

Targeting Energy Infrastructure: Examining the Terrorist Threat in North Africa and its Broader Implications (ARI)

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Theme: This paper analyses the terrorist threats to energy infrastructures in North Africa –with a specific focus on events in the Sudan and Algeria, where oil and gas resources have been targeted–, at the statements made by al-Qaeda in this regard and at the protection strategies which are needed.

Summary: This ARI examines terrorist attacks on energy infrastructures in the current environment, in which tighter supply channels have created a market that is more vulnerable to disruptions. In addition, most new discoveries of oil and gas are made in uncertain neighbourhoods where conflict and instability threaten production. As North Africa is a significant source of natural gas for Western Europe, this analysis will focus on events in the Sudan and Algeria where energy infrastructure –chiefly oil and gas resources– have been targeted. Statements by al-Qaeda regarding the targeting of energy infrastructure will also be discussed as they might point to an emerging strategy in North Africa, where al-Qaeda affiliates operate. Concluding remarks will highlight the short- and long-term strategies needed to protect energy resources and deter groups from making attacks that can either affect key supply channels or, more likely, cause markets to respond by raising energy costs due to the –perceived– vulnerability of supplies.

Analysis:

‘Energy security is among the most serious security and economic challenges, both today and in the future. As the economies of the World grow and societies develop, so does the importance of energy. And so does the importance of the infrastructures that produce and supply this energy’ (Dr Raphael F. Perl, Head of OSCE Action Against Terrorism Unit).¹

In the last decade, major terrorist attacks –such as the 9/11 attacks in the US and the Madrid train bombings– have catapulted international terrorism to the top of national security priorities around the globe and highlighted the massive devastation, civilian losses and fear that terrorism can cause. Moreover, images of civilian casualties in these dramatic attacks have influenced our perception of the targeting choices of today’s terrorist groups, which are assumed to focus on civilian targets. This view, however, is not

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¹ R.F. Perl (2008), ‘Protecting Critical Energy Infrastructures Against Terrorist Attacks: Threats, Challenges and Opportunities for International Co-operation’, Reinforced NATO Economic Committee Meeting, 22 September, http://www.osce.org/documents/atu/2008/09/33084_en.pdf.

supported by the available data on terrorist attacks: according to the US National Counterterrorism Center's WITS terrorism database and the Global Terrorism Database (GTD), many violent non-state groups carry out attacks that usually avoid civilian targets. In fact, a significant and increasing number of attacks are on energy infrastructures, including oil, gas and electricity facilities as well as energy sector employees.

Examining this trend more closely it can be seen that in 2003 roughly 25% of terrorist attacks were aimed at the energy sector, having jumped to 30% and 35% between 2003 and 2007 –the long-term trend revealing more attacks aimed at energy infrastructure (EI) occurring annually–. With oil accounting for nearly '40% of the world's energy and 96% of its transportation', the protection of energy infrastructure has thus become a top priority for most industrialised nations.² Efforts have been made to enhance the protection of these assets throughout North America and the EU but the main oil and gas exploration and production facilities are increasingly located in politically unstable countries that are marred by poor economic and social conditions.³ Additionally, the benefits derived from attacking the energy sector have risen considerably in the 21st century as they generate widespread media attention and can create broad economic turbulence –translated into higher global energy costs– due to the energy market's interconnected nature, the growth in demand and the short-term supply shortages caused by disruptions.

Africa, with respectively 10% and 12% of the world's proved oil and gas reserves, has 12 countries that are currently net oil exporters. Its leading producers are Nigeria, Algeria, Libya and Angola. A closer look, however, shows that Africa's web of oil and gas pipelines and critical facilities are frequently in areas subject to internecine strife and home to transnational terrorist groups. North Africa is an important source of energy –mainly gas– for Europe, particularly for Spain, Italy and France, who are dependent on North African gas supplies to meet much of their energy needs. However, resources in the region are threatened by ongoing conflict and violent politically-motivated groups –such as al-Qaeda of the Islamic Maghreb (AQIM)– that have begun to threaten and/or attack the energy sector. This paper examines the changing global energy security scenario and highlights the threat to energy infrastructure in North Africa and its implications for Europe.

