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Gas in Mozambique
a High-risk Economic Revolution

Benjamin Augé

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Introduction

Since oil was discovered in Uganda in 2006, East Africa has been an arena for a race in the exploration for hydro-carbons. Yet the oil reserves in Uganda, the more recent and modest ones in Kenya and the few pockets of gas in Ethiopia are on a completely different scale from the enormous gas resources discovered since 2010 in the off-shore waters of Mozambique and Tanzania. The approximately 184 trillion cubic feet discovered in the basin of the Rovuma in the North of Mozambique (a quantity on a par with that of Nigeria) are going to turn upside down both the regional and international markets. If the oil from Uganda is going to have a major impact on the national economy, it will be a mere drop in the ocean for the world oil market. On the other hand, not only will the gas from Mozambique transform the local landscape beyond recognition (probably quadrupling the GNP in little over a decade), but it will also have far-reaching consequences for the world market in terms of prices and future projects[1].

As a result of the discoveries of gas and the simultaneous development of major coal projects, Mozambique has become in recent years a country welcoming major direct investment (5,000 million dollars' worth in 2012, when the GNP is no more than 14,000 million). Opportunities for foreign companies with know-how in oil servicing (drilling, pipe-line assembly and factory construction) and associated fields (catering, logistics…) are already plentiful. This will also apply to infrastructure construction (bridges, airports, ports, roads) and the building of accommodation in the gas regions (the province of Cabo Delgado). As regards the gas sector itself, the former President of the leading Italian company ENI, Paolo Scaroni, regularly referred to an investment of 50,000 million dollars for the duration of the project[2].

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[1] Certain very costly developments – particularly in Australia – risk never seeing the light of day as a result of the discovery of Mozambique's gas which would be extremely competitive in view of its enormous volume, the favorable geological conditions and the supply of cheap labor.

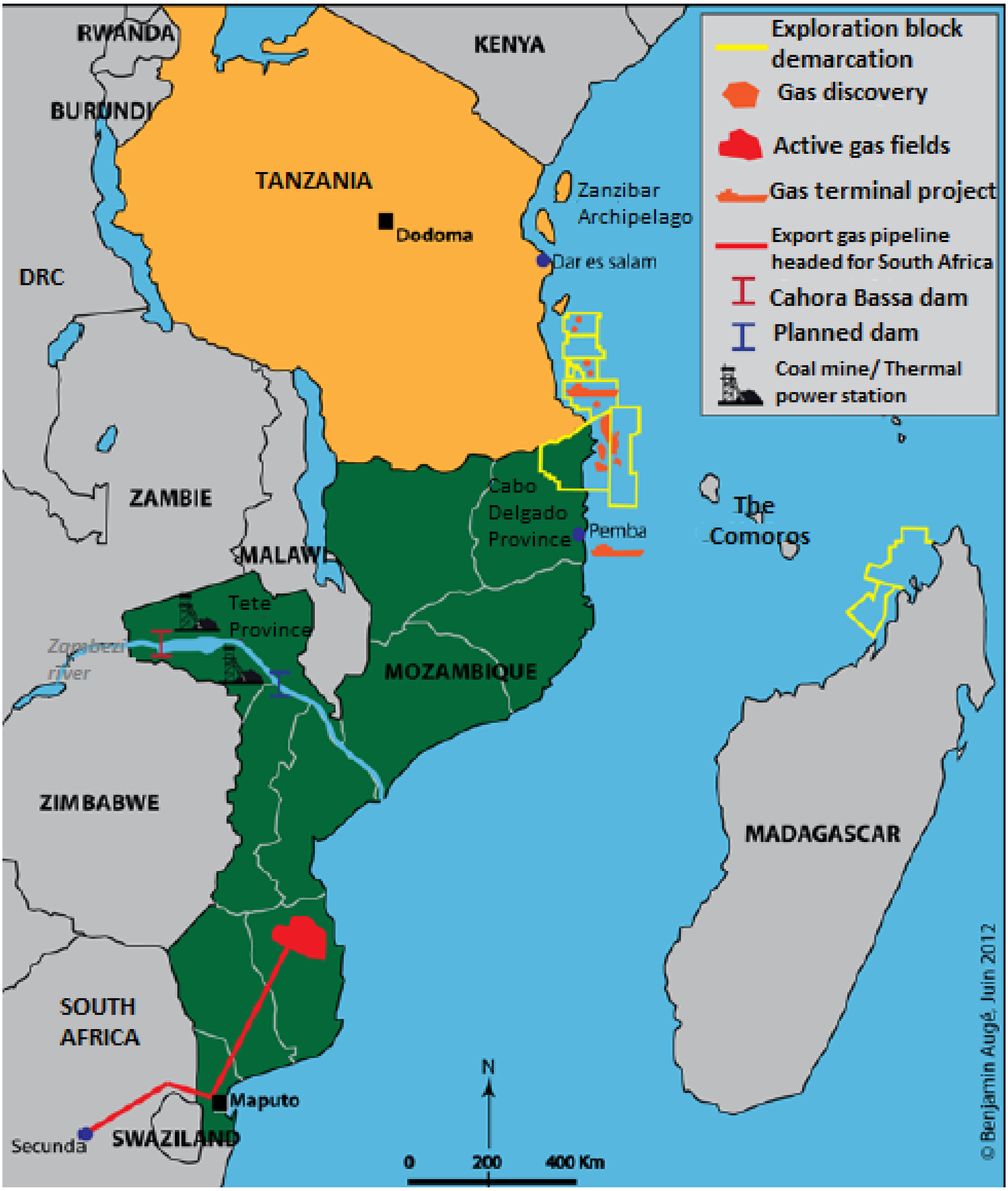
[2] "ENI may spend $50 billion on Mozambique Gas to Supply Asia", *Bloomberg.com*, December 8, 2011, see: <www.bloomberg.com/news/2011-12-08/eni-plans-50-billion-investment-in-offshore-mozambique-gas-1-.html>.

While the opportunities for foreign workers will be considerable, it is important to remember that the local political-economic context is highly complex. Independent since 1975, after ten years of armed struggle against the Portuguese colonialist regime, Mozambique then engaged in a civil war, which officially came to an end in 1992 after the Rome Accords. Thus its stable economic history only goes back to 20 years and the consequences of those various conflicts are considerable and will make themselves felt for a good time to come: poverty is endemic and effects up to three quarters of the rural population in the northern parts of the country, there is an almost total absence of skilled labor and a desperate need for infrastructure development[3]. Over and above all that, the private sector is underdeveloped and to a large extent controlled by leading members of the ruling Frelimo party (with a communist ideology but liberal leanings since the end of the 1980s).

