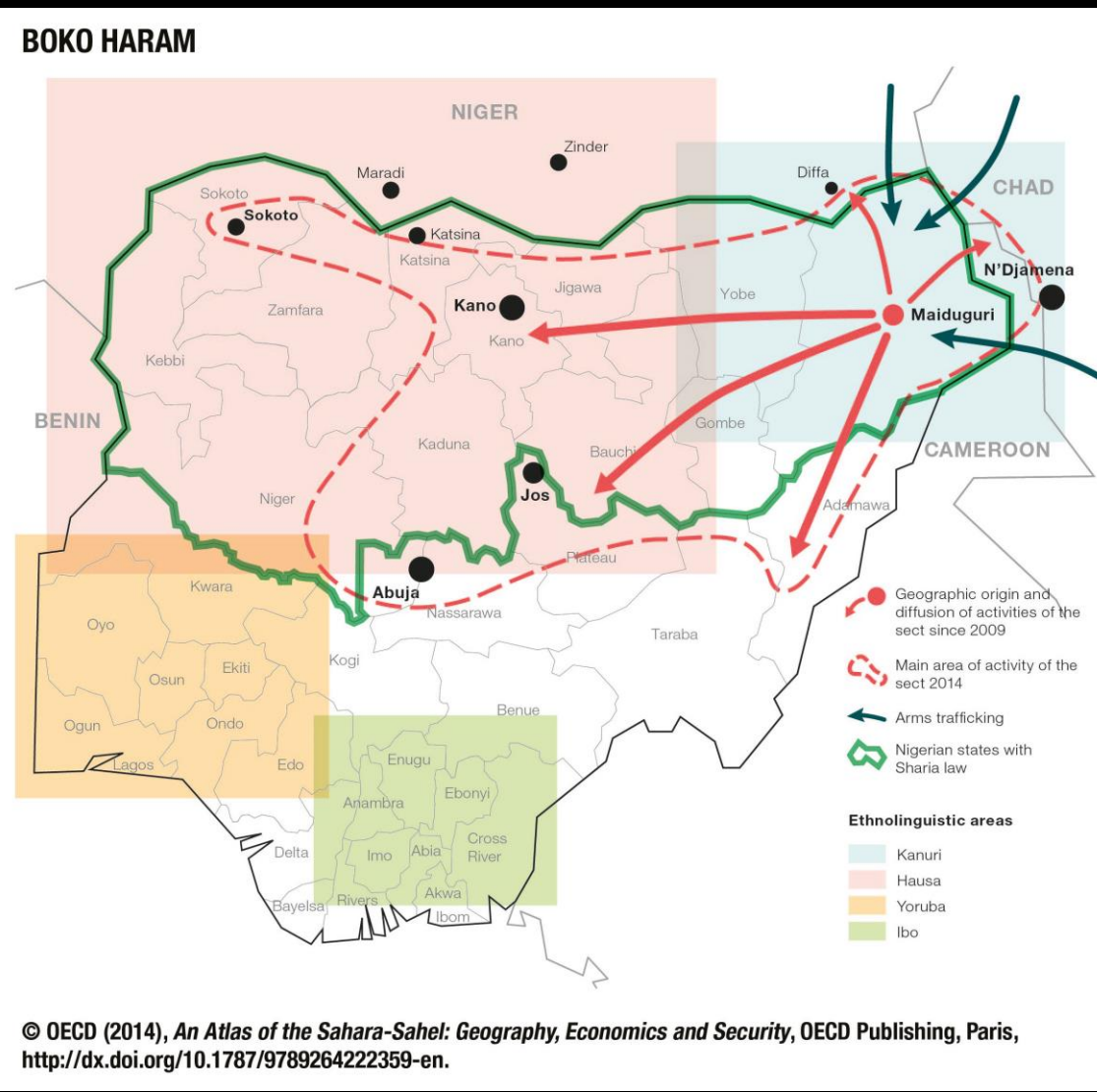
A tiny sect has metastasized

Proliferating in dilapidated Northeast

Sending around terror, living off plunder

Establishing a new order

wherever the State cannot provide security & justice





# In fragile countries such « cancers » destroy the local economy

In North East Nigeria 4.5-  
millions people now face  
hunger

About 2.4 millions have  
been displaced

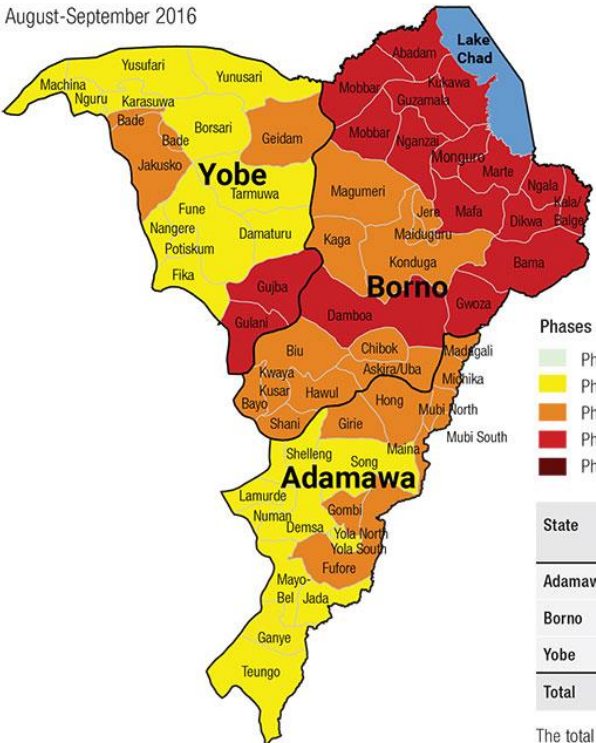
Some now migrate to  
Europe

A very similar situation to  
Afghanistan were this year

45 % of the rural  
population is also  
confronted to hunger.

## ONE OUT OF THREE PEOPLE IN NORTHEASTERN NIGERIA FACED WITH ACUTE FOOD INSECURITY

August-September 2016



Phases of food insecurity

- Phase 1: Minimal
- Phase 2: Stressed
- Phase 3: Crisis
- Phase 4: Emergency
- Phase 5: Famine

© Agrhymet/CILSS

Source: Cadre harmonisé analysis conducted by three teams comprised of government officials, CILSS, FAO and FEWS NET staff, August 2016. Partners include ACF, Caritas Nigeria and the WFP.

State	Phase 1: Minimal	Phase 2: Stressed	Phase 3: Crisis	Phase 4: Emergency	Phase 5: Famine	Total of phases 3-5
Adamawa	1 697 300	1 868 200	591 200	38 000	-	629 200
Borno	75 700	1 672 400	2 219 000	886 200	58 500	3 163 700
Yobe	1 544 900	1 074 900	534 900	113 700	6 500	655 100
<b>Total</b>	<b>3 317 900</b>	<b>4 615 500</b>	<b>3 345 100</b>	<b>1 037 900</b>	<b>65 000</b>	<b>4 448 000</b>