A Changing Scenario

Since the 1980s, energy infrastructure has been used as a strategic weapon and symbolic economic target by various non-state armed groups operating in many largely fragile countries. But while targeting energy infrastructure is not an entirely new phenomenon, in the 21st century local events have global consequences, communications and information move rapidly through a variety of media, financial systems are intertwined and developing nations now compete for vital natural resources to feed their burgeoning economies. According to the US State Department, between 1996 and 2004 there were at least 80 terrorist attacks against oil companies world-wide, that resulted in kidnappings, casualties, damages and large monetary losses.⁴ As shown in Figure 1, however, attacks aimed at

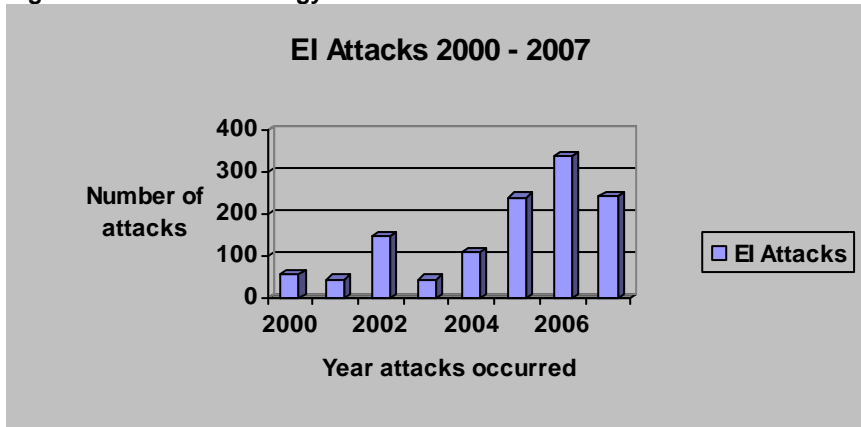
2 G. Luft (2005), 'Pipeline Sabotage is Terrorist's Weapon of Choice', Institute for Analysis of Global Security (IAGS) Energy Security, 25/III/2005, <http://www.iags.org/n0328051.htm>.

3 The world's most significant sites of oil and gas exploration and production are located in increasingly politically unstable locations, such as Algeria, Indonesia, Iran, Iraq, Libya, Nigeria, Russia, the Sudan and Venezuela.

4 M. Lindsay (2005), 'The Security Threat to Oil Companies in and out of Conflict Zones, Business Briefing: Exploration and Production', The Oil & Gas Review, 2.

energy resources have been steadily growing and have increased sharply over the last five years.⁵

Figure 1. Attacks on Energy infrastructure⁶



This trend shows that not only are energy resources being targeted both inside and outside conflict zones,⁷ but that the energy sector is increasingly sensitive to disruptions, whether perceived or real, due to a number of factors that relate to the 'peaking' of supplies. Such factors include increased demand from growing developing economies – as well as continued robust demand from developed countries–, short-term supply shortages, tight production characteristics (little spare capacity for oil production) and the lack of growth in OPEC production between 2005 and 2007, accelerated speculation, higher oil exploration and development cost (much of it in deep-water, offshore locations), a weaker US dollar and increased commodity prices. In short, higher energy costs have been the result of market fears that rising demand will eventually outgrow available supply.⁸ These concerns are reinforced by threats to energy supplies. The current climate, in which crude oil prices have dropped beneath US\$40 per barrel⁹ –due to circumstances arising from the global credit crunch–, has led to a lower demand and hence a situation of oversupply, is only temporary. OPEC has already begun to cut its supply in an effort to keep oil prices at around US\$40-50 per barrel during this downturn. Once the global

5 Iraqi Pipeline Watch, <http://www.iags.org/iraqipipelinewatch.htm>; 'Nigeria: Oil Infrastructure, Delta Militants and Increased Attacks, Stratfor, 30/VII/2008,

http://www.stratfor.com/analysis/nigeria_oil_infrastructure_delta_militants_and_increased_attacks.

