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The Trans-Saharan Gas Pipeline: An Illusion or a Real Prospect?

Benjamin Augé

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IFRI
27, RUE DE LA PROCESSION
75740 PARIS CEDEX 15 – FRANCE
Tel : +33 (0)1 40 61 60 00
Fax : +33 (0)1 40 61 60 60
Email: ifri@ifri.org

IFRI-BRUXELLES
RUE MARIE-THERESE, 21
1000 – BRUXELLES – BELGIQUE
Tel : +32 (0)2 238 51 10
Fax : +32 (0)2 238 51 15
Email: info.bruxelles@ifri.org

WEBSITE: *Ifri.org*

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Introduction

The African continent holds 8% of global natural gas reserves. Its relative economic weakness and the almost total absence of natural gas networks means there is very limited internal gas consumption – almost none outside of Algeria and Egypt[1] – giving it considerable exporting capabilities. A pipeline joining up Sub-Saharan Africa with the European Union (EU) is therefore a reasonably logical project in economic terms. The two interested blocks have been discussing this with increasing intensity since early 2000. On the face of it the strategy seems obvious, the European area has three important gas producers: Norway (a non-EU member but closely associated with its energy policy), Great Britain and the Netherlands, with respective outputs of 99.2, 69.5 and 67.5 billion m³ in 2008[2]. However, Norwegian and Dutch production will begin to decrease in several years time; and British production has already fallen considerably since 2000. Britain currently imports one-third of its gas for domestic consumption (93.9 billion m3 in 2008). Logically EU imports are going to increase progressively. And yet, a fear of dependancy on Russian natural gas[3] - currently the average rate of Russian gas supply amongst the EU 27 is 25% - in the near future, is leading the EU to consider diversifying its supply source. Without this diversification Russia could be supplying around 70% of the European market (27 countries) by 2050.

Presently some EU countries clearly favour an increase in 'regasification' plants in order to import more liquified natural gas (LNG): France, Italy, Spain, the United Kingdom, the Netherlands, and Poland. The Persian Gulf countries, Egypt and Algeria and the U.S. will supply these new plants. The Trans-Saharan Gas Pipeline (TSGP) which would link Nigeria to Niger and Algeria, itself connected to Spain and Italy by existing pipelines or those currently under construction, could turn out to be an additional supply option in the long term. However, if this 4,128km long pipeline considered by

Benjamin Augé is a PhD candidate at the French Institute of Geopolitics, University of Paris 8.

[1] In 2008, Algeria and Egypt consumed 25.4 and 40.9 billion cubic meters per year respectively. These two countries represent two-thirds of total consumption on the continent. Figures from *BP Statistical Review of World Energy 2009*.

[2] *BP Statistical Review of World Energy 2009.*

[3] This fear has been further accentuated by recent supply cuts in Europe caused by disputes over the price of gas between Russia and the Ukraine (currently the main route for the pipeline between the two areas).

NEPAD[4] as a priority, is not just a dream nor even a challenge from a technical point of view, solutions to the various financial, security and geopolitical elements will need to be found before a hypothetical formal decision on development can be taken in the coming years.

[4] NEPAD: *The New Partnership for Africa's Development*. This initiative launched in 2001 by five heads of state (from South Africa, Algeria, Egypt, Nigeria and Senegal) within the framework of the Organization for African Unity (OAU), former African Union (AU), envisaged an acceleration of economic development in Africa. After almost ten years of existence, it can be credited with few tangible results.

The Trans-Saharan Pipeline: A Project with Hidden Dangers

With a current estimated cost of 21 billion dollars[5], the Trans-Saharan Gas Pipeline or *Nigal* (Nigeria/Algeria) project was formally launched in September 2001 with the signature of a *Memorandum of Understanding* (MOU) between Nigeria and Algeria. The extremely low cost of a barrel[6], less than US$ 20, at the time of the signing of the MOU, was the reason behind the initial slow take-up of the pipeline idea. The new economic order[7], as of 2003, saw the price of petrol and gas increase, reaching 147 dollars a barrel in July 2008. The Trans-Saharan project attracted more attention because of the revenues raked in by producing countries and oil companies following the increase in gas consumption in the European area. In 2009, the economic crisis caused European consumption to fall, and its energy growth could remain static for several more years.

[5] At the time of the project launch in 2001, Nigeria and Algeria estimated the TSGP construction at 7 billion dollars. Since then, all the costs of the service companies have increased, pushing up the final cost. Despite a trend towards lower payments in this sector since 2009, it is highly unlikely that the projects costs will return to their early 2000 levels straightaway.

[6] Until summer 2009 gas prices closely tracked petrol prices. The current de-correlation between the two raw materials is partly due to the boom in natural liquefied gas projects (particularly in Qatar) which are flooding the market. Added to that is the recent temporary decrease in demand for gas in OECD countries caused by the economic crisis of 2008/2009.

[7] This new phase can be explained by several combined phenomena. China has seen a steady increase in its oil and gas consumption since 1993. Since then, its domestic petroleum output no longer met its own needs. In 2003, growth rose suddenly and between 2003 and 2004 Chinese oil consumption went from 5.8 million bpd to 6.7 million bpd. (In 2008 the Chinese economy used 8 millions bpd and in 2009, it became the second largest importer in the world ahead of Japan, and just behind the U.S.). In India meanwhile, between 1998 and 2008 consumption rose from 1.8 million to 2.8 million bpd of which local production accounted for only 883 000 bpd. In addition to these two new and important energy consumers on the world market, all the traditional zones of consumption, including the OECD countries, grew between 2003 and 2008. The U.S., the number one consumer in the world, burned as much as 21 million bpd in 2005 even though its domestic output continues to decline: 6.7 million bpd in 2008. At the same time, other big producers such as Iran, Mexico, Venezuela and the Gulf states are seeing their internal consumption continually increase, reducing their export capacity. All these phenomena together, combined with the multiple geopolitical issues: Venezuela (strike at the PDVSA), Russia (differences with Ukraine), Iraq (war), Saudi Arabia (terrorist attacks), Nigeria (insecurity in the Delta region), encourage speculation. Prices in 2008 reached all time highs of 147 dollars, even during the second oil crisis in 1980 it only reached 80 dollars at constant value.