The result of a field study in Mozambique in August 2013, where we met around 40 of the key players (politicians from the regime and the opposition, those in charge of the oil companies, ambassadors, international donors staff, representatives of bilateral and multilateral joint projects, the press and NGOs), this paper sets out to analyze the way in which the Mozambique government is preparing for this new phase of development.

[3] World Bank, *For a ninth poverty reduction support credit,* June 19, 2012. See: <www.worldbank.org/projects/P131212/ninth-poverty-reduction-support-credit-prsc-9?lang=en>.

Discoveries of Gas in Mozambique and Tanzania
and projects for electric power-stations



Gas in Mozambique: what are we talking about?

Since the end of its civil war, Mozambique has been experiencing some of the most rapid economic growth of the entire African continent. Between 1993 and 2012, according to the World Bank, its GDP has been growing on average 7.4% per year[4]. According to the same institution, that growth will be 8.5% in 2014 and 2015. Yet international donors such as the World Bank and the G19[5] state that, while the rapid growth served to reduce poverty in the 1990s, that reduction has been slower since 2003. Between 1997 and 2003, the proportion of the population living in poverty has come down from 68% to 56%. In 2009 the figure had not come down further than 52% and there had been increases in certain rural regions in the center of the country from 65.4% to 71.2% between 2003 and 2009. Mozambique is therefore going through a phase, in which wealth creation is no longer enabling a significant part of the population to break free from poverty. This growth is only raising living standards for urban populations in the large towns in the south of the country like Maputo and certain urban areas around ports such as Beira. In other words, the wealth currently being produced in the country brings advantages to a very small minority and is not contributing to the emergence of a middle class. That class – according to the African Development Bank – only represented 2.6% of the population in 2010, one of the lowest figures of its kind in Africa[6].

As in many African countries, the majority of the active population is working in the agriculture sector (essentially subsistence farming): 78% of the labor force is working in that sector which accounts for only 23% of the GNP. This low percentage can be explained in particular by the extremely low level of productivity in agriculture and the lack of infrastructure for transport and storage, which prevents farms with surpluses, situated mainly in the North and center of the country, from selling their produce in zones where there are shortages. This means that vegetables and cereals often rot where they grow and numerous consumer products are imported

[4] World Bank, *For a ninth poverty reduction support credit*, June 19, 2012.
[5] The body which manages direct aid paid into the Mozambique budget, including the country's main Western backers and also institutions like the European Union and the African Development Bank.
[6] African Development Bank, *The Middle of the Pyramid, Dynamics of the middle in Africa*, April 20, 2011.

from neighboring countries such as South Africa, which – thanks to its agricultural output on a completely different scale – floods the Mozambique market, in particular that of the Maputo region just over the border from South Africa[7]. The fishing sector for the time being is little more than a cottage industry and, when it comes to sea-fishing it is largely left to foreign operators working under licence. Mozambique is keen, however, to develop its national capacities and, in 2013, acquired for that purpose 24 trawlers and longliners for catching tuna from the firm “Constructions Mécaniques de Normandie[8]”.

The industrial sector which accounts for nearly 24% of the GNP is predominated for the most part by aluminum production (Mozal – operated by BHP Billiton has been active since 2000 and is located near Maputo) and electricity thanks to the Cahora Bassa dam in the northern province of Tete (2,075 MW), virtually all of which is sent to South Africa. As for the services sector, which accounts for nearly 50% of the GNP, its structure is now improving thanks to the rapid growth of commerce, the buildings and works sector, mobile telephones and the banking sector.

In this economic landscape, the extractive industries are to a large extent still in their infancy. While coal gold and tantalite reserves have been known about for several decades, their isolation – in particular in the Tete province (in the North-West of the country, see map above) – and the country’s political instability until the 1990s have to a large extent kept investors away. In 2012, the extractive sector only accounted for 1.7% of the national wealth and the revenues, certified by the only report published by the Extractive Industries Transparency Initiative (ITEI) for 2010, only came to 1.9 billion meticais or $58 million (using the 2010 rate of exchange). Coal exports from Moatize by Vale which started in September 2011, and from Benga (in Tete province) by Rio Tinto (which started in 2012) are going to swell the country’s mining revenue considerably. The World Bank estimates that it will reach 2 to $4 billion a year, when these coal mines and certain others like those in Jendal (which have been productive since 2013 in Tete province) will be working at full capacity towards the end of the present decade. This will depend in part on the railway corridors currently being built in the direction of Nacala, those planned to extend rail links to Pemba (see the map), the future deep water port in Macuze (Zambezia province) or the increased capacity of the port at Beira, which at present is the only one being used to export coal. Apart from that last raw material, other mining resources could be exploited as well, such as iron in Tete, mineral sands in Moma or substantial graphite deposits and so on.

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[7] On agricultural issues in Mozambique, see: reports from the Food and Agricultural Organization of the United Nations.

[8] See: <www.liberation.fr/economie/2013/09/05/le-mozambique-commande-200-millions-d-euros-de-bateaux-made-in-cherbourg_929732>.

At the heart of the extractive sector and apart from minerals, the place of hydrocarbons still remains to a large extent marginal. Only the South-African company Sasol has been producing small quantities of gas since 2004 in the Inhambane province (see map) thanks to the Pande and Temane fields. These fields were discovered in 1961 and 1964, but at the time small-scale gas resources were only rarely developed, because there was no distribution or export network: the companies in the sector concentrated on marketing oil. In 2010, the taxes paid by Sasol to the Mozambique treasury came to 195 million meticais (or $6.3 million[9]). Virtually, all this gas is being sent through a gas-pipe (800 kilometers) to the Secunda factory in South Africa, operated by Sasol. The gas is then used to transform coal into fuel oils using the Fischer-Tropsch process[10]. A minimal amount of this gas has also been used since 2013 to produce electricity (122 MW), using Aggreko generators located at Ressano Garcia at the South-African border. The latter supply the South of Mozambique with a very modest amount of electricity (32 MW) and also Namibia (90 MW) thanks to the existence of regional links. Another power-station at Ressano Garcia (CTRG), the result of a joint-venture between Sasol and Electricidade de Moçambique (the state electricity company) which occurred in 2012, is also to allow Mozambicans to benefit more from their gas resources currently being exploited and producing 140 MW of electricity.