6 Data compiled from the Global Terrorism Database. Additional monitoring was performed to capture attacks that might not have been included in the GTD. Data for 2007 are still being gathered and therefore attacks in 2007 might be slightly higher than currently listed. Indeed, many of the attacks between June 2003 and March 2008 occurred in Iraq. There have been 469 attacks aimed at Iraqi energy infrastructures (2003 = 37; 2004 = 148; 2005 = 100; 2006 = 101; 2007 = 59; and 2008 = 4). However, the sustained attacks in Nigeria and attacks in other regions during this period have also contributed to the dramatic rise. The recent attacks in Yemen and increasing piracy attacks off the coast of Somalia (which have targeted oil tankers) have also contributed to the increase.

7 Attacks by Kataeb Jund al-Yemen ('Soldiers of Yemen Brigades' –an al-Qaeda affiliate–) against oil facilities in Yemen and attempted attacks on Saudi facilities, both non-conflict zones, are indications that non-state armed groups can achieve global energy disruptions by targeting installations in their home territory where they can take advantage of security deficits and more local support. C. Zambelis (2006), 'Attacks in Yemen Reflect al-Qaeda's Global Oil Strategy', *Terrorism Monitor*, 6 (17),

<http://www.jamestown.org/terrorism/news/article.php?articleid=2374393>.

8 The International Energy Agency has noted that oil could peak as early as 2020. T. Macalister & G. Monbiot (2008), 'Global Oil supply will Peak in 2020 says Energy Agency', *The Guardian*, 15/XII/2008,

<http://www.guardian.co.uk/business/2008/dec/15/global-oil-supply-peak-2020-prediction>.

9 At the time of publication, crude oil prices were slowly climbing and hovering around US\$40 per barrel.

economy recovers, however, and demand starts to grow again, oil prices will most likely rise to new heights.¹⁰ Hence, in the long-term, the markets will continue to be sensitive to disruptions.

While market-related factors, such as tighter supply chains and changes in demand, are the primary areas that dictate global energy costs, other events such as geopolitical turbulence and threats of any kind to the oil infrastructure create uncertainty and also affect prices.¹¹ Uncertainty results in a security premium being placed on oil prices. According to the international energy consultant Dr Gal Luft, 'whether perpetuated for political or criminal reasons, assaults on oil infrastructure have added a "fear premium" of roughly US\$10 per barrel of oil'. Thus a single energy 'event' can create 'shockwaves through the world energy order, push prices up or down, and set off tectonic shifts in global wealth and power'.¹² Thus, while energy infrastructure has been targeted for many years in various countries, the effects of attacks have only recently generated more attention.

Grasping the Trends

Elements of energy infrastructures, such as oil pipelines and electrical pylons, are easily accessible and present the perfect 'soft' target that can result in economic damage and losses if attacked.¹³ Various armed groups have now incorporated energy infrastructures into their attacks. In Asia, since the 1980s the Kurdistan Workers' Party (PKK) has threatened and carried out sporadic attacks on oil and gas pipelines in Turkey and northern Iraq –most recently against the newly constructed Baku-Tbilisi-Ceyhan (BTC) pipeline–. In Pakistan, Baluchi militias have also carried out numerous attacks against power transmission lines and gas installations resulting in disruptions to electricity in the Punjab, while in India the United Liberation Front of Asom (ULFA) claimed responsibility for a series of pipeline attacks in 2006. Russia is not immune, as shown in 2004 when Chechen terrorists attacked several pipelines near Moscow, Volgograd and Stavropol. In America, the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN) have carried out repeated attacks on Colombia's Cano Limón-Covenas oil pipeline, which transports an average 35,000 barrels per day (bpd) from Arauca province to the Caribbean coast. The most recent attack occurred in June 2008 and resulted in a temporary suspension of production. Further north, in Mexico, a string of oil and gas pipeline attacks were carried out in 2007 by EPR militants and resulted in supply shortages, economic losses and damages, while news of the attacks caused natural gas futures to increase.