The TSGP began as a bilateral project with meetings held between the two main actors, Nigeria and Algeria. In January 2002, during an official trip to Nigeria by the Algerian President Abdelaziz Bouteflika a joint committee, the *Steering Committee*, was created in Abuja. The *Steering Comittee* is where the oil and energy ministers officially make important decisions – the equivalent of an OPEC Conference. The Sponsor Committee bringing together the national oil companies, and the Experts Committee allowing national specialists to resolve technical problems, prepare and clear away any differences should they arise. The *Steering Comittee* therefore only endorses decisions which have already been negotiated beforehand. In May 2002, a company was created in London between the Algerian Sonatrach and the Nigerian National Petroleum Corportation (NNPC) to finacially support the project. The usefulness of this action is yet to be seen.

High level meetings are rare: the second meeting did not take place until March 2003 and the third in February 2008. It was during this third *Steering Comittee* meeting in Abuja in 2008 that the Republic of Niger was officially integrated into the project. The largest part of progress took place during the Experts Committee, but no communiqué was published at the end of the meeting. This Committee has already met around a dozen times. The first important decision taken, helped by the good circumstances of the gas price, was to hire a consultancy company to conduct a study on the feasability of the TSGP.

The cabinet selection scheduled for the end of 2004, took place on 7 May 2005 and selected the British Penspen and IPA Energy. Their report, submitted in May 2006, concluded that this project is technically feasible and economically viable. Two options are proposed: a pipeline capable of transporting 20 billion cubic metres/year or another with a capability of 30 billions cubic metres.

The proposed route of the Trans-Saharan pipeline would begin in the Niger Delta region near to Warri town (south-eastern Nigeria) where most of the reserves are located. It would then pass through the largest town in the north of Nigeria, Kano (thus covering more than 1,000km in this country). Next it would cross Niger for 841km running through Zinder town in the south and on to Agadez town in the northern region. Obviously the pipeline would not pass directly through these towns, but would pass close by, should it be decided that the pipeline will also supply those urban concentrations close to its path. If this is not the case, then from a purely financial point of view, the developers would prefer to avoid the towns. The TSGP will then travel through Algerian territory for almost 1 500km passing through the outskirts of Tamanrasset town (no detour around the Hoggar mountain chain is currently foreseen) before rejoining the hub of gas producers of Hassi R'mel (a region in the middle of the Saharan desert). The pipeline will then connect with Europe through one of the pipelines presently under construction leaving from Hassi R'mel: such as the *Medgaz* which will link Algeria to Spain or the

Trans-Mediterranean (called Enrico Mattei since 2000) which has connected Algeria to Italy via Sicily since 1983; or the *Maghreb Europe Gas Pipeline* between Algeria and Spain (also known as Pedro Duran Farrell)[8]. In order to reach the coast, the pipeline in Algeria will need to be around 2,300km in length.

Since the report's presentation, the project has not advanced much further on the key issues such as a definitive decision on the route and contractors, financing, and security. The former European Union Energy Commissioner Andris Pielbags[9] promised during a trip to Abuja in September 2008 that Europe was ready to finance other feasability studies. Even though no real decision has been taken, the date of 2015/16 for the pipeline to begin operating, has always been espoused in official communiques ever since the project's launch. An intergovernmental agreement (IGA) for the development of the TSGP was signed by the three petroleum and energy ministers from Nigeria, Niger and Algeria on 3 July 2009 in Abuja. This was the green light for the three governments to begin developing the project. Therefore, in theory, there are no more disputes between developers. Despite the willingness declared by the three actors, the project still faces a multitude of obstacles.

[8] In the longer term, the *Galsi* pipeline between the east of Algeria, Sardinia and Italy will export Algerian gas to Europe. According to le Journal Officiel (the French official government register) of 10 January 2010, the *Galsi* should also pass through Corsica.
[9] He is Development Commissioner since 2010.

The Thorny Question of Available Reserves

One of the main reasons for the delay in the project development is the doubt hanging over the reserves of gas available[10] in the Niger Delta Region. The managers of Algerian Sonatrach asked Nigeria to engage an independant cabinet to carry out a study on the extent of its reserves during several meetings in 2008[11]. This request was rejected by Nigerian officials who argue that estimates of available reserves in the Delta - 184 trillion cubic feet (TCF) – are not determined by the state, but by the private oil companies who have exploited the region's hydrocarbons for over fifty years. This episode cooled relations between the project's two developers who decided to put this question to one side during the Algier meeting in July 2008. During this same meeting differences seemed to be momentarily smoothed over. Nevertheless doubts remain. Besides, it is impossible to invest in a project on such an enormous scale without any certainty over the size of the reserves. More important than the reserves themselves, it is the ability to exploit the reserves, rather than the reserves themselves, which is really under question.

Since 2006 the Delta region has been the stage for an increase in vandalism and piratery because of the actions of the *Movement for the Emancipation of the Niger Delta* (MEND). This movement operates like a federation of small groups. The fighters are equipped with the latest arms and modes of transport such as go fast boats. They can easily reach the most remote off-shore platforms, and land vandalism is even easier. MEND is characterised as applying a warrior program with the publicised goal of "destroying the governments capability to export oil in order to take control at the expense of oil companies[12]". As such, it is completely different to the pacifist movements of the nineties like the *Movement for the Survival of the Ogoni People* whose main leaders were condemned to death in 1995 by the Sani Abecha regime. Since its first radical action, the assasination of nine employees of Saipem (ENI) at Port Harcourt in 2006, MEND has succeeded in reducing oil production from 2 million

[10] Available reserves are those which are able to be mobilized quickly for production. Nigeria has considerable reserves which have been proven but investors need to be certain about the immediate ability to extract.
[11] *Africa Energy Intelligence*, N°600, 11 March 2009.
[12] Benjamin Augé, "Pillage et vandalisme dans le Delta du Niger", *Hérodote*, 3rd trimester 2009.