It is in this economic context that the recent discoveries of gas by Americans from Anadarko (Block 1) and Italians from ENI (Block 4) have been made near the Cabo Delgado province (in the Rovuma basin). These two blocks adjoin the Tanzanian border in the North (see map). The reserves which have already been certified amount to some 184 trillion cubic feet thanks to the only two permits so far issued, or 100 trillion cubic feet in accordance with Permit 1 and 84 on the basis of Permit 4[11]. Clearly, it will probably not be possible to sell all these reserves: studies are still necessary to establish what volume it will actually be possible to produce (it is only possible to extract a limited percentage of the hydrocarbons discovered: the average recovery rate for oil worldwide is between 30 and 40%, and when it comes to gas, that number rises to around 75% of the volume discovered). It is, however, possible to imagine that there will later be new discoveries in the country. The volume of

[9] Having often been attacked in the press or by certain Mozambique NGOs for having obtained very advantageous contracts, and transferring part of its revenue to the Mozambique state, Sasol has been defending itself, arguing that at the time the contract was signed in the early 2000s, nobody wanted to invest in this sector. The South African company therefore considers that the clauses in its contract reflect its readiness to take risks only a few years after the end of the civil war. The oil companies which subsequently acquired rights to exploration Blocks, such as Anadarko and ENI, have not been able to enjoy the same investment conditions. The terms of all the oil contracts have all been on-line since the beginning of 2014.
[10] A process making it possible to produce synthetic crude oil from gas or coal.
[11] Figures made available by Arsenio Mabote, the Director General of the National Oil Institute during a seminar at Aberdeen in July 2013.

184 trillion cubic feet is therefore likely to be substantially revised. Before these discoveries, Mozambique only had reserves of 5 trillion cubic feet. The oil operators are also a long way from having completed their radiography of Zones 1 and 4 and it is likely that new reserves will be discovered in the next few years. If no discoveries are made in the Blocks further South, in particular those of Statoil and Tullow (Blocks 2 and 5) and those of Petronas and Total (Blocks 3 and 6), it is still far too soon to write them off when exploration has only been going on for four years so far. This zone which forms part of the Rovuma basin (the river which separates Mozambique and Tanzania) could well contain a good deal more gas. In addition, the other sedimentary basins in the country (the basin of the Mozambique in the South, the Manimba basin in the North-East, the Nyassa basin in the lake of the same name and finally the Mid-Zambezi basin in the Tete province) are still very much underexplored. New invitations for tenders are planned for the end of 2014.

In the next three decades, Mozambique is going to redefine the map of gas producers throughout the world and it will become – alongside Qatar and Australia – one of the most important suppliers of liquefied gas destined mainly for the Asian economies (China, India, Singapore, Thailand, South Korea and Japan), where demand is booming and purchase prices are currently high[12]. ICF International – one of the consultant companies chosen by the World Bank to help the Mozambique government prepare its gas strategy (Gas Master Plan) – estimates that the quantities already confirmed would enable it to meet all the current needs of Germany, France, Italy and Great Britain combined for twelve years. The reserves in Mozambique – 184 trillion cubic feet – put the country in 9th place in the world, ahead of Nigeria and Algeria and behind Venezuela, the United Arab Emirates and Saudi Arabia. Mozambique is likely to become – after just three years of intensive exploration in just two Blocks – one of the major world exporters of the future. We shall see, however, that the obstacles standing in the country's way, as it seeks to achieve this goal, are far from negligible.

The question from this point on is to know what the country is going to do with this vast resource when no market close by is capable of absorbing it. Indeed, even if South Africa remains the leading economic power of the continent, its future demand and growth are far from being enough to 'swallow up' the amounts of gas expected in Mozambique. As early as the end of 2011, aware of the volume of gas already discovered, Anadarko and ENI started thinking about building a factory for liquefying gas. It would then be possible to transport the transformed gas in tankers to the main consumers in Asia and perhaps to Latin America as well. There would be no

[12] Mozambique is not the only country in East Africa attractive as a source of gas: Tanzania also – thanks to Exxon, Statoil, BG and Ophir – discovered three years ago over 40 trillion cubic feet, quantities perfectly adequate to envisage significant exports to countries in the Indian Ocean zone.

problems involved in selling that gas because the main customers are also shareholders in the consortia of Blocks 1 and 4. In February 2013, the China National Offshore Oil Corporation (CNOOC) bought 20% of Permit 4, of which the Koreans from the company Kogas have 10%. As for Block 1, Thais from PPTEP have bought up the 8.5% belonging to the British from Cove Energy in 2012. Indians from Oil and Natural Gas Corporation (ONGC) and Oil of India have taken 20%, and the Japanese from the Mitsui Company have owned 20% for several years now. In fact, all the main Asian consumers already number among the shareholders, a key fact for the two operators Anadarko (US) and ENI (Italy), whose resources from Mozambique will probably never be sold in their own countries.

The Mozambique government has already specified an area in the bay of the small coastal town of Palma, situated in the extreme North of Cabo Delgado province, for the construction of the first four LNG trains[13] (each with a capacity for 5.2 million tons) of the Afungi facility, which would be operational at best by 2019/2020. Afungi would have the possibility of gradually expanding and would be able to count on as many as 10 or 12 LNG trains for a production of between 50 and 60 million tons per annum, or the equivalent of what Egypt and Malaysia are currently producing and a third of what Qatar, the world's leading exporter of liquefied gas; is producing. Maximum output will only be achieved from 2030 at best. ENI envisages for its part that it will resort to a *floating liquefied natural gas* facility (FLNG), enabling it to stock up the gas on an enormous floating barge, which will carry out the liquefaction. The gas tankers would then take on supplies directly from the FLNG instead of connecting up with a port terminal. This option would aim at saving time, but the FLNG technology is still in its infancy: the first structure of this type will be started up by Shell in Australia only around 2017. Moreover the Mozambique government does not wish to concentrate the development of its gas industry off-shore and hopes for visible spin-off for its population[14]. When it comes to FLNG facilities, this will only concern part of the gas production, that situated furthest from the coasts (Block 4), so as to avoid the construction of an expensive network of underwater gas pipe-lines.