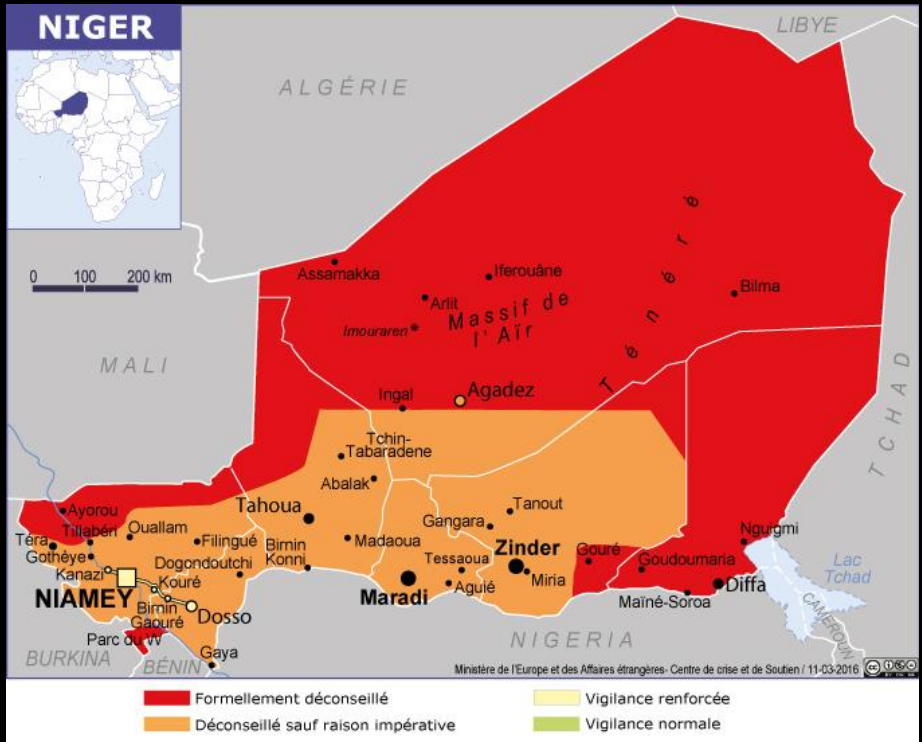
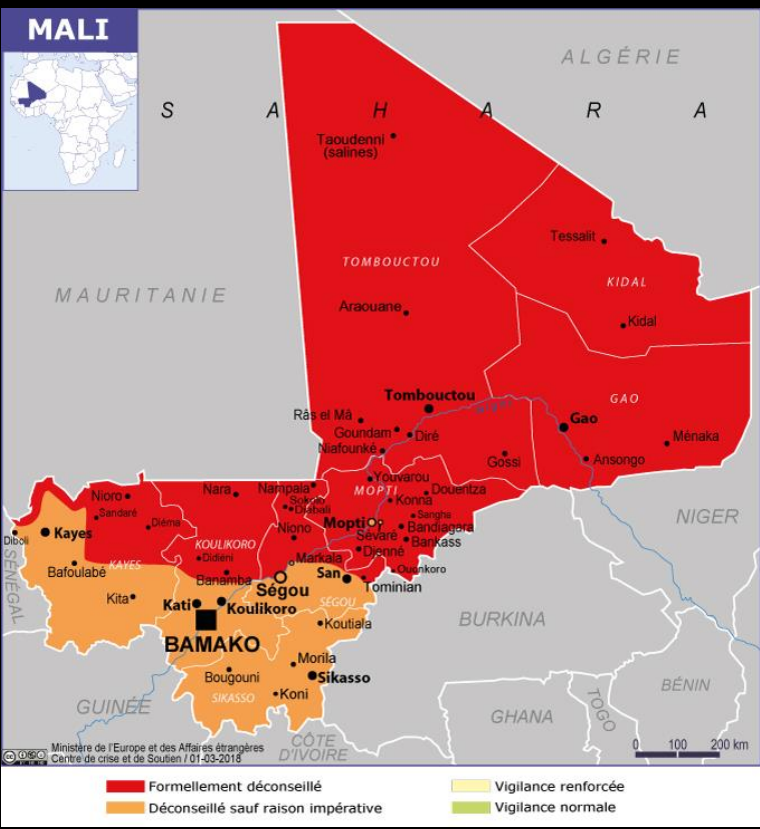
The total population of Adamawa, Borno and Yobe is estimated at 13 million people.

# **This is very similar to what happened in Afghanistan**

More than a trillion US dollars spent for military efforts over 18 years!

Huge aid amounts that some years reached the level of Afghan GDP!

The security situation is so bad that the US recently had to send back troops.