barrels a day - Nigeria's current quota in the Organization of the Petroleum Exporting Countries - to 1.2mbd at the height of the violence during summer 2009. MEND has not spared petroleum infrastructures either by blowing up pipelines or kidnapping technicians in charge of the liquidification factories (Bonny Island in 2006). MEND's power is in its capability, without even using the considerable resources at its disposition, to simultaneously block production in several oil fields. Its leaders are advised by Nigerian petroleum technicians, able to determine where installations are vulnerable and where to hit to cause the most damage. Following the announcement by President Umaru Yar'Adua's government of the opening of an amnesty process, MEND members ordered an unlimited cease-fire as of 4 October 2009, which was broken on 30 January 2010. Therefore the threat remains. Even if a "permanent" agreement is signed between the MEND rebels and the Nigerian government in the course of 2010, there will be no guarantee of continued access for the oil and gas companies to the gas reserves in the Delta to supply the TSGP. If there is disagreement at any time over the management of the oil, even minor, MEND could act again, just as it did in December 2009 when an oil pipeline in the River State was vandalised[13]. Moreover, on several occasions in February and July 2009[14], MEND has explicitly threatened to strike out at the TSGP. Without a deep-rooted political change in this region[15], the oil and gas reserves will remain permanently on hold, in other words subject to exploitation and stoppages even if only temporarily. This holds true for all the hydrocarbon development projects in the region. Some individuals claiming to be from MEND use the movement for dishonest ends and exploit the under-development of the region for their own personal gain. They become wealthy through the theft of crude cargo with the complicity of certain high-level military officials. The movement can also prove to be a formidable political trampoline for Delta leaders who defend it publicly. The arrival at the head of the country at the beginning of February 2010 of the former Vice-president Goodluck Jonathan[16] - serving as interim president following the hospitilisation of the president in name only, Umaru Yar'Adua, in Saudi Arabia from November 2009 to 25 February 2010 - will perhaps change the

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[13] *Africa Energy Intelligence*, N°619, 6 January 2010.
[14] *Oil and Gas Journal*, 13 July 2009.
[15] In addition to the amnesty proposal from the Nigerian President, a new ministry charged solely with the Delta region was created in December 2008. This minister must carry out a herculean task given the budget available: he must improve the economy of the region by financing infrastructure projects, facilitate the creation of employment targeted at youth, etc. This minister has just added himself to the Commission charged with the development of the Delta Region: *Niger Delta Development Commission* (NDDC). Created in 2000 by the former president Olusegun Obasango, it also suffers from an under-funded budget: 314 million dollars in 2009. The stack of committees and organizations charged with the Delta region spread out resources and investments and delay advances on key issues in a region of almost 30 million inhabitants.
[16] Goodluck Jonathan sworn in as President in May 2010.

federal states strategy towards this region and the problem of hydrocarbon management. Jonathan actually comes from the oil state of Bayelsa where he was formerly governor. (Umaru Yar'Adua originates from Katsina state in the north, which has no petrol reserves.)

Sonatrach executives can barely conceal their fear about the availability of Niger Delta reserves because of the daily risks of vandalism. Sonatrach also echoes the Penspen report which asks the TSGP developers to prioritize liquefied natural gas (LNG) projects in the Delta. Currently three gas producing plants are at the planning stage: OK LNG (a postponed programme headed by Chevron and Shell), Brass LNG (the go-ahead decision by the Italian ENI has been pushed back several years), and Escravos GTL (commissioning planned for 2012). As well as these projects, each of which requires billions of dollars of investment, the currently unsatisfied increase in local gas consumption needs to be added. This issue is going to become a priority with the new oil and gas law in Nigeria due to be voted on during 2010 (this law is also constantly being delayed). This new legislation, of which one of the principal components is dedicated to gas in the document "Gas Masterplan", would force every company looking to exploit a new gas field to develop projects to supply local power stations. This wish is fully justified from an economic point of view. For several years now, the Nigerian gas-fuelled powerstations in Lagos, Egbin, Afam (Port Harcourt), Geregu (Kogi) and Sapele (Delta) have been forced to function at reduced capacity, hampered by a lack of gas. The national electricity company *Power Holding Company of Nigeria* (PHCN) in December 2009 reminded that it was the lack of gas[17] that had made it impossible to reach the production target of 6,000 megawatts promised by President Umaru Yar'Adua[18]. The *West African Gas Pipeline* (WAGP)[19], scheduled to begin operating some time in 2010, should not be omitted from this list of gas projects. After several postponements, once it is working, this is also going to have bearings on the amount of gas available in the Delta. The proliferation of LNG projects and the mobilization by pipeline of a proportion of the gas reserves in Nigeria understandably provokes fear amongst the Algerians.

The other major problem is the rise in construction costs in the oil industry. Service companies costs have risen since early 2000; sometimes projects have been conceived at a certain cost but by the time the decision to move forward with the development is taken,

[17] *African Energy*, N°178, January 2010.
[18] At the end of 2009 Nigeria was producing 3,000mw, in other words fifteen times less than South Africa.
[19] This 620km pipeline links Lagos, the economic capital of Nigeria to Benin, Togo and Ghana. One billion dollars have been invested in this pipeline in total. Construction was led by a consortium of companies headed up by the American company Chevron-Texaco. The WAGP has experienced numerous delays due to vandalism of the ELPS pipeline in the Niger Delta by MEND in May 2009. After completion the WAGP should transport 30 million cubic feet/day. This pipeline could, according to the Ivorian authorities, be extended as far as Abidjan.

investment needs have risen considerably. Furthermore, the reasons behind the constant delays in the liquidification projects by the private oil companies must make the TSGP partners reconsider. Why would oil companies want to invest in the TSGP when they are constantly delaying their less expensive liquefaction plants in the same area? Investors are clearly waiting for significant improvements to restore confidence in the future.

