No peace and stability in the Sahel without electricity

Columbia University  October 9  Serge Michailof
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-million 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.
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 reasons.

In Afghanistan the population has doubled since 1990.

In the Sahel, population doubles every 20 years.

Niger’s population was 3 million in 1960, will be between 42 and 45 million in 20 years, and 60 to 90 million in 2050.
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
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 Nigeria 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 demagogoy 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

Mingrids 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.
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.

• Authored by a highly experienced and free-thinking development practitioner
• Raises major geopolitical and development issues that will have a major impact on Europe's and the world's stability