Today the State of Mozambique is still at the stage of drawing up its Gas Master Plan: that is to say it is deciding how to divide up gas resources between those to be exported and those to be used locally. It is also considering how to transform the gas as effectively as possible. The exploitation of quantities of gas of this order will never be able to involve local staff on any large scale, at most several thousand people employed when production is at full capacity. On the other hand, these quantities of gas can give the State the opportunity

[13] Trains for the liquefaction of natural gas are facilities in which gas is liquefied.
[14] Examples often given during conferences by Arsenio Mabote, the Director General of the National Oil Institute (INP)

to create various industries, which will have the capacity to set in motion a pool of jobs in the Northern provinces, in particular that of Cabo Delgado. Mozambique's Ministry of Mineral Resources is indeed studying, along with other national institutions such as the *Empresa Nacional de Hidrocarbonetos* (ENH – National Enterprise for Hydrocarbons), the best ways of creating up to 70,000 jobs with the help of this gas. This could take the form of electric power-stations or factories for the production of fertilizer, which requires large supplies of power that is inexpensive and constant. This plan is one of the paths favored by the government for two key reasons. First of all, it will make possible the export of large quantities of fertilizer to other countries on the African continent, where consumption has risen over the last ten years from 2 to 4 million tons[15]. Secondly that should, logically speaking, help Mozambique's agricultural sector increase its productivity. In Mozambique, the average fertilizer use between 2006 and 2010 was between 5.8 and 10.2 kilograms per hectare[16], while the African average was 11 kilograms and the world average 122 kilograms. Mozambique used 62,000 tons of fertilizer in 2011. Other jobs would be indirectly created in services required by oilmen such as those working in the administration of the future deep water port at Palma and at the airport or on the railways needed to facilitate logistics in the Cabo Delgado province. Finally, the government is thinking of creating free zones near the places where gas has been discovered so as to attract companies and to create an industrial hub – an option which will not necessarily be crowned with success as regards job opportunities. Apart from the financial advantages, private companies would be attracted by extremely advantageous energy prices and regular supply.

When full production will be achieved (if the plan for building 12 LNG trains, coupled perhaps with a FLNG facility, materializes) the World Bank estimates that the gas revenue coming into the State of Mozambique could be of the order of 5 to $10 billion per annum. This would mean a quadrupling of the State budget and would represent nearly 35% of the current GNP. To this would be added – as we have already seen – between 2 and 4 thousand million dollars a year thanks just to coal production. The extractive sector will thus bring about profound change in Mozambique's economy in the decade starting in 2020.

The arrival of this manna from heaven in a context of serious poverty, where the population is hoping for great boons, presents the leaders of the country with a number of challenges, in relation to fair and transparent redistribution of this wealth. The mixed nature of Mozambique's society – numerous marriages between people of

[15] According to the International Fertilizer Development Center, see: <economie.jeuneafrique.com/entreprises/entreprises/agro-industrie/21505-afrique-lutilisation-des-engrais-reste-toujours-minimale.html>.

[16] World Bank, *Agribusiness Indicators Mozambique*, April 2012, p.15.

different regions and creeds and community ties, the absence of dominant ethnic or religious groups and the geographically wide support-base for Frelimo fortunately remain considerable advantages in a situation where there are massive resources concentrated in a single area, as is the case with the gas in Cabo Delgado province[17], a region which has incidentally always been loyal to Frelimo[18]. Frelimo, in its turn, has always gone out of its way to get rid of ethnic and religious differences through decentralization, making sure that governors never come from the region of which they are in charge.

[17] *Mozambique, quelle démocratie après la querre?,* a special issue of the journal *Politique africaine*, N°. 117, 2010/1.
[18] The candidate put forward by Frelimo for the presidential elections which will take place in October 2014, the current Minister of Defence, Filipe Nyussi, is moreover originally from Cabo Delgado.

A Mining Sector still far from Operational

The Skilled labour Shortage

No country on Earth, however high its level of development may be, would have the capacity and the 'weapons' required to prepare itself appropriately for the discovery of such an enormous resource in so little time. Mozambique, however, was starting out from a particularly low level. The oilmen, mine-owners, backers and ministers met in Maputo are unanimous in naming the lack of a skilled workforce as the main problem and a problem from which the gas sector will suffer a great deal. Education is a major issue in a country with a literacy rate of 56% for men and 43% for women (for the people in the area where the liquefaction facility is due to be set up, the literacy rate did not exceed 7% in 2013[19]). While the donors can congratulate themselves on the fact that there was access to primary education for 90% of children in 2011 against only 56% in 2000, it will be a long time before this have an impact on the future working population. As regards skilled personnel (accountants, logistics experts, technicians, engineers…), their rarity makes the process of hiring staff particularly difficult. Knowing that they are very sought after, people trained in these fields only remain in one and the same post for a very short time and, after only a few months, start negotiating a better salary in another company. This leads to a record turn-over, far higher than in other African countries where numbers of trained personnel are noticeably higher than in Mozambique (Tanzania faces a similar problem, but not such an acute one nevertheless). This means that oil and mining companies have to pay out very high salaries to people who are not going to stay for long and who, in addition, are very reluctant to go to remote provinces such as Cabo Delgado for gas or Tete for coal. Several oil and mining operators have confided to us that, when it comes to levels of expertise and staff mobility Mozambique was "one of the worst country in Africa" they had ever worked in.

[19] According to internal documents of the US Company Anadarko.

This problem risks becoming a major obstacle when the Mozambique government seeks to apply maximum limits for the proportion of expatriate staff so as to promote the take-up of local staff. The current Minister of Labor in Mozambique, Maria Helena Taipo, is not enthusiastic when sent several dozen visas requests for expatriates. As early as 2014/2015, some 8,000 foreigners, whose skills cannot really be replaced by Mozambique citizens, are due to arrive for the construction of the Afungi plant. The prospect of possible delays in the issue of visas is viewed very seriously by the oilmen, who are trying to make the authorities more aware of the problem, in particular the office of the Minister for Mineral Resources (MIREM). Yet, although the minister in charge, Esperança Bias, is well aware that a delay in the issue of visas for expats would be disastrous as regards cost, she is not always able to resolve these situations. Is it a question of political calculation, in which everyone is engaging in role-playing: “Taipo would be difficult and Bias understanding about it”? It is difficult to say, but this administrative bottle-neck remains a source of anxiety for the future.

An Administration for the Mines that is interventionist but still disorganized

The key role of the State in this sector is also giving the gas players food for thought. Characterized as it is by a strong leaning towards State control, Frelimo intervenes to a massive extent in the economy. In this respect, the creation in 2013 of ENH Logistics – a branch of the national oil company ENH – is symptomatic. The aim of ENH Logistics is to concern itself with the implementation of all the logistics projects linked with gas production in Cabo Delgado. It is therefore going to have to invite tenders, set up joint-ventures with companies which it will select and then keep a close eye on construction sites. This work will apply to roads, the deep water port at Pemba (capital of the Cabo Delgado province) etc. Anadarko and ENI are going to depend on the progress of the same projects in order to be able to develop their gas factory. One of ENH Logistics’ partners will be the State enterprise, Ports and Railways of Mozambique (CFM), which is already in charge of work on the railway designed for the export of coal from the Tete province through the port of Nacala. Major delays are to be deplored and the mining companies are powerless because they have little influence when it comes to scheduling. The oil companies are also afraid of being relegated to an onlooker role in the development of these projects, of not being able to influence decision-making and eventually seeing themselves obliged to postpone the opening of their liquefaction factory.