In order to provide some response to these new projects, the Nigerian government is counting on the progressive end to gas flaring[20] to supply its new plants. However, the Nigerian government, which officially banned gas flaring in 1984, has never had the will to force companies to build the necessary networks to recuperate the gas. A new timetable was discussed in the Nigerian Parliament at the end of 2009, with private companies in favour of 2013 and parliamentarians, 2011. The only efficient coercive measure would be a ban on production until the actual creation of a network but Nigeria is not in a position financially to allow this to happen. More than 90% of the Federal State exports are from the sale of hydrocarbons. Currently Nigeria has the largest gas reserves in Africa, ahead of Algeria, but because of extensive associated gas flaring, it is only the third largest producer (with 35 billion cubic metres), after Egypt (58.9) and Algeria (86.5)[21].

Besides Sonatrach's complaints about the NNPC on the crucial question of the reserves, Niger has also made several important remarks to its partners since its entry into the project. During the committee of experts meetings in September 2009 in Niamey, and then a month later in Algier, the NNPC proposed to use networks already built in Nigeria (between the Delta region and the north) instead of constructing a new network. This solution would have the main advantage of considerably reducing the total cost of the project. However, Niger has no gas infrastructure and, in this case, would have to pay royalties to its partner to use the network.

Moreover, there is no guarantee that existing pipelines in Nigeria, which have been in service for several dozen years, are in any state to safely transport the necessary amount of gas towards Europe for another three decades (the minimal lifetime foreseen for the TSGP). This proposition from one of the original developers of the project poorly conceals the enormous difficulty of finding funding to finance the TSGP. The financial crisis which began in 2008 and which

[20] Gas flaring is the burning of associated gas from oil field. All oil fields contain to a greater or lesser extent a significant quantity of gas. In order to avoid constructing a costly gas network, the operating oil companies have, since the beginning off oil production in Nigeria in 1958, chosen to burn the associated gas. The volume of gas burned in Nigeria is estimated at 70 million m²/d. This is the equivalent of 2 to 3 billion dollars a year in state revenues, according to the figures given by Vice-president Goodluck Jonathan in 2008. It is partly due to this phenomenon that Nigeria is the biggest polluter of the continent.

[21] *BP Statistical Review of World Energy 2009*

reached its peak in 2009 has further aggravated this exercise. Niger is negotiating with its two partners for independent studies to be carried out on the viability of Nigeria's networks.

The Geopolitical Dangers of the Route

Besides the threat from MEND and other groups in the Delta region, which should be taken seriously, the route favoured by the Penspen agency would pass through other areas extremely difficult to control because of their very low population density, especially in Niger and Algeria, and which are for the main part desert. Two prominent threats should be considered: the Touaregs in Niger and the former Salafist Group for Preaching and Combat (GSPC) which became Al Qaeda in the Islamic Maghreb (AQIM) in 2007, and which originally used Algeria as its main base.

The Touaregs are mainly located in the north of Niger, in the Agadez region – exactly where the pipeline would have to pass. Since the 1990s, they have fought against the Niger government to ensure that their region is not left out in terms of infrastructure and development. They have also benefited from the near total absence of the state in their area by developing small-scale goods smuggling, the volume of which is very difficult to evaluate. Between 2007 and October 2009, the rebellion was strengthened with the creation of a smaller group: the Movement of Nigeriens for Justice (MNJ)[22]. To put pressure on Niamey this organisation killed almost 80 Nigerien soldiers with mines and direct attacks on barracks. Libyan mediation paved the way for the signing of an agreement in October 2009 and the recognition of a cease-fire by the two parties, symbolized by several weapon handover ceremonies. The Nigerien Interior Minister Albadé Abouba has promised to reintegrate the Touareg rebels in the state and to take care of the Agadez region financially in the future. Although the government initially chose to be firm when dealing with the Touaregs, the latter have still managed to corner the government into negotiations. The huge uranium mine Imouraren, exploited by the French company Areva, and a share of the country's petrol resources are held in this strategically important area (Currently the Chinese company *China National Petroleum Corporation* (CNPC) is exploring several areas there[23]). The main Touareg movements in the 1990s,

[22] See *Touareg Crises in Niger and Mali*, Institut Français des Relations Internationales, Seminar on 27 November 2007.
[23] One of the Chinese national companies, *China National Petroleum Corporation* (CNPC), was able to begin its exploration work on the Ténéré field again after the Nigerien President Mamadou Tandja, lifted the ban on exploration of the zone on 27 November 2009. Since 2007, a document banning exploration of this region was

like the Niger Patriotic Front (FPN) and the Front of Forces for Recovery (FFR), accepted the October 2009 agreement. However, there is no reason not to suppose that if the results of the reintegration process do not satisfy one faction, the rebellion would not start again under a different name. The TSGP could be a good pretext to demand more from the government. Not many resources are needed to vandalise a pipeline which can not be protected across its entire 844 km route through Niger territory. The Niger authorities will have to negotiate with the Touaregs and the local communities to allow the pipeline to pass through their land. If even one faction is not satisfied with the agreement with Niamey over the financial spin-offs from the TSGP, fresh instability could break out.

Al Qaeda in Islamic Maghreb (AQMI) is also taken seriously in Algeria where several murders and kidnappings have been carried out since 2007. All the countries in the region are, to a greater or lesser extent, confronted by AQMI. In Mauritania actions began with the murder of four French citizens in December 2007, and Mali has also experienced numerous kidnappings for ransom. This movement has training centres in the desert area within the borders of Algeria, Mali and Algeria. It is for this reason that the French and U.S. intelligence services have lead several operations there since 2007[24]. This area is under even closer surveillance as it is conducive to drug smuggling for the same reasons as Niger: insufficient control by the government through a lack of means or because of the sheer size of the area to be monitored. A number of AQMI communiqués are directed at French citizens whereas, in actual fact, their actions target all Westerners, as well as military, in countries where the movement is established. AQMI knows the south of Algeria, where the Trans-Saharan gas pipeline will have to pass, better than anyone. In Algeria, AQMI has never officially threatened the TSGP's construction. Nevertheless, there are fears that this relative silence will change when work eventually begins. The French multinational Total publicly announced its interest in this project in May 2009[25]. The pipeline could become a strong symbol of French interests in Algeria and therefore doubly targetted.