10 IEA (2005), 'Oil Market Report. International Energy Agency', 12/IV/2005. According to the IEA, between the 1980s and 2003-04 oil demand rose consistently and thus pushed oil inventories to lower levels. This tight supply coupled with the geopolitical uncertainties and the increased market speculation related to the uncertainties that have marked the last decade have been the chief reason why prices have increased so dramatically.

11 For example, a war in an oil-producing country, poor weather conditions (such as tropical storms) in an oil-producing region or direct attacks on energy infrastructure all create uncertainty in the market that can result in price volatility.

12 P. Roberts (2005), *The End of Oil. The Decline of the Petroleum Economy and the Rise of the New Energy Order*, Bloomsbury Publishing, London, p. 93.

13 Nuclear facilities, which are typically located in relatively stable and developed nations, have not been targeted. In addition, these facilities are 'hard' targets that are operationally challenging to attack. Hydroelectric facilities, on the other hand, were targeted by Sendero Luminoso ('Shining Path') in Peru and caused a city-wide blackout in 1983. The vast networks of interrelated facilities in the petroleum and natural gas industries, however, are more accessible targets and require less investment.

But it is the threat posed by violent Islamist groups that reveals the increasing appeal of energy infrastructure attacks. In February 2003, members of a violent Muslim extremist group who had realised the value of attacking energy infrastructures issued an online call to the 'mujahideen of all Arab and Muslim countries in which the West has military bases or are involved in the energy industry, to rise against these interests in the name of the Muslim Ummah'. Al-Qaeda, which had previously opposed targeting oil in the Middle East, followed suit and announced a major shift in the group's strategy in late 2004 by calling on members to 'Do everything you can to stop the biggest plundering operation in history – the plundering of the resources of the present and future generations in collusion with the agents and the aliens [...] Be active and prevent them from reaching the oil, and mount your operations accordingly, particularly in Iraq and the Gulf'.¹⁴ This is in stark contrast to previous calls by Osama bin Laden, who acknowledged the strategic importance of the energy sector. In his 1996 'Declaration of War Against the Americans Occupying the Land of the Two Holy Places', bin Laden rejected attacks on energy infrastructures and called on followers 'to protect this (oil) wealth and not to include it in the battle as it is a great Islamic wealth and a large economical power essential for the soon to be established Islamic state, by Allah's Permission and Grace'.¹⁵ However, al-Qaeda had already begun exploring the possibility of attacks on energy infrastructure in 2002, when it attacked the *Limburg*, a French oil tanker off the coast of Yemen carrying 397,000 barrels of crude oil. In its statement claiming credit for the attack, al-Qaeda made sure to point out that the incident 'was not an incidental strike at a passing tanker but [...] on the international oil-carrying line in the full sense of the word'.¹⁶

By 2005, a jihadist website featured a 'Map of Future al-Qaeda Operations', that essentially called for more attacks on energy infrastructures and stated that such targets should be a priority for al-Qaeda.¹⁷ With the presence of such a strategic resource in their own neighbourhood, al-Qaeda and other violent groups realised that they did not need to carry out all their attacks in Europe or North America in order to generate global attention and cause economic damage to their enemies. The change in strategy and the call for more attacks against energy infrastructures, coupled with increased volatility in the Middle East and elsewhere, has resulted in a jump in security premiums from US\$2 to \$15 per barrel depending on the event.¹⁸ For instance, following an attack in April 2008 on a Japanese oil tanker off the coast of Yemen, sweet crude rose to a record US\$117.40 per barrel.¹⁹ Shortly after, another attack in May 2008 on an oil refinery in Aden resulted in prices increasing to US\$122.80 per barrel. When al-Qaeda attacked the Abqaiq oil facility in Saudi Arabia in February 2006, the attempt alone drove oil prices up by US\$2 per barrel.²⁰ More recently, al-Qaeda affiliates have carried out attacks on oil installations in

14 'Website Posts Full Version of New Audiotape Attributed to Bin Ladin', FBIS Report, FEA20041227000762, 27/XII/2004.