In the Sahel, foreigners are now warned not to travel in red zones

And be very cautious in pink zones

It reminds one of similar maps and instructions in Kabul 10 years ago...

# In the Sahel, reasons for increasing insecurity are many, but demography, poverty, environmental crisis and the lack of jobs are key

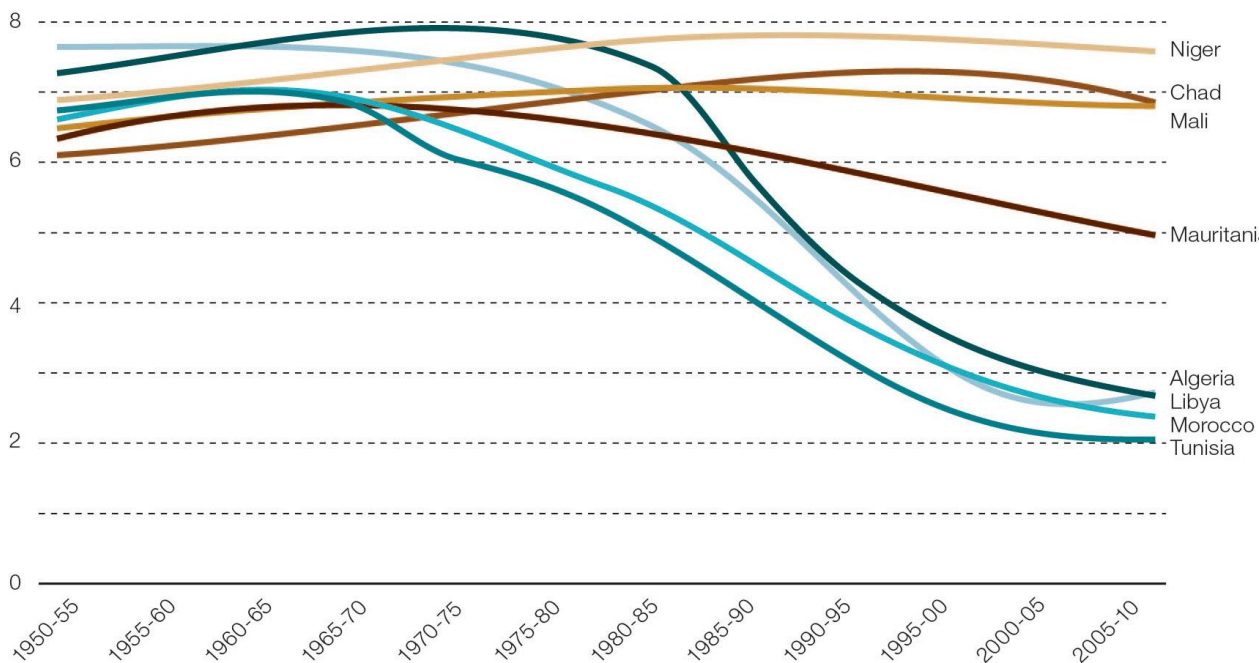
In Afghanistan the population has doubled since 1990

In the Sahel, population doubles every 20 years

Niger's population 3 million in 1960, will be between 42 and 45 million in 20 years

- and 60 to 90 million in 2050

### FERTILITY TRANSITIONS (CHILDREN PER WOMAN)



Source: DESA UN, World Population Prospects: The 2012 Revision

© OECD (2014), An Atlas of the Sahara-Sahel: Geography, Economics and Security, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264222359-en>.