Despite these threats, a kind of "soft power" for this large geopolitical project is used with other countries in the region. Mali which is not, in principle, on the TSGP's path, has since summer

signed by the President of the Republic every three months in the light of Touareg activity.

[24] The United States are going further than carrying out simple stakeouts. The Pentagon has consecrated around 436 million dollars between 2005 and 2009 for the *Operation Enduring Freedom-Trans Sahara* (OEF-TS) program, itself preceded by the Trans-Sahara Counterterrorism Initiative (TSCTI) launched in 2005 and the Pan Sahel Initiative (PSI) in 2002. Almost 170 American soldiers have trained armies from different countries involved in the OEF-TS program in the fight against terrorism: Algeria, Mali, Mauritania, Chad, Burkina-Faso, Senegal and Tunisia. The United States considers this area as the third most dangerous terrorist hub after Iraq and Afghanistan.

[25] *Africa Energy Intelligence*, n° 605, 27 May 2009.

2009 been actively preparing an argument to convince their Nigerian and Algerian counterparts to let them form part of this venture[26]. In September 2009 the Authority for the Promotion of Oil Research to Mali (AUREP) commissioned a feasibility report from the Canadian company ERCO Worldwide with the conclusions submitted to Mali at the end of 2009. ERCO concluded that there would be a slight but sufficient advantage in routing the pipeline through Mali[27]. To reach this conclusion justifying a change in the route, the Canadians compared the relief of Malian territory with that in the north of Niger. ERCO also presented an opinion on the gas potential of Mali, a share of which could be siphoned into the TSGP. The International Financial Corporation (IFC), a private subsidiary of the World Bank, has also been approached by Bamako to take part in the TSGP shareholding. The Nigerian President Umaru Yar'Adua back in November 2009 said he was ready to meet the Malian President Amadou Toumani Touré. But, as was mentioned in an earlier paragraph, Ya'Adua was hospitalised with a heart condition in Saudi Arabia from November 2009 to February 2010, blocking all discussion. As for Abdelaziz Bouteflika, he reacted to the Malian proposition at the end of December 2009 through a letter signed by the Minister of Energy and Mines, Chakib Khelil. Khelil[28] is due to visit Bamako soon to discuss this further with the Malian President. However it is highly unlikely that Mali will ever be included in this project. The country's gas reserves are for the time being unknown, and no drilling has taken place since the 1990[29]. Furthermore, according to several specialists the pipeline's passage through Malian territory would mean an increase in construction costs. It is highly unlikely that Mali will manage to raise the funds for a pipeline which is not a priority at all for traditional funders. The project already seems difficult with three actors involved, adding a fourth would only complicate it further. The last factor which does not help the Mali's case: the repeated attacks by the Algerian army against AQMI over the past three years have led a large number of fighters to seek refuge in the north of Mali. Relations between Algeria and Mali have considerably deteriorated mainly because of this issue.

[26] *Africa Energy Intelligence*, n° 615, 4 November 2009.
[27] ERCO, having been appointed by the Malian State, would have found itself in a delicate position if its conclusions had been any different.
[28] Khelil has been dismissed in late May 2010. He has been replaced by Youcef Yousfi, an ex energy minister in the 1990s.
[29] Mali's hopes lie in Sipex's future drilling in Block 20 of the Taoudeni sedimentary basin shared between Mali, Mauritania and Algeria. (Sipex is a foreign subsidiary of Algerian Sonatrach.) This drilling has been postponed until July 2010. The main reason for the delay is that Sipex is waiting for the results of the drilling on the same sedimentary basin carried out by Total in Mauritania since the end of 2009.

The Kremlin's Africa Strategy: Suffocation of the EU?

During the Paris Summit of September 2000, the European Union initiated a new dialogue with Russia on energy. One of the goals of this meeting was to confer on the response to the rapid increase in energy demand in the EU zone, in particular in the area of natural gas. At the time there was complete confidence between the two blocks. The question was whether Russia would accept and if it would have the means with which to respond to European demand. Actually, EU dependence on Russia is going to become overwhelming if there is no change in energy policy. The Russian Energy Minister pointed out that the EU could be depending on Russia for as much as 70% of its gas by the year 2050 (this percentage is not an overexaggeration if the situation remains the same). Several pipelines are presently under construction to allow the EU, whose consumption will increase considerably in the medium term, to obtain enough gas from Russia[30]. This is notably the case for the *North European Gas Pipeline* made official by the signing of a contract in 2005 between Russia and Germany.

The current problem between the two blocks originates from the recent slump in EU confidence in Russia[31]; following the momentary cut in Russian gas supplies in 2006 and 2009, owing to a dispute with Ukraine[32]. Ukraine is currently the almost obligatory route for Russian gas to enter the European market, 80% of Russian gas imports destined for Europe pass through its territory. Disappointed,

[30] Nord Stream Project.

[31] See the detailed study by Susanne Nies: *Ukraine: a transit country in deadlock*, Institut Français des Relations Internationales, December 2009.

[32] Russia demanded that as of 1 January 2006, Ukraine pay the same price as the European Union (the equivalent of 220 dollars for 1,000 cubic meters) even though Ukraine at that time was only paying one fourth of this. In the end Ukraine obtained a gradual incrimination from Gazprom: 95 dollars in 2006, 130 in 2007 and 179 in 2008. Currently Ukraine pays more for its gas than Europe. Before 2006, Ukraine benefited from a preferential tariff because of the special relation between the two former Soviet states. The elections at the end of 2004 putting Victor Yushchenko, the candidate favored by a number of Western countries, at the head of Ukraine at the end of 2004, changed the geopolitical context. Following these elections, Russia treated Ukraine a lot less preferentially. The arrival to power in Kiev of Victor Yanukovych, the pro-Russian candidate in February 2010 is unlikely to change the Kremlin policy of making Ukraine pay a price close to the market price, particularly after Russia's economy experienced an 8% fall in 2009 (International Monetary Fund).