15 'Bin Laden's Fatwa', PBS Online NewsHour, 1996, www.pbs.org/newshour/terrorism/international/fatwa_1996.html.

16 J.C.K. Daly (2006), 'Saudi Oil Facilities: al-Qaeda's Next Target?', *Terrorism Monitor*, vol. 4, nr 4, 23/II/2006, <http://www.jamestown.org/terrorism/news/article.php?articleid=2369910>.

17 Z. At-Taqwa, 'Al Qaeda and the Battle for Oil', <http://www.alqimmah.net/showthread.php?t=1226>.

18 Zambelis (2008).

19 M. Fackler (2008), 'Oil Market Rattled by Attack on Japanese Tanker', *International Herald Tribune*, 21/IV/2008, <http://www.ihf.com/articles/2008/04/21/asia/22tanker.php>.

20, 'Saudis Foil Oil Facility Attack', *BBC News Online*, 2006,

http://news.bbc.co.uk/2/hi/middle_east/4747488.stm. It should be noted that such attacks have little chance of success with Saudi Arabia spending between US\$1.2 to US\$1.5 billion annually to protect its oil and gas industry; however, in this case it can be seen that even the threat to supplies resulted in a jump in prices.

Yemen, including a June 2008 attack on the Safir oil refinery (a video of which was posted online).²¹

Al-Qaeda's shift in targeting selection has implications for the North African energy security market. North Africa provides much-needed energy resources to its European neighbours: the EU receives 30% of its gas needs from Algeria alone. Thus even the threat to these resources can create future market insecurity and, in a worst case scenario, disrupt supply. With al-Qaeda affiliates operating throughout the region and other politically-motivated armed groups seeing the value of energy infrastructure attacks, the threat to the energy sector is real and in many cases has already been tested through attacks aimed at the energy sector in Algeria and Sudan. The following paragraphs examine the situation in Algeria and the growing jihadist threat against the energy sector. Sudan will also be discussed as it a good example of another regional case where armed groups have attacked energy infrastructures as a platform to air their grievances to a larger audience.

Algeria

From 1991 to 2002, civil war raged in Algeria between the government and several Islamic insurgent groups, such as the Islamic Salvation Front (FIS). Foreign workers were killed during the war, and Muslim extremist rebels warned foreign companies investing in the oil sector to withdraw from the country or face serious damage to their installations. Nevertheless, until 1995, the 'government-owned Sonatrach hydrocarbon company had escaped the violence that has killed an estimated 30,000 Algerians in three years of strife, largely because its oil and gas operations represent the economic lifeblood of all sides in the conflict. Both the government and the Muslim extremists trying to topple it acknowledge that 95% of Algeria's foreign exchange earnings come from the petroleum sector'.²² Another group, the Armed Islamic Group (GIA), had little chance of threatening energy infrastructures since at that time it did not control the territory through which the pipelines run. Starting in 1995, however, rebels began to attack energy infrastructure assets. As one Western oil executive at the time commented on the insurgent groups: 'Something has changed [...] It could be they are trying to raise the stakes'.²³ Despite a seeming increase in the number of attacks against energy infrastructure and production sites, Algeria's hydrocarbon industry grew rapidly. As indicated by the *Financial Post*, Sonatrach had signed more than a dozen lucrative exploration agreements with international oil companies, which have already spent roughly US\$400 million on them.²⁴