# Agriculture is confronted to an environmental crisis

Traditional agricultural systems were based on low human densities

As densities increase, fallow areas disappear and soil fertility is destroyed

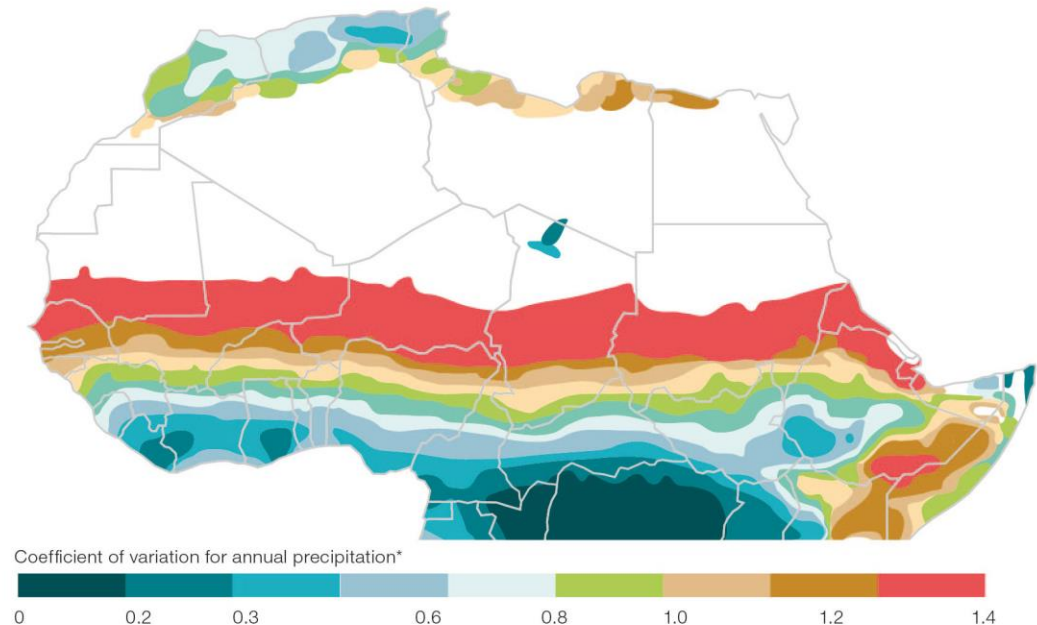
Poverty is increasing

Adequate investments would offer solutions but are not undertaken

Global warming will bring increased climate instability

and increased poverty

COEFFICIENT OF VARIATION FOR ANNUAL PRECIPITATION, 1901-2006



\*standard deviation normalised by the mean,  
only regions with annual precipitation > 10 mm/year

Source: UK Met Office Hadley Centre; University of East Anglia Climate Research Unit (CRU)

© OECD (2014), *An Atlas of the Sahara-Sahel: Geography, Economics and Security*, OECD Publishing, Paris,  
<http://dx.doi.org/10.1787/9789264222359-en>.