the EU drew a lesson from this episode on the need to diversify its supply sources in the future. Russia, because of the scale of its reserves, will inevitably remain one of the main European suppliers[33]. It is in this context of defial that the European Union is gradually showing its interest in the TSGP. The former European Energy Commissioner, Andris Pielbags initially showed his support for the project during a meeting between Africa and the EU on future pipelines in November 2006 in Algiers. A meeting of all European Union energy ministers was held on 18 December 2007 in Limassol to outline the energy priorities of the Euro-Mediterranean program budget for 2008/2013. Pielbags once again brought up the European Union's interest in this project, albeit only once. It was only on 11 September 2008 that the EU gave a more favourable signal with the visit of Pielbags to Abuja in Nigeria: the European Commissioner proposed financing new feasibility studies of the pipeline. He suggested the possibility of financing the TSGP through the European Investment Bank or the *Infrastructure Fund*. On 13 November 2008, the *2nd Strategic Energy Review* which approves the EU's energy investment priorities every two years, only looked at "how to integrate the TSGP"[34]. On 22 January 2009, the Czech Ambassador to Nigeria, Jaroslov Siro, publicly declared his country's interest in the TSGP especially "in the context of the Ukraine-Russia crisis". Siro expressed the position of a country supplied entirely by Russian gas, like almost all Eastern European countries; the Czech Republic therefore has a pressing need to push the EU to diversify. As nothing concrete was forthcoming from Brussels, the Nigerian Oil Minister Rilwanu Lukman went to the EU captial on 26 and 27 March 2009 to bring the EU's attention back to the TSGP. Despite being received politely, he returned to Nigeria without the slightest commitment.

In these last two years, the EU has shown an increasing interest for the TSGP, even if only in words. For its part, Russia, through the state-owned energy giant Gazprom, prepared the ground for active cooperation with Nigeria and Algeria. Cooperation with Algeria began with an agreement with the national company Sonatrach signed in August 2006. However, Gazprom had to wait until December 2008 for the first concrete step of this agreement, with its entry to the El Assel field. It was largely Gazprom's assurances to the Algerian Minister on the TSGP pipeline at the beginning of 2008 which made this participation possible. Even so, some criticisms of Gazprom's arrival in Algeria were made such as those of the then Sonatrach president, Mohamed Meziane. The latter declared in

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[33] Russia is conscious of the fact that a large part of foreign currency returns come from the sale of gas in Europe. Therefore, it can not afford to block gas distribution for long periods. The simple fact of it being used as a weapon has, however, led the EU to reflect. The economies of both blocks are intrinsically linked: on the one hand the EU needs gas for its economy to function; and on the other hand, Russia needs to sell its gas for the government to function, especially important for its not very diversified economy.

[34] *Europe Information Service*, 13 November 2008.

March 2008 that Gazprom had done nothing in Algeria since signing the *Memorandum of Understanding (MOU)* and that it would not be one of the TSGP pipeline constructors. This declaration was interpreted by a Russian daily as an anti-Russian attack[35]. Meziane will not give any more to Russian investments in Algeria: he was relieved of his functions in January 2010 for alleged corruption[36].

Gazprom's arrival in Nigeria has been more laborious. After Vladimir Putin's initial trip to Abuja in 2007, a Gazprom delegation visited Abuja in January 2008 to propose an energy partnership. The Russian company officially declared its interest in constructing the TSGP for the first time. An extremely vague *MOU* was signed by Gazprom and NNPC in September 2008; collaboration in exploration, production and hydrocarbon distribution in the country was mentioned. However, it was not until the official trip by the new Russian President Dimitri Medvedev to Nigeria at the end of June 2009[37] that a joint-venture, Nigaz, was created between the two national companies. The priority project for Nigaz is the construction of the first section of the TSGP (which starts at the Delta and heads to the north of the country). Gazprom "seduced" the Nigerian government by proposing right from the initial negotiations, to build networks to recuperate gas torched by the companies which exploit the Delta resources. These networks would notably increase the electricity capacity of the five gas-fired power stations, a proposition which the Nigerian government is sensitive to. The figure of US$ 2.5 billion worth of global investment is regularly held up by the Russian side to demonstrate its engagement with the Nigerian authorities. Gazprom has also tried, unsuccessfully until now, to obtain gas fields in exchange for IOUs on the construction of gas networks.

Gazprom's strategy for the TSGP can be better understood through an analysis of its activities with other producing countries in the Gulf of Guinea and the North Africa region. Gazprom is trying to limit any possibility of diversification by the European Union. On 17 October 2008, the president of Gazprom, Alexei Miller visited Malabo in Equatorial Guinea to sign an MOU beginning cooperation, as it had previously done with Nigeria. But, as before, it was not particularly specific. It is also known that Russia is targetting acquisition of equity in the second part of liquefaction at the EG LNG factory. The MOUs with Nigeria, Equatorial Guinea and Algeria allow Gazprom to hope that one day they will control a share of the gas going to the European Union. To seal its strategy, Gazprom has also gained a foothold

[35] *Nezavisimaya Gazeta*, 28 March 2009. Nezavisimaya Gazeta is a left-leaning Russian daily newspaper.

[36] *Africa Energy Intelligence*, n° 620, 19 January 2010

[37] During his African trip from 23 to 27 June 2009, Dmitri Medvedev also stopped off in Egypt (for gas and regional diplomacy), Namibia (Uranium and construction of a gas power station) and Angola. In the latter country several strategic partnership agreements were signed, notably in the energy sector. Angola does not yet export its gas and is therefore not a huge source of anxiety for Russia in its strategy of surrounding Europe.

in Libya. During his July 2008 visit to Tripoli, Gazprom's Director General Alexei Miller proposed the construction of a network of pipelines as well as refineries in exchange for access to the country's hydrocarbons – it has the fourth largest gas reserve on the continent. This strategy has been crowned with success as Gazprom walked away with 33% of the main gas field, El Feel, in December 2008. Almost all of Libya's gas production is sold to Europe; the TGSP is far from its borders, however regionally speaking, its participation would not be without some sense.