The heavy protection of pipelines and facilities and the location of oil and gas fields have provided much of the deterrent for attacks and/or served to limit any damage. The stream of revenues provided by hydrocarbon resources convinced the Algerian government that extensive protection of infrastructure was needed given the climate of political instability. Also, most of the country's oil and gas reserves are located in the far south or in the eastern Sahara, while most of the fighting took place in the north and the government controls all travel to the oil and gas producing region by requiring special permits. As Porter notes, 'Unlike southern Iraq or Nigeria's delta states where insurgents attack those countries' important oil sectors in order to call attention to their grievances and advance

21 'Saudis "Foil Oil Facility Attack"', BBC News, 24/II/2006, http://news.bbc.co.uk/2/hi/middle_east/4747488.stm, video at <http://clearinghouse.infovlad.net/showthread.php?t=15362>.

22 'Algeria Facing Increased Sabotage', United Press International, 12/V/1995.

23 Ibid.

24 'Algeria's Hydrocarbon Industry Grows Despite Unrest', The Financial Post, 4/VIII/1995, p. 37.

their political agenda, the key oil and gas producing areas in Algeria are in the south of the country and are far from population centers'.²⁵ However, ports –located in heavily populated areas such as Algiers, Oran, Arzew and Skikda–, where oil and gas is stored for transport, and Algeria's main gas liquefaction facility at Skikda remain vulnerable.

The 2006 merger of the Salafist Group for Preaching and Combat (GSPC) with al-Qaeda, now known as al-Qaeda of the Islamic Maghreb (AQIM), marked a revival in the Algerian Islamist militant movement. In 2006 and 2007, respectively, suspected AQIM militants bombed a natural gas pipeline –with the earlier attack temporarily cutting off supply–. Other related attacks have involved bombing buses carrying oil sector employees. Overall, this points to an emerging trend within Algeria to target the energy sector by attacking soft, mobile targets in line with al-Qaeda's call to attack energy resources. However, the attacks on energy infrastructures are relatively few compared to campaigns in other states and analysts suspect that this may be due to a split within the group between those that 'want to bring the group's objectives into line with the broader global al-Qaeda movement and those who want to retain the group's "Algerianist" orientation'.²⁶ In the short-term it appears that while sporadic attacks will occur, mainly on softer objectives, most attacks will focus on government targets.

Nevertheless, as energy supply channels tighten and global demand surges, the threats to Algeria's energy sector have a great potential to create the perception of vulnerability which will in turn influence pricing. In addition, non-state armed groups, like AQIM, continue to change, innovate and prove their ability to circumvent security measures by carrying out asymmetric attacks. The Nigerian-based Movement for the Emancipation of the Niger Delta (MEND) has carried out repeated attacks (an estimated 60 to 70 annually) on energy infrastructures in Nigeria since 2006, gaining international notoriety and causing production to be cut by 20%-25% (around 4-600,000 barrels per day). The North African groups, who operate within this energy-rich region, might see the effects of such attacks and in turn step up and launch more organised and systematic blows at the energy sector. As noted in a 2007 Rand Corporation report, 'Chaos and anarchy could threaten production or give rise to short-term strategies of disruption, including terrorist attacks on production facilities and pipelines'.²⁷ Algeria's increasing significance as a European and US energy supplier makes such threats of even greater concern.

Sudan

Since its independence in 1955, the Sudan has experienced intermittent civil war as a result of economic and political inequalities fuelled by the divisions between the dominant Arab-Muslim population to the north and a non-Arab, mostly Christian population to the south. Temporary peace in the 1970s, which allowed oil development and exploration to commence, was followed by a resumption of hostilities in 1983 that quickly halted production.²⁸ The discovery of oil, while not the root cause of conflict in the Sudan, added another dimension of conflict to a volatile region that is torn over economic resource distribution. As aptly noted by Kot, 'Since oil, like all strategic resources, is a source of power, it illogically becomes an important element in the conflict' (Kot, 1992, p. 104). In the case of the conflict in the Sudan, the oil region lies in the coveted territory dividing the north and south of the country. Due to the civil war, oil development was suspended until

25 G. Porter (2007), 'Islamist Terrorism and Energy Sector Security in Algeria', *The Terrorism Monitor*, 5 (12), 21/VI/2007, http://www.jamestown.org/terrorism/news/uploads/TM_005_012.pdf.