Several Mozambican decision-makers encountered in the Ministry for Mineral Resources have spontaneously mentioned Sonangol in Angola as a model: it has gradually become a sort of investment fund active in various sectors of the economy, sometimes without any link with oil. Sonangol has also opted to participate in Blocks for exploration/production as well as to create joint-ventures with private companies for services to the oil industry (Sonamet liaising between Sonangol and Subsea7[20]). This strategy, which can be admired or denounced (Sonangol is only capable of operating in relatively simple fields after more than 50 years of production) has taken decades to achieve any concrete results. The projects in Angola have not been held back because private investors are given pride of place and Sonangol does not create any major problems with regard to logistics projects: the national company stands to benefit, if the infrastructure plans connected with oil projects are operational within the shortest possible time-span. However, the experience and maturity gained in this field by Sonangol and the Angolan oil sector in general – which has been producing large quantities of oil since the 1960s – are very different from those of Mozambique, where the State involvement can too often mean that projects are delayed and become tied up in bureaucracy.

Apart from the fears already voiced by oil executives, the organization within the Ministry and the State institutions already in place can also prove an obstacle for smooth development of Mozambique's gas reserves. First of all, there is the matter of the low level of competence found among civil servants. Just as in the private sector, well trained employees are still too rare in public bodies. In addition, when some of them obtain training abroad and come back to Mozambique, the attraction of the private sector, in which salaries are better than in public service, encourages them to leave the latter. This means that there are major problems for those seeking to hold on to the best staff in State service. Mozambique has not escaped the classic phenomenon observed in a number of developing countries: a minister and departmental directors of a good level but an administration lacking good quality staff at the intermediate level. This applies both to the ministry and to the public companies which are in charge of the sector – the ENH and INP (the National Oil Institute responsible for regulation and also for assigning exploration Blocks). In parallel with this skills shortage and inadequate training of by the staff employed, various departments within the Ministry for Mineral Resources do not always work together and sometimes even oppose each other. According to some of the donors' representatives we have encountered, information (such as that found in annual reports from the oil and mining sectors) does not circulate and exploration results are sometimes jealously guarded by civil servants anxious to hoard such data and render themselves indispensable by doing so. When decisions have to be taken urgently on the basis of such data, it is sometimes impossible to find them. There are also too many

[20] ENH Logistics and Subsea7 have also just set up a joint-venture in Mozambique for assembling gas-related materials: see *Africa Energy Intelligence*, N° 707, October 7, 2013.

departments at one and the same hierarchical level and nobody outside the Ministry is really capable of obliging departments to work together and of preventing them from holding back information. In the provinces as well, the problem of skills in the administrative bodies in charge of the mines and oil industry is acute, apart from a few exceptions as in Tete, where some people responsible for the mines are reputed to be highly efficient. The directors in charge of the mines who are meant to submit information to Maputo have very limited means of doing so, since communications are sometimes poor (the Internet can be down for several months at a time, as it recently happened in the Zambezia province).

Frelimo, a Party very involved in Business Affairs

Apart from the difficulties for the administration in charge of oil and gas, the politicization and vote-catching gimmicks in this sector are also a cause for concern. Various members of the Frelimo party (which has been in power since independence) have created private companies in order to acquire permits for mining exploration. This is notably the case with retired generals Alberto Chipande (a native of Cabo Delgado), Jacinto Soares Veloso, Raimundo Domingos Pachinuapa, de Eduardo da Silva Nihia, currently defence advisor to President Armando Guebuza, former general and ex-governor of a province, João Facitela Pelembe, retired general and former head of the air-force João Americao Mpfumo and former head of the Maputo police, Amandio da Graça Vasco Zandamela[21]. While certain of its personalities are no longer in power as ministers, they sometimes remain as deputies or members of Frelimo's political commission (like Chipande, head of the influential branch of former combatants and well-known for having fired the first shot against the Portuguese in 1964, in the province of Cabo Delgado) and it is thanks to their place at the heart of the party that they have obtained their permits. While this phenomenon is far from exclusive to Mozambique, conflicts of interests in this country seem to loom particularly large. Foreign investors are, moreover, obliged to pass via Frelimo and its associates in order to engage in exploration in Mozambique by purchasing at exorbitant prices the mining permits which the regime executives have obtained for very little. This system, in which politics and 'business' are intrinsically connected, is quite widespread in Mozambique. Its porous nature is also reflected in Frelimo's investment fund "SPI, Sociedade de Promoçao de Investimentos"

[21] The quasi-exhaustive list of the generals, ministers and Frelimo members is available in a special dossier brought out by the *Lettre de l'Océan Indien*, "Former Generals go-betweens in the Mines", March 26, 2012.

directed by Safura Conceicao. The latter figure who is attached to the party, manages interests in the private sector in Mozambique.

Under pressure from international donors, a law on public integrity was passed in 2012 to prevent, in particular, deputies from directing State firms (for example, José Katupha, a deputy and, until June 2013, president of the society for petrol distribution, Petromoc, or Teodor Waty, formerly president of the aviation company LAM, while he was president of the parliamentary laws commission). Nevertheless, political offices combined with activities in private business continue to be widely tolerated. These practices have not really affected the gas sector because it requires such gigantic capital investment. Nevertheless, oilmen fear that companies close to political power will be imposed upon them for the provision of services (catering, logistics, and small-scale projects). Some former 'Frelimist' ministers such as Chipande and Katupha, both of whom come from Cabo Delgado (the province where one of the last Frelimo congresses was symbolically held, in September 2012) are seeking to assume a role in the gas sector. Katupha has just set up an association called CDeM (Cabo Delgado em Movimento), through which he is putting himself forward to take charge of mediation projects between oilmen and the local population. Initially CDeM had been aspiring to attract investors for tourism, but since then urgent priorities have been elsewhere. Katupha makes the most of the fact that this association is, for the moment, non-profit-making. The first meetings of CDeM in Pemba (Cabo Delgado) were organized at the end of 2013.