This strategy of "surrounding" all of the gas countries and even to supply the TSGP or to liquefy the gas destined for the European Union has been laid out in a report by the Centro Nacional de Inteligencia (the Spanish Secret Service). Published by the daily newspaper *El Publico* in April 2009, the report's conclusions state that the sole reason for Gazprom's strategic agreements across Africa and the Middle East is to control all the gas supply routes to the European Union. Even though the report is extreme in viewing the single Russian objective to be the surrounding Europe, it does still voice the fear of some EU countries of being put under the energy guardianship of its mighty Eastern neighbour.

As was mentioned earlier, the sole goal of the Gazprom agreements in Africa is not to surround Europe. Russia is also looking to regain a certain economic and diplomatic influence vis-à-vis African countries. With the fall of the USSR, privileged relationships with certain countries on the continent like Algeria, Libya, Guinea, Angola and Mozambique were lost. Obviously, efforts are going to be concentrated on those countries where a return can be sought with commercial contracts in areas such as the energy or mining sector. Russia also helps its own private companies to do business. The last trip made by Medvedev in June 2009 is a good example of this: a delegation of two hundred businessmen accompanied him. Medvedev is leading, as Prime Minister Vladimir Putin did before him, a business-focused African diplomacy, and its central pillar is energy. Russia has the worlds leading gas reserves with 43 trillion cubic feet or 23.4% of volume of gas discovered until now[38]. A fair share of Russia's gas is already sold to the EU and it is still not able to develop other areas of growth, oil and gas sales account for more than 60% of the country's exports. Russia therefore needs to carry out an upstream policy in order to benefit, in the long-term, from other EU gas supply projects. On the other hand, Russia remains to be convinced by the TSGP. During their long African trips, the Russian leaders gave the impression of speaking about the TSGP simply to please their hosts without being really convincing about their complete belief in its economic and security relevance. If it goes ahead, they want to be one of the partners, but if it does not, then it will not be of great importance to them either. Strategically speaking,

[38] *BP Statistical Review of World Energy 2009*.

this would perhaps even be the best solution as it puts to one side the one diversification opportunity for Europe. The lack of progress on the TSGP gives them time to gain a better hold in the Gulf of Guinea countries and to try and obtain reserves to develop. For the time being Europe lacks reactivity compared to Russia and is settling for making short-lived statements of intent. Europe is in the race behind the Russian leaders, but has still not fully signed up to anything concrete, to the huge displeasure of the Nigerians and Algerians. The latest trip to Lagos on 10 February by Plutarchos Sakellaris, Vice-President for Sub-Saharan Africa at the European Investment Bank (EIB) does not signal any change in the European energy policy towards the TSGP. Indeed Sakellaris actually signed a 240 million euro loan for improvements to the electric network and the creation of a *National Gas Distribution Grid;* and absolutely no financing was foreseen for the Trans-Saharan Pipeline[39].

[39] *Africa Energy Intelligence*, n°622, 16 February 2010.

Tactical Discussions by International Companies

The *Trans Saharan Gas Pipeline* is an expensive project: initially figures of seven and then ten billion were discussed and even 21 billion dollars has been mentioned, although this last figure seems slightly exaggerated. Its construction would take years and there are dangers along the route. Nevertheless, several European companies have already declared their interest in this pipeline which, when constructed, would be the longest not only in Africa but worldwide. The main companies are Total (France), ENI (Italy) and Natural Gas and Repsol (Spain). Total's directors twice expressed themselves on this subject in 2009: once on 25 February, during an oil and gas summit in Abuja, through the group's Nigeria Director, Guy Maurice and next through its North Africa Director, Jean-François Arrighi de Casanova during an interview with *Le Pétrole et le Gaz Arabes* (PGA)[40] in March 2009. These two executives announced that, in general, after having studied the available technical data, the TSGP seemed appealing. The Director General of ENI, Paolo Scaroni, was rather more explicit in an interview with the French weekly *Jeune Afrique* in May last year: "the project lead by Sonatrach and NNPC primarily interests us because our teams are familiar with the high-pressure transport technology necessary for the development of this pipeline". As for Natural Gas and Repsol[41] they, like their homologues, were quite vague on their desire to be part of this project but nevertheless repeated it several times in 2009. Knowing the numerous risks and constraints of this pipeline, the objective reasons for the support of these companies to the TSGP can be questioned, but profitability is consistently the main criteria for investment.

The suggestion that there is real will to invest is highly unlikely. The most logical explanation is the same as Gazprom's: discussion on the TSGP is simply a strategy, with the aim of flattering the authorities of the project's host countries, particularly Nigeria, with the goal of obtaining access to its reserves and fields. The TSGP has been carried along, since the beginning, by the same actors, the oil

[40] A fortnightly publication in French which covers all aspects of the petrol and gas industry in North Africa and the Middle East with sub-sections focusing on the Caspian Sea and Sub-Saharan Africa.
[41] *Africa Energy Intelligence*, n°614, 21 October 2009.

and gas ministers from Nigeria, Rilwanu Lukman[42], and Algeria, Chakib Khelil. These authorities are also those who, in their respective countries, carry the most weight in the allocation of exploration contracts. These public statements by the leading companies are, for the most part, the result of tactical repositioning. The oil and gas companies need to renew their reserves at any cost to ensure that their stock value does not fall. Since the last stock surge in petrol, conditions of access to resources have considerably worsened, including in Africa. Total is developing multiple projects in Nigeria (with around fifty licences). ENI is also there and has a strong foothold through the its joint-venture with the NNPC. These companies want to continue work in order to eventually surpass their rivals: Royal Dutch Shell[43], Exxon-Mobil and Chevron-Texaco. Nigeria, in its *Gas Masterplan,* warned that it would not grant any more access to its resources without a contractual engagement from companies to develop the areas around the fields. Producing countries have understood that, as holders of reserves, they hold the hand and have to demand a high-price for this non-renewable and non-finite resource. This has become a central issue for the sovereignty of the producing states. As for Natural Gas and Repsol, they have tried unsuccessfully to enter Nigeria's exploration market in Nigeria for several years; by speaking about the TSGP their voices are more likely to be heard by Abuja. All these companies have the same mindset as Gazprom. Should the TSGP project ever be carried out, it would be in their interest to be involved because they would all be directly affected by this gas destined for Europe. The Trans-Saharan would arrive directly from Algeria to Italy and Spain and the gas would then travel up to France. Therefore, it is only logical that the three largest companies in these three countries would be interested in it. Even more so as competition in the construction of gas and oil pipelines is becoming increasingly globalized[44]. It is striking to note that apart from the European companies directly concerned by the TSGP's construction, no other company, American or Asian for example, has shown any interest up until now. The likely reason being that the TSGP still does not inspire confidence in professionals.