26 Ibid.

27 Rand Corporation (2007), 'Persian Gulf Security. Improving Allied Military Contributions', p. 24.

28 In 1978, Chevron discovered oil near Bentiu and Heglig, in southern Sudan.

1997 when temporary peace was achieved. However, it did not take long for conflict to resume, and the energy sector took centre stage and soon became a valuable target for the Sudanese People's Liberation Army (SPLA), the main rebel group based in the south that fought the government until 2005.

Compared with the campaign of violence in Nigeria, attacks on Sudanese energy infrastructure have been modest, primarily due to a concerted effort to protect facilities situated in the midst of the conflict zone. But while armed groups have not been able to cause major disruptions, they have managed to limit exploration and development through a sustained campaign to destabilise the oil-producing southern region. The first attack was recorded in September 1999 –shortly after the Sudan began exporting oil– when SPLA rebels bombed a large pipeline that carried oil to a Red Sea coastal facility.²⁹ While the attack caused no major damage, it was intended to 'deprive the Sudanese government of funds with which to keep itself in power and to finance its war effort against rebels in the south of the country', according to an SPLA spokesman.³⁰

Following the initial attack in 1999, the SPLA continued to carry out smaller attacks, all of which were either unsuccessful or resulted in little damage. Between 2000 and 2001, the SPLA managed to launch five successful attacks on energy installations in the Western Upper Nile. Following a June 2001 warning to oil companies advising them to withdraw from the region, the SPLA ambushed a government-escorted convoy that was carrying oil company equipment.³¹ Shortly after the attack, the SPLA claimed credit for a raid on the Heglig oil field, stating that 'extensive damage was inflicted [...] the production and flow of the oil came to a complete halt. The main central pumping station and fuel stores were destroyed'.³² While the government denied it, Talisman confirmed the attack but noted that little damage had been caused.

From 2001 to 2004, the SPLA continued its campaign with an intensified effort to cause disruption to the energy sector by firing rockets, bombing pipelines, kidnapping oil workers and ambushing convoys. In one attack, the SPLA had reportedly blocked the route between Juba and Malakal, 'making the eastern area of Unity State non-operational [...] to all traffic, whether oil companies or government of Sudan security'.³³ In a 2004 attack, the Sudanese rebels targeted an oil field and stated that they 'chose the oil fields because this is the wealth of Sudan, which this government is not sharing with all of its people'.³⁴

The SPLA has also repeatedly accused the central government in Khartoum of using oil revenues to finance the war; however, in response to this claim, Sudan's first vice-president, Ali Osman Taha, said: 'We do not use the proceeds from petroleum in the civil war'. Instead, he claimed that the government was 'directing those revenues towards development and services'. However, in 2000, a government official in the south resigned over the mismanagement of funds and the lack of resources to address development needs, noting that 'oil revenues were intensifying the war in the south'.³⁵ Today, the Sudan is once again attempting to maintain peace. However, such efforts are highly

29 J. Muir (1999), 'World: African Rebels Attack Sudan Oil Pipeline', BBC News, 21/IX/1999, <http://news.bbc.co.uk/1/hi/world/africa/453552.stm>.

30 Ibid.

31 E. Blanche (2001), 'Sudan: Oil Fuels Internal Unrest', The Middle East,

http://findarticles.com/p/articles/mi_m2742/is_2001_Oct/ai_n25037107/pg_2?tag=artBody;col1.

32 Ibid.

33 Ibid.

34 Luft (2005).

35 Blanche (2001).

sensitive and in many regions violence continues –especially in Darfur–. The oil industry is still a major target as demonstrated in an October 2008 attack when Darfur rebels abducted nine Chinese workers at an oil field operated by the Greater Nile Petroleum Operating Company near Abyei in the southern Sudan.³⁶ The rebels, who have accused China of indirectly helping the central government fund military operations with oil revenues, demanded a share in the oil wealth.³⁷ Oil resources will continue to be a major issue in this region and drive it back into war if the socio-economic situation does not improve.