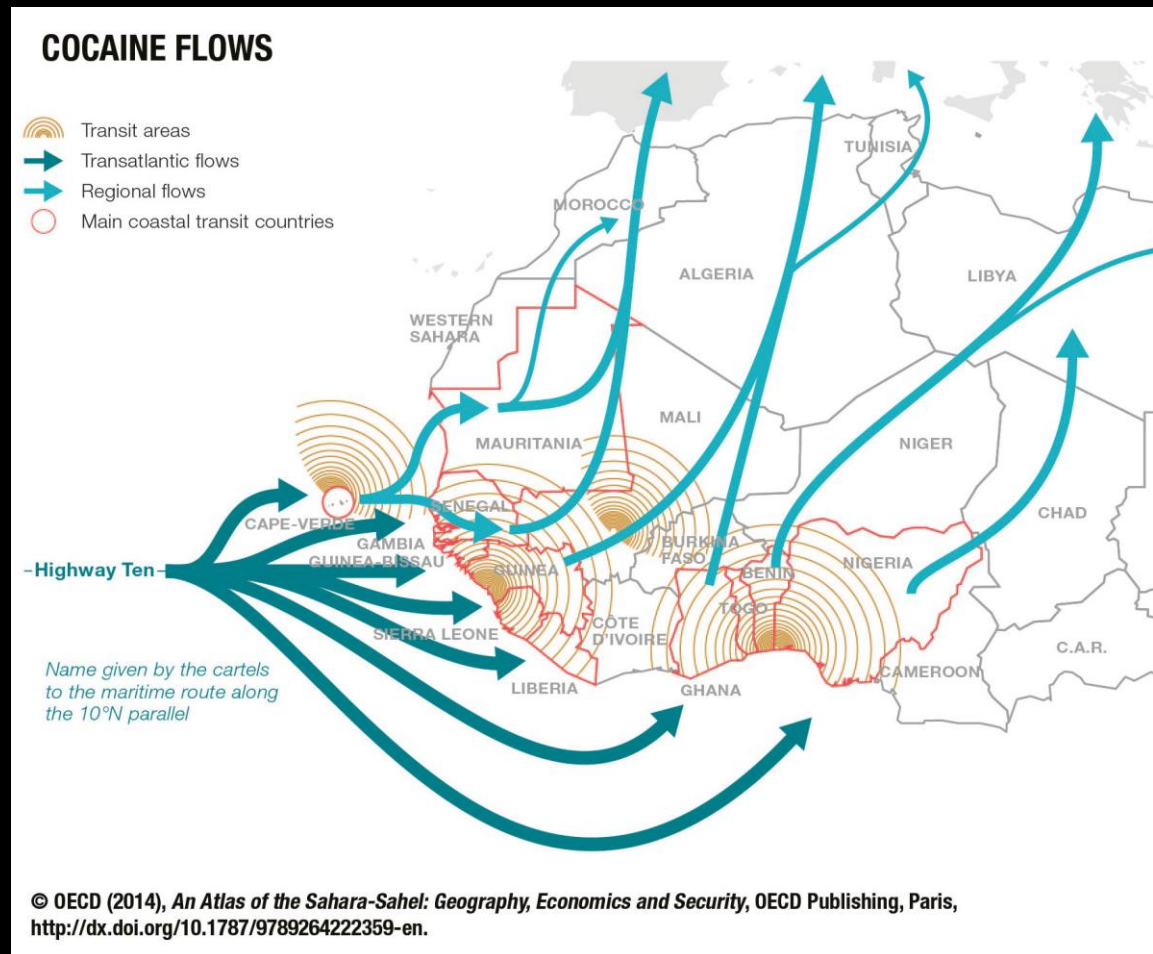
# Mafias control illicit traffics:

Stolen cars, cigarettes, hashish, cocaine and the “migrant business”

Enrollment into such illicit traffics

and into well paid Jihadist groups

are now attractive options for unemployed young men



# **A collapsing Sahel would be a disaster for West Africa**

In 2050 Nigéria will have 400- million people.

Côte d'Ivoire's population has grown seven fold since 1960.

migrations played a critical role in its past political crisis

West Africa is becoming a powder keg

The powder is demographic

The detonator is poverty and lack of jobs

# Will foreign military intervention pacify the Sahel ?

Let's be serious.

The French military operation “Barkhane” covers the whole G5 region from Mauritania to Chad,

an area the size of Western Europe with about 100 million people.

Obviously, France and its 4,000 troops cannot act as the region's policeman.



## **What about the UN forces ?**

Such forces can help maintain peace after a political settlement,  
but cannot fight to impose it.

They sometimes become almost irrelevant!

Having lost 160 men, in Mali their main concern  
is now to take care of their own security....



# What about foreign aid?

Money is no longer an issue

But making good use of it is a big problem !

More than \$4 billion are earmarked each year for the Sahel.

But Mali could absorb \$1 billion per year for 10 years,

and Afghanistan aid has some years been equivalent to its GDP,

with no convincing results...