[42] On the launch of the project in 2001, Rilwanu Lukman was Advisor on Hydrocarbons to Nigerian President Olusegun Obasanjo. Lukman has been dismissed in early April 2010 and replaced by Diezani Allison-Madueke (ex-Shell manager).

[43] Shell has had a very bad reputation in Nigeria since the political problems of the 1990s when Shell was accused of being complicit with the power of Sani Abacha. Moreover, as the largest, oldest and most productive operator in the Delta, it is also the most exposed. Currently, the Nigerian government is creating problems over the renewal of several of its contracts.

[44] One of the Libyan state companies, Tamoil Oil, has invested a lot in the construction of oil pipelines over the last few years with several projects in the Democratic Republic of Congo as well as Uganda to take gas and oil products from the Kenyan town of Eldoret to Kampala (works on this project are continually being delayed). The Chinese also own numerous companies capable of building oil and gas pipelines in difficult conditions and over distances of several thousand kilometers.

Moreover, the arrival of firm financial offers from Chinese or Malay companies or from the American giants already present in Nigeria, would signify that the Trans-Saharan project is no longer just an illusion lacking solid foundations, but that it is a financially interesting and viable project. The conclusion that the TSGP is at present only a "Trojan horse" for companies who want to maintain or create good relations with Abuja does not seem to be an overexaggeration.

Conclusion

High-level discussions on the subject of the *Trans Saharan Gas Pipeline* project have been taking place since the beginning of the 2000s and several, not entirely insignificant, advances have been made. The first is the technical feasibility, validated by a technical study submitted in 2006 to the governments of the project's member countries. These countries have also created a follow-up body, with different levels of responsibility. With regular meetings it can advance and overcome the obstacles dividing the TSGP partner countries. The feasibility study has however highlighted issues which governments still need to resolve, such as the availability of gas reserves in the Delta, a key point that investors can not ignore.

On analysis of all the elements of the route and the geopolitical realities, it appears that there are more reasons to believe that the pipeline will not be constructed in the near future. This statement is not based at all on the technical constraints which would be insuperable, gas pipelines of 4,000 kilometers are nevertheless made possible by numerous contractors. On a topography level, there would certainly be a few difficulties which would weigh down the cost of the project i.e. the Hoggar mountain range, but this would not be impossible for specialized companies. A study of the solutions proposed by the developers confronted by this sort of obstacles should wait until a final choice is made on the route.

The inhospitality of the areas it will cross, geopolitically dangerous because of previous or ongoing conflicts will be one of the biggest challenges faced by the project. Some of the incertitude behind the implementation is also financial, depending on the European Union's geopolitical choices in terms of energy security: currently no private investor, no donor, nor any country has gone beyond a mere declaration of intention for the TSGP. The European Union, itself, even thought it is cornered into diversifying its supplies in the near future because of a reported drop in internal production, is not fully supporting this project. The European Union imports only 20% of oil produced in Nigeria, but already 80% of its gas. Since the problems in the Delta Region intensified in 2006 due to the actions of MEND and the increase in costs of the oil and gas service industries, all LNG factory construction projects have been frozen. All the more reason why a far more costly gas pipleine is not going to garner great enthusiasm on the side of member countries. For the security of its supplies, the European Union will risk continuing with its current strategy of developing natural liquefied gas projects with gas from the

Persian Gulf, the U.S. and Egypt amongst others. Several regasification terminals are under construction in countries on the Mediterranean coast. This choice of a transport preference by gas carrier does not run contrary to support of the Medgaz and Galsi projects, both are backed by mainly private companies. But for the moment, these two projects are solely supplied by Algerian gas. The EU has, until now, reacted to the TGSP through the media with the sole objective of countering Gazprom and not through any conviction that the project is central to its diversification strategy.

The numerous interviews conducted by the author with oil and gas companies and bankers prove to what extent the TSGP project remains illusory today, almost ten years after its formal launch. Oil and gas pipelines always take a long time to realise, but the obstacles here seem particularly hard to overcome. The only way to make this gas pipeline a reality is for it to be financed, at least in part, by the countries it crosses, so that it attracts other players. And yet, Nigeria, with a population of 150 million is financially battered. Algeria has considerable foreign currency reserves (gained in the 2003-2008 period) but does not count on paying the share of its much larger neighbour to the south. As for Niger, it remains one of the poorest countries on the continent.

Furthermore, funding bodies would need to give steadfast guarantees before private companies will commit to investing one single dollar. The case of the TSGP is similar to that of the Doba/Kribi pipeline, constructed in 2002/2003 to transport petrol from the south of Chad to the Cameroon coast for export. If the World Bank had not guaranteed the project and given a loan to cover part of the cost of the work (amounting to a few hundred million dollars) the project would never have gone ahead. Private companies like Exxon-Mobil easily had the means to finance the US $3.7 billion dollar total cost of the project. However, an assurance from the World Bank, for an investment of this size is required. Especially in Chad where there are numerous problems of governance. Unfortunately this set-up can not be used as a model, because Chad, after reimbursing all of the World Bank loans at the end of 2008, closed the Bank's oil project in N'djamena. Therefore the Bank no longer has any control over the governance of oil in Chad. African oil-producing countries are increasingly refusing to accept funding organisation interventions in their internal affairs and they are making this fact known. The World Bank, badly burnt, will think twice before investing again in a project, and one that is even more complicated given the number of actors involved, the money at stake and the issue of access to reserves. And without further clarification on this final point, the project will remain at the feasibility study stage.