The party in power has often had attention drawn to it by NGOs (notably the Centro de Integridade Pùblica[22]) and opposition parties (Renamo, Movimento Democràtico de Moçambique – MDM) on account of the lack of transparency in the strategic sectors. Yet efforts have been made and staff from the oil companies have told us they were given a green light from the government to publish the contract. This effort to improve transparency finally came to fruition at the beginning of 2014. Joining the Extractive Industries Transparency Initiative (ITIE) on October 26, 2012 and the publication of its report for 2010 also contributed to this campaign. It is the deputy-minister for Mineral Resources, Abdul Razak Noormahmoud[23], who is in charge of implementing the ITIE. Pressure from the donor community, represented by the G19, was a determining factor for ensuring that Mozambique engaged in that transparency process. It was not a foregone conclusion and the culture of secretiveness of the State in Mozambique is often criticized by NGOs and donors. Yet the inadequate scale of public information is in reality due more to the disorganized nature of the Ministry than to deliberate attempts to hide

[22] An NGO often supported by Danish, British, Swiss, Norwegian and Swedish volunteer organizations.
[23] Who is the Governor of Cabo Delgado province since April 2014.

elements of that information. The conversations we have had with ministers, advisors and the head of department from the ministry have indeed shown that only a few questions make them really ill-at-ease and they do not have any real difficulty or embarrassment about explaining points that are unclear or even downright litigious (such as that concerning taxes on transfer profits, to be discussed below).

The Chaotic Management of Capital Gain Tax

The issue of legal insecurity regarding contracts and legislation covering gas is also a major concern in Mozambique, just as elsewhere. One of the questions which have caused the most trouble in the heart of the oil community has been that concerning the capital gain tax. Since 2011, various companies, which were holding interests in Permits 1 and 4, have decided to dispose of some of them while raking in substantial profits from transfers, thanks to the enormous discoveries that had been made. At the time the State of Mozambique did not possess a law specifically enabling it to tax capital gain in the mining sector relating to operations carried out by foreign companies. There was therefore a legal void which oil and mining companies rapidly exploited. The Ministers of Finance and Mineral Resources meanwhile did not just stand back and do nothing, given that the sums involved were very large. When the gas discoveries had already been formally identified, the British company Cove Energy transferred 8.5% of Block 1 to Thailand's PTTE for $1.9 billion. Although the government of Mozambique had no legal grounds for doing so, all the oilmen, who had sold part or all of their assets bound up with their permits (ENI, Anadarko, Videocon), had to negotiate directly with the State and they were all made to part with a significant sum. ENI, which completed the last operation of that kind, has just paid $400 million to the Mozambique treasury after having sold 20% of its Block 4 to CNOOC for $4.2 billion. In order to make that operation possible, the First Minister of Mozambique, Alberto Vaquina, went to Rome in April 2013 to announce the suspension of the fiscal agreement between Italy and Mozambique which had been concluded in the 1990s.

The government has just finally succeeded in settling this question, which had previously been dealt with in an opaque manner. Since January 1, 2014, foreign companies selling their interests in oil Blocks are being taxed at 32% on the profits obtained (outside their investments). The law is not retroactive. The text of the law applicable in 2014 was voted for in parliament in May 2013. A first version voted on in December 2012 had been thrown out at the beginning of 2013 by the President of Mozambique, Armando Guebuza. He had clearly responded to the oilmen's lobby, which had risen up in protest against the retroactivity of the text that was finally abandoned. That period of legal wavering, which only came to an end in January 2014, served to place the legal basis for governmental negotiations under a cloud of serious suspicion. Before the law was applied, oilmen paid the State a tax on increases in value of roughly between 10 and 12%. This was the equivalent of a third of the tax to which all transactions were subject to from 2014 onwards. Apart from these sums, there are lawyers and NGOs who consider that there could have been other forms of compensation, which would not necessarily have been declared, and that could explain the leniency of the State (12% is very different from the 32% as specified in the law). In any case, this question has helped to maintain the image of a rather opaque power structure, as the NGOs and the opposition constantly denounce. It has symbolized the first and rather worrying discord in the management of a sector, where there are still many shortcomings with regard to legal matters, expertise and know-how. The companies, for their part, have clearly understood that it would not be in anybody's interest to try and go before an arbitration court to sort out this matter[24].The stakes in this country are considerable and the regime could have disrupted the work of the oilmen currently out there, if the latter had set in motion a procedure of that kind which could last several years.

[24] This type of procedure is currently underway in Uganda and Equatorial Guinea.

Opposition Forces are still weak

The decisions being taken now will have consequences for the next fifty years. Indeed, the period immediately before the beginning of gas exploitation will condition the governance of years of production. The first gas tanker will leave Cabo Delgado (see map above) between 2018 and 2020. So it is now that Mozambique should put in place the necessary safeguards to avoid repeating the errors of governance made in Nigeria, Congo-Brazzaville or even in Angola, the country which is often taken as an example by Mozambique.

The greatest risk during the years that precede oil or gas production stems from the absence of any opposition. Ghana, where production started in 2010[25], was able to manage that period in a relatively methodical way, thanks to the existence in the political arena of two strong political parties[26]. The regime in the case of Ghana could not ignore the opposition, especially in Parliament, where the laws for managing the sector (governance) and for the utilization of the future manna were voted on. Moreover, the opposition found itself, in its turn, in power after 2009 and so there was shared responsibility for the preparation for the oil arrival shared by the two main Ghanaian parties. In Mozambique, it is really difficult to find any real opposition to Frelimo. Our meetings with representatives from Renamo and the Movimento Democratico de Moçambique (MDM) revealed a certain lack of knowledge about the stakes involved and a lack of structured discourse about a sector in which the opposition members of parliament could easily find themselves supporting shady individuals or the government's "lapses" (as in Uganda, albeit without success[27]). The Renamo party does not regard the discoveries of gas as an issue of fundamental importance, since it is entirely preoccupied by the negotiations, which began in

[25] This field discovered by Tullow Oil, is one of the most important discovered in West Africa in recent years.

[26] See: Benjamin Augé, "L'Afrique en questions" N° 14: *La difficile équation énergétique de la nouvelle présidence au Ghana*, Ifri, December 19, 2012. See:<www.ifri.org/?page=detail-contribution&id=7476&id_provenance=87&provenance_context id=2151>.

[27] In October 2011, Ugandan deputies forced the government to have a debate over oil. That did not lead to any concrete results but the debate nevertheless made it possible to bring various questions into the public arena thanks to the coverage in the newspapers. On this subject, see: Benjamin Augé, *L'Afrique de l'Est*, *une géopolitique pétrolière à haut risque*, Note de l'Ifri, November 2012.