# **Lack of electricity has been perceived by Afghans as a major failure of the foreign intervention**

Because a powerful warlord had been appointed minister of energy in 2002

fearing corruption no donor seriously invested in the energy sector

They all waited for the completion of a high voltage line coming from Uzbekistan

Until its final completion in 2012, only one third of Afghan population had access to electricity

and most of Kabul at night remained in the dark

# **Unreliable electricity hampers small and medium enterprises in Afghanistan**

Since then, available energy has significantly increased but even in Kabul it has remained unreliable

This is still a major problem for the SMEs who need to invest in generators

And despite some pilot projects, most of the countryside is still in the dark at night

Despite a huge potential in small hydro generators

# **In the Sahel, just as in Afghanistan, jobs are the key issue!**

Underemployment is generalized

Each year in Niger, 240,000 young men reach the job market

In Afghanistan, 400,000

In 20 years in Niger, 570,000.

***Where will the jobs be?***



# **Will international private investment be the solution ?**

Let's not fool ourselves

No serious international investor will put its money in such countries

Except in enclave oil and mining projects

But there is a huge employment potential

in agriculture, livestock, upstream and downstream rural activities

and in the informal urban service and manufacturing sectors

## However what can be done without electricity ?

Lack of energy is locking the Sahel into a poverty trap

In Niger only 9.5% of the population has access to electricity

In rural areas, where 80% of the population lives and insecurity is now rampant,

*only 0.2% of the population has electricity*

How can you keep the young in the countryside without electricity?

# **Lack of electricity locks the Sahel countryside into poverty**

With temperatures sometimes reaching 50 degrees centigrade,

how can you keep food and medicines in villages?

How can children learn to read and write in the dark?

How can local blacksmiths repair a simple plow?

How can you develop efficient small irrigation?

## **Should we expect the situation to soon improve?**

In Niger, wood is providing about 90% of the energy needs,  
leading to deforestation and desertification

Connecting to the grid requires waiting on average 115 days  
and costs about 65 times the annual average income

Even in Niamey, only 40% of the population has electricity



# **Development of the small informal manufacturing sector can have a major impact on employment**

Combined micro finance and technical training

with improved links between banks and microfinance institutions

can have a major impact on employment in both urban and rural areas

*But what can be done without electricity ?*

# Is it a matter of money ?

Millions of dollars have been spent for power generation in the Sahel  
construction of hydro and diesel power plants have mobilized donors since independence

The key issue, as in most African countries, has been inadequate policies

And lack of understanding that standard approaches based on big interconnected grids

Will never meet the rural needs

# 1- Wrong policies: the usual parastatal issue

State electricity companies have a monopoly on transport and distribution of electricity

Hotbeds of trade union demagoguery these utilities are poorly managed

Led by political “friends” they also tend to be the milch cows of the regimes

In addition the government and most public institutions do not pay their bills

If not bankrupt, they are short of cash

Under donor and government pressures they desperately try to expand vast grid programs

## **2. Wrong policies: The parastatal monopoly on distribution discourages private investors**

Such big grids make perfect sense in cities and very densely populated regions

However the cost of extending them to rural areas is outrageous and makes them an uneconomic solution

But utilities monopoly on energy transport and distribution

means that any private energy producer needs sell its production to the state utility

and thus be paid with a two- to three-year delay—or not at all.

No sane investor will invest under such conditions.



### **3. Wrong policies: Lack of public support leads to high cost and hazardous installations**

The only domains of private-sector involvement in energy

Are in renting diesel groups to cash short state utilities

and in illicit (and hazardous) production and distribution

leading to an exceptionally high cost of electricity in the range of 30 to 35 cents/KW

## **4. Wrong policies: rural areas in the Sahel will never significantly benefit from interconnected electricity**

In such huge countries, where 70/80% of the population lives in scattered villages,

it makes no sense to focus on interconnected systems

instead of investing heavily in decentralized autonomous systems.

It is true that maintenance of decentralized diesel generators is difficult,

but solar energy opens new perspectives.

## **5. Wrong strategies: Utilities still focus on interconnected systems**

Like their French model (EDF)

state utilities in Sahel have neither expertise nor interest in decentralized systems.

These should be based upon village-level minigrids using mostly solar or mixed diesel-solar systems.

Or individual systems.