Conclusion: Terrorist attacks carried out by radical Islamist groups within the EU's borders are a concern and measures to prevent future catastrophic attacks must continue. However, as North Africa becomes a more significant supplier of energy to Western Europe, threats to the energy infrastructure in the region must also be considered. As discussed above, attacks or threats against energy infrastructures can lead to uncertainty amongst market players and overall insecurity, thereby raising global energy costs and placing additional budgetary pressures on states and consumers. The worst-case scenario is that of attacks affecting supplies along a key route. The natural gas of the Maghreb is of particular importance to its European neighbours as it is a regional commodity: disruptions that originate in the Maghreb affect the entire regional supply chain. The events in Algeria show that AQIM is interested in attacking the energy sector although there has not been a broad campaign as seen in the Sudan or, in a more extreme form, in Nigeria and Iraq.

To counter this trend and the inflexibility of the current energy environment, states need to adopt a multifaceted approach. In the long-term, the EU needs to make a concerted effort to diversify its energy portfolio, develop domestic energy sources and invest in alternative energies so as not to rely so heavily on oil and gas from unstable neighbourhoods. In the short-term, however, not only should states address the issue of disruption to energy flows by assisting in protecting facilities, but they must also work with the media and the financial markets that react to such threats. Energy security can also be improved by increasing global strategic stockpiles in consumer countries;³⁸ hence, the international community –led by the US and the EU– must press for capacity increases to mitigate the consequences of disruptions.³⁹

In addition, oil and gas importing countries can allocate much-needed aid to producing countries –such as the Sudan and Algeria– who struggle to secure their energy resources. European countries, for instance, could provide funding for costly technology to enhance the security of pipelines and facilities. Other assistance can come in the form of military training, funding police and community patrols, and strengthening capacity and facilities.⁴⁰ In Iraq, the US helped fund 14,000 security guards that were placed in critical locations along major pipelines and at facilities. Similar efforts are underway in the Gulf of

36 'China Workers Abducted in Sudan', BBC News, 19/X/2008, <http://news.bbc.co.uk/2/hi/africa/7678829.stm>.

37 Ibid. At the time of writing, the fate of the victims was unknown.

38 A.P. Schmid (2007), 'Targeting Oil and Other Energy Resources and Infrastructure, MIPT.

39 Ibid. Capacity increases can help cushion market sensitivity. For example, despite continued turmoil in Nigeria's oil-producing region, the price of oil has been declining steadily since August 2008 due to decreased demand from a slowing global economy. Even with OPEC cutting production down in addition to instability in oil-producing regions, the market is cushioned by the perceived healthy supply.

40 Such security measures can involve: burying pipelines, hardening them against corrosion, increasing patrols and security forces for facilities, security cameras, etc. Technology is another important investment that can provide better protection. Developments using seismic sensing of underground vibrations can identify whether unauthorised personnel are near a pipeline –thus preventing sabotage–.

Guinea and off the Somalian coast where NATO, the EU and the US Navy have provided assistance in maritime security. Southern Europe, which relies on gas supplies from North Africa, might also require the assistance of NATO to help protect key installations in the Maghreb. While important, military support can inhibit violence aimed at energy infrastructures but cannot remove it completely from the equation, since community engagement is also a key element. For example, the Algerian extremist groups rely heavily on community support to continue their violent campaign. Should attacks on energy infrastructure be deemed to be unfavourable within the community, then AQIM might continue to avoid serious attacks on it. Communities can also serve as the eyes and ears of intelligence officials and alert them when such attacks are being planned or, in some cases, inform them as to who perpetrated the act. In closing, with many new energy sites being discovered offshore and oil tankers traversing uncertain waters, such external state support will continue to be an important element in securing supplies located in unstable regions.

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