April 2013 with the regime, regarding its participation in the next rounds of elections[28]. Gas (and coal as well) are an additional justification for their repeated demand for the wealth to be shared. As for the MDM, founded in 2009 by renegade Renamo members, the deputy that we met seemed to have difficulties expressing himself in a precise manner. Neither of the two parties has designated any of their members to take on the task of following the gas companies' dossiers (and possibly those of the mining companies too). This means that they have not necessarily adopted a strategy for attacking the government on basic issues or on possible 'lapses' with regard to governance. The President of Mozambique, Armando Guebuza, his Minister for Mining, Esperança Bias and Frelimo in general are therefore not free to manage this sector (as indeed several others as well) without real critical interlocutors and experts on the subject in the political field[29].

As for the role of the NGOs in the work of the oil industry in Mozambique, it remains fairly marginal. We have met, among others, the director of the Centro de Integridade Pùblica, Adriano Nuvunga, and had exchanges with the leader of the civil society platform concerned with natural resources, Alda Salomao, (Centro Terra Verde). Apart from the government's lack of transparency, which they emphasize on a regular basis, the NGOs are still ill-equipped for constituting a real opposition to the government on a subject which is highly technical and requires time before it can be properly understood. They sometimes base their criticisms on untruths[30]. Some of the NGOs still have difficulties understanding a complex sector, which has its own codes and logic. It is quite difficult for those organizations to play an opposition role, because they do not always have access to information and often have difficulties analyzing it when they finally obtain the information. Alsa Salomao from CTV has a rather pragmatic view of the situation: she quite often goes into the field in Cabo Delgado province, where she arranges public consultations during which she gauges the environmental stakes as well as the unavoidable problem involved in displacing the population. According to Anadarko documents, the Afungi liquefaction plant in

[28] Renamo boycotted the municipal elections of December 2013. What is at stake now is its position with regard to the presidential and legislative elections in November 2014. In view of multiple acts of violence against Mozambican soldiers or citizens at the edges of main roads during 2013, Renamo has once again shown its capacity for causing trouble. While the political negotiations of 2013 between the government and Renamo did not achieve any results, it seems that a new phase has begun in 2014 based on a more open approach employed by Frelimo. The latter fears that an increase in incidents and violence by members of Renamo will directly prejudice investment in mining and the gas industry.

[29] Those in power in Mozambique show little hesitation when it comes to intimidating militants from the opposition parties. Meetings of MDM militants are sometimes dispersed by the regime, which bars access to jobs in public office for members of this party and starves municipalities of funds, if their mayors support the opposition.

[30] Assertions were made during our conversations on points of the contract which were incorrect.

Palma will involve displacing 2,733 people and will cost the oil companies in the region $73 million. The latter had moreover suggested another site with a far smaller population on the coast, but the State insisted on the village of Quitipo as the main zone for setting up the factory because the site would make it possible to clear a larger area which would be adequate to cater for other activities related to the liquefaction all in one place. In view of the relative unsuitability of the local inhabitants for involvement in the project, as we have seen with regard to the 93% illiteracy, Alda Salomao's NGO (CTV) is calling for action to ensure fair compensation for displacement and appropriate sites to re-house those affected. Bad managing of a dossier of this kind can rapidly degenerate and lead to conflict, if the government does not take into account the activities of the displaced people (access to the sea if they are fishermen or to arable land if they are farmers for example). The precedent in relations between Vale and the NGO Cateme has left its mark in this respect[31].

Other civil society NGOs have been working on the question of governance in relation to the oil industry as in the case of the employers' organization *Confederação das Associações Económicas de Moçambique (CTA).* In a tone fairly critical with regard to the current regime, the CTA representative in Maputo explains that the public authorities show little enthusiasm for explaining the process currently underway and that there is no real policy aimed at local entrepreneurs currently envisaged for encouraging their activities in this new sector[32]. The CTA financed (thanks chiefly to funds from America's USAID and the Norwegian development organization Norad) Richard Westin's work, an American expert in contracts and oil law. He has made a special study of projects for oil legislation which is being examined in parliament. He also edited a downloadable document on the CTA site[33], in which he explains the positive and negative elements of the gas project under discussion. This same expert also came to Maputo (11-12 September, 2013) to speak at a conference and reply to questions from the delegates about the challenges facing Mozambique in connection with gas and about the state of the government's preparation[34].

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[31] See: <www.minesandcommunities.org/article.php?a=11439>.

[32] The CTA organized a meeting in mid-February 2014, at which international oil companies like ENI, Anadarko or Statoil explained opportunities for co-operation to an audience of local factory directors. See: *Africa Energy Intelligence,* No. 717, February 25, 2014.

[33] See: <www.cta.org.mz/>.

[34] *Africa Energy Intelligence*, N° 707, July 1, 2013.

The donors' support sometimes seen as contradictory

As for the role of the donors regarding policy in the hydrocarbons sector, it varies considerably and is sometimes an essentially contradictory one. Mozambique's oldest partner in this context is Norway, which has been active in the oil sector in this country since 1993. It was Norway – using Norad and Petrad as intermediaries (Norwegian non-state bodies providing training and expertise in the oil industry which were set up in 1989) – which supported the creation of a body to regulate the oil industry, materialized as the INP in 2005. It allocated the Blocks for oil exploration but does not participate in any way within those perimeters, a role entrusted to the national company ENH. This co-operation with Norway allocates several tens of millions of dollars each year for this type of policy in most African countries where discoveries of oil have just been made (Ghana, Uganda) or even to countries which are so far only in the exploration phase (Madagascar, Zambia…). Norad proposes "à la carte" programs. It is the states themselves which transmit their requests for advice and consultations in the spheres they wish to master better or in which they do not yet have adequate skills for negotiating appropriately with foreign companies. In this way the States concerned do not feel their sovereignty has been 'wounded' (as Chad did vis-à-vis the World Bank – an example of how not to advise on governance[35]) and they usually respond well to the way the Norwegians proceed. In Mozambique, apart from the quasi-permanent aid from consultants who work with the Ministry for Mineral Resources or the INP (Norway does not work with the ENH), Norad finances short courses (lasting a few weeks) or long ones (for a Master's degree) for civil servants in its own universities or in British ones. Norway also participates in the training of parliamentarians, who may avoid difficult issues when debates are underway in the Assembly, because they do not understand the subjects being discussed (as happened in Uganda in October 2011). Since 2012, Norad has also been helping the Minister for Mineral Resources prepare its Gas Master Plan, in which one of the objectives is to determine the percentage of gas destined for export and that to be used locally.

[35] See: <www.crisisgroup.org/fr/regions/afrique/afrique-centrale/tchad/B065-chad-escaping-from-the-oil-trap.aspx>.