Solar production costs are now competitive:

6 to 8 US cents per KW for minigrids;

12 to 26 US cents for individual equipment

## **5. Wrong strategies: decentralized mini grids are still despised by large utilities**

Minigrids are banks of batteries charged by solar arrays with occasional diesel support

They can operate independently of national grids

They offer services more quickly and reliably than state utilities

Unlike simple rooftop solar systems they can power freezers, machinery, irrigation pumps

Helping rural people set up new businesses or improving productivity in existing businesses.

# Major donors now need to invest heavily in decentralized rural electricity

Energy needs are such in Sahel countries

that confronted with huge unmet demand, donors focus on large projects:

dams and large power plants, even large solar-power units such as in Burkina

They forget the high interconnection costs and needs of the rural population

60% of this population has no access to electricity in West Africa

But it is so much easier to fund a large project than thousands of minigrids. . .

# **Even simple rooftop solar panels are a great improvement**

Many rural africans already spend about \$ 100/140 a year on kerosen lamps and candles

New led bulbs and other energy saving devices

allow rural people to access electric light, radio, telephone and fans with simple solar panels

Many companies have sprung off and offer to install such systems and charge customers on a monthly basis

# **Minigrids based on solar energy have allowed Morocco to provide electricity to 99% of its rural population**

32 % of Africans have no electricity

In ten out of the 15 WAEMU countries less than 20 % of the rural population has electricity

Despite considerable investment efforts in 37 out of 48 African SSA countries the number of people without electricity has increased

It is time for Sahel countries to follow the successful Moroccan approach which brought electricity in their most remote mountain regions

# **The private sector needs regulatory frameworks and clear public guidance**

Recent changes in electricity laws in West Africa have allowed NGOs and private investors to launch decentralized electricity projects

These experiments have proved the feasibility of such approaches

But uncoordinated projects lead to messy situations

And state utilities see these experiments as unfair competition !

Which means that huge constraints still remain to be overcome despite the young impatience

*and developing threats...*



# **Just as in Afghanistan, electricity in the Sahel is no longer only a matter of better living conditions**

It is a key factor in keeping children in school,

in creating jobs,

in keeping young men in villages and small towns.

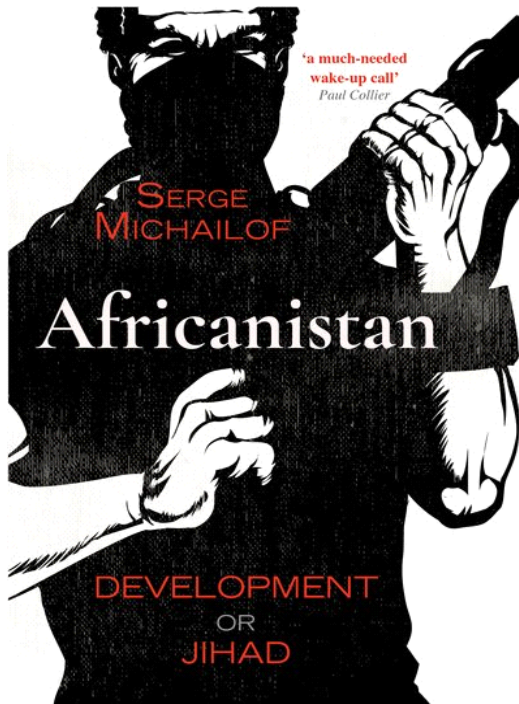
*It has become a critical issue in maintaining stability and security in rural areas.*

# Africanistan

## Development or Jihad

By: **Serge Michailof**

OXFORD  
UNIVERSITY PRESS



While progress in Africa can be seen across the board, every day-migrants are dying in the Mediterranean. The continent is in fact a powder keg. The powder is demographics. And the detonator is unemployment. What is worrying for the continent is even more dramatic for the Sahel, a huge region of about 100 million inhabitants, where insecurity is spreading and which may act as a detonator for West Africa with a population of 700 million in 25 years.

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