The support from Norway tends to be viewed positively by Mozambique. The Norwegian model implies that laws should be put in place, making possible “maximizing the oil revenues of the producer State” as the Norwegian representatives in Maputo expressed it. Norway also proposes the same system to all the countries who seek its expertise. Oil companies in general and those in Mozambique in particular see this influence as philosophically harmful because it is aimed at demanding the maximum from the private sector while increasing the part played by the State. Norway always advocates setting up a State fund and funds for future generations. In countries where an infrastructure hardly exists and the needs for training and education are colossal, it is sometimes difficult to insist that governments should put aside some of the funds generated by oil revenue.

Another key player called upon to play a growing role in the aid for Mozambique’s gas sector is the World Bank. On March 28, 2013 it approved a loan of $50 million over seven years (in addition to the $8.15 million from Britain’s Department for International Development) aiming to advise the Mozambique government on all questions relating to the mining sector (oil, gas and minerals). Of that sum over $11.5 million are earmarked for improving the capacities of national players (the Ministry and national companies) in relation exclusively with gas. This loan from the World Bank, which Mozambique will only need to repay over several decades, is promoting an ideology very different from the one introduced by Norway. The Norwegian embassy staff in Maputo incidentally views this project with a certain degree of annoyance, because they consider that in a good number of cases this is going to give rise to two versions of expertise on one and the same subject. In addition, and this seems most important, the policies of the World Bank mining sector are perceived by the Norwegians as promoting the interests of the oil companies. The Mozambique government is going to have to make a choice between these different models – one from the World Bank reputed to favor private interests and the other from Norway aimed at maximizing state revenues.

Apart from the role of these two players in the extractive sector, other less visible players have been elaborating a long-term strategy for a long time. This is the case with the German development organization (GIZ) which, since May 2012, has been financing the work of a consultant accommodated in the offices of the Ministry for Mineral Resources. This representative of GIZ, due soon to be joined by three other individuals, will be helping the Ministry until at least 2016 to organize the aid which it is receiving and to try and redefine the roles of the various departments of the institution so that they might improve their efficiency. This expert has until now undertaken a good deal of work to ensure that Mozambique successfully passes the test of the Extractive Industries Transparency Initiative (ITIE) and becomes a member of the organization (successfully achieved in 2012). Minister Esperança Bias is always asking for help and the allocation of experts when she undertakes foreign trips – a wish which is often granted. This leads to multiple reports and work for consultants on similar subjects, the conclusions of which are seldom read and never implemented according to certain staff from the Ministry for Mineral Resources. Moreover there is never any follow-up or coherence about the aid which seems to be more of a publicity stunt than a real policy aimed at improving the Ministry's capacities. The fault can be placed at the door of both parties, not simply at that of the Ministry. When asked about the piling up of reports, one of the advisors in the Ministry for Mineral Resources justified the Mozambique strategy saying that this path of action made it possible to form an opinion more easily and that anyway the Minister was the only person who would decide in the end. Yet this range of co-operative projects proves expensive for Mozambique (especially the World Bank project) and risks slowing down the decision-making process.

Finally, the group of G19 donors also put a platform in place (Task Force) for the extractive industries, of which Britain's DfID is currently in charge. Its aim is to encourage exchanges between the various donors on this subject so as to establish a clear common position and then submit questions to the authorities, when it is necessary to clarify specific points. This group has not proved very active until now and it is also beset by differences in approach, in particular between Norway and the other donors who view the World Bank projects more favorably, such as Italy or the United States, whose interests in the country will be enormous from now on as ENI and Anadarko are both involved.

Conclusion

Thanks to its enormous gas reserves, Mozambique has become since 2010 one of the African countries with the greatest potential for economic development for the next few decades. The growth of its GNP will be constant (for at least two decades) and automatic.

Meanwhile there will be no shortage of challenges. The country is still one of the poorest in Africa. It has tremendous needs, particularly as regards infrastructure and the education system. The government, which has been working for more than a year on its Gas Master Plan cannot count solely on its gas 'manna', which will result from its contracts for selling gas to Asian markets: it would be well advised to do everything possible to create lasting employment in Mozambique in activities related to gas. Once built, the liquefaction facility will only be able to employ several hundred salary-earners on full pay: it is therefore crucial to create a new economic hub in the North of the country and to examine how – outside the Cabo Delgado province – other regions can profit from this colossal potential. The politicization of the sector is not particularly surprising, but the Frelimo party currently in power is going to have to open up the sector as far as transparency and the players involved are concerned, without which the implementation of projects could be postponed in view of blockages.

Efforts to improve communication and education are going to prove essential, particularly among the inhabitants directly affected by the sector in Cabo Delgado, like those displaced. This information campaign is also going to be indispensable vis-à-vis the population of Mozambique as a whole, which can think that enormous gas 'manna' is going to fall from the sky very soon. As we have seen, sizable revenue will not appear before 2020. In addition, the necessary recouping of investments agreed by the private players (oil companies) is going to hold up still further, for several years, the peak of the revenue linked to the sale of gas. This specific feature of the hydro-carbons industry has to be explained straightaway (even if the authorities are already raising it in their speeches) so as to avoid possible misunderstandings, which could lead to violence on the part of groups within the population, if they consider themselves to have been betrayed and robbed by the government. Frelimo cannot blame the poor education of its citizens stemming from the country's very low literacy rate in order to manage the gas sector as it has so far been managing many sectors (such as the mining sector) without real transparency and without making any progress in cracking down on the many conflicts of interest which have come to light.

The billions of dollars which the mining and gas sectors will bring in for Mozambique will change the country beyond recognition and the regime is going to have to adapt. The weakness of the political opposition (Renamo, MDM) on this key subject shows that it is not from this quarter that a real opposition is going to arise in the near future. In addition, it seems highly unlikely that Frelimo will lose the next legislative and presidential elections in 2014. Thus it is the president elected in 2014, Armando Guebuza's successor (most likely Filipe Nyussi) who will have to manage the initial exporting of gas from Cabo Delgado. His responsibility will be enormous, because he will have to put in place the mechanisms to ensure optimal use of the revenue (education, health, infrastructure) as well as economic diversification linked to gas (fertilizers, electric power-stations, improved agriculture thanks to improved yields). Donors and NGOs (the only real critics of public policies in Mozambique) have an important role to play to put pressure on the government so that it adopts clear laws related to gas and puts in place transparent and durable governance for this finite resource, to make possible Mozambique's economic lift-off. Current economic growth, although strong, is profiting only a small fringe of the population and has got off to a bad start. The creation of a large middle class throughout the country is the true challenge as regards the use of the revenue from the extractive industries. Those industries can easily become a curse but they can also, in rare cases, be used to accelerate development.