

Providing All-Round Security Against Oil And Gas Infrastructure Sabotage And Physical Attacks On The Staff Of NNPC And Multinational Oil Companies In Nigeria As A Critical Article Of Her National Security Efforts

Zems, Mathias

Abstract: By the period the demise of the cold war era took place, there occurred paradigm shift in the earlier are conceptualizations of the term 'national security. So when viewed from the binoculars of this emerging paradigm, the manifestation of the attacks on oil and gas infrastructure network, staff of NNPC and the multinational oil companies in Nigeria and their implications no doubt hold out severe threats to national security in the country, (Onuoha, 2012: 99). This is in addition to other costs such as those from kidnappings, piracy, gangsterism and other forms of organized crime who's monetary, psychological and emotional values are too difficult to be quantified.

Keywords: Oil Terrorism, kidnapping/physical attacks on NNPC Staff, Oil/Gas infrastructure sabotage.

1. INTRODUCTION

A recent study commissioned by royal Dutch/shell put the amount of oil stolen each year by bunkers or vandals in Nigeria at between 100 million and 250 million barrels. At an average of US\$60 per barrel, the theft translates to a loss of about US\$15 billion each year, (Mumuni & Oyekunle, 2007.12).

This paper is structured into six sections. Following immediately after this introduction is the second section which is on the clarifications of the meaning of 'oil and gas infrastructure sabotage' and 'national security' as used in this paper. This is followed by the third slice which is a brief overview of the oil and gas infrastructure network in Nigeria. Then the fourth slices in which the four dimensions of the oil and gas infrastructure sabotage are examined with a view to highlighting the actors and the objectives behind them. In the fifth section, the implications of the said sabotage for national security are examined. The paper concludes in its sixth and last slice by canvassing recommendations on how to combat the increasing number of incidents of attack on the oil and gas infrastructure and staff of NNPC and the multinational oil companies operating in Nigeria. Finally, it outlined the anti-crime-terrorism and insecurity awareness tips.

2. CONCEPTUAL FRAMEWORK FOR THE ANALYSIS

The concepts of oil and gas infrastructure sabotage and national security are pivotal to this discourse and as such, their meanings deserve to be clarified.

In terms of the Nigerian constitution, all minerals, oil and gas in Nigeria belong to the federal government section 44(3) states that 'not withstanding the foregoing provisions of this section, the entire property in and control of all minerals,

mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon the territorial waters and the Exclusive Economic Zone of Nigeria shall vest in the Government of the Federation and shall be managed in such manner as may be prescribed by the National Assembly' (Federal Republic of Nigeria, 1999). Oil extraction outside the framework of an agreement with the federal government is illegal as is the possession of crude oil by anyone not licensed to do so.

Specific crimes have also been created relating to damage to oil installations (including for the purpose of siphoning off crude oil or petroleum products) (Human Rights Watch, 2002:27-28). In Nigeria it has infrastructure sabotage) Act (Act 353 of 1990). The Act defines a saboteur as any 'person or group of persons who does aids another person, or incites, counsels or procures any other person to do anything with intent to obstruct or prevent the production or distribution of petroleum products in any part of Nigeria; or willfully does anything with intent to obstruct or prevent the use of that vehicle on that public highway for the distribution of petroleum products. Hence, the responsibility to ensure the security of these pipelines is part of the duties of the various security agencies such as the police, armed forces and Nigerian security and civil defense corps.

3. OIL AND GAS INFRASTRUCTURE SABOTAGE

Oil and gas infrastructure sabotage, as referred to therein, concerns the illegal or unauthorized act of destroying or puncturing of oil pipelines so as to disrupt supply or to siphon crude oil or its refined products for purposes of appropriating it for personal use or for sale on the black market or any other outlet. It includes such acts as oil bunkering, pipeline vandalisation/fuel scooping and oil terrorism. In this sense, any person(s) or company involved in such an acts is considered to be guilty of economic sabotage.

4. NATIONAL SECURITY

The term 'national security' has long been conceptualized from a narrow, militaristic and strategic perspective. The amassing of arms and ammunition was then seen as a key strategic for guaranteeing national security. In this context, then, the nation was the key referent object that dominated security discourse and policy. From this perspective, Harmann (1983:13) defines national security as 'the sum total of the vital national interest of the state, and because a vital national interest is one for which a nation is willing to resort to force or war either immediately or ultimately, concepts of national security will vary from state to state in direct proportion to their individual willingness to risk either conflict or war at any given time (Zems, 2013: 122-4).

Against the same background, Lipman (1943:123) contends that a nation is secure to the extent that it is not in the danger of having to sacrifice core values, if it wishes to avoid war, and is able, if challenged, to maintain them by victory in such a war. Hence, national security is conches in esoteric terms, and equated with the security of the state or the regime in power. Although the narrow conceptualization of national security dominated the Cold war era, the need for its expansion has long been conversed or challenged by scholars (McNamara, 1968:192; Falk, 1975; Prins, 1984, Chapter 7:xiii; AL-Mashat 985:50; Thomas, 1987).

With the end of the cold war threats to security such as disease, natural disasters, poverty and hunger as well as terrorism gained new importance. The narrow perspective of nationals security gradually began to give way to a more comprehensive and broad definition that reflects the multi-dimensional nature of security and takes cognizance of economic, cultural, technological, political, environmental and military variable (Onuoha, 2012: 305). As Tyoden (2005:172) rightly argues, 'while security, considerations are still (and will continue to be) priority consideration for all states and while conceding that the conception of security as military security has its strategic relevance, a more holistic security framework approximates better reality; from this perspective, therefore, Ullman (quoted in Bassey, 2001) defines national security as the capacity of society to protect individuals, groups and the nation-state from physical and socio-economic dangers and from the threat of such danger created by both systematic and attributional conditions'.

Another generally accepted definition is that national security is the 'readiness and capability of a country to contain internal and external threats to its existence and well-being (The military dimension), and ensure the socio-economic welfare of its peoples (the developmental dimension)' (Tyoden, 2005:173). The new emphasis on an expanded definition of national security does not suggest that the idea is a new one, but rather that its relevance was greatly undermined by security doctrines and strategic considerations that shaped the idea of security during the Cold war era.

Within the context of this paper, national security would, therefore, be the capacity of a state to promote the pursuit and realization of the fundamental needs and vital interests of man and society, and to protect them from threat which may be economic, social, environmental, political, military or epidemiological in nature. In this sense, it has both qualitative and dynamic dimensions. Qualitatively, it encapsulates the unending drive of the state for improving the safety of and protecting the lives, prosperity and resources within its defined territorial boundaries. It is dynamic in the sense that its broad dissensions oscillate with emergence of new threats or the transformation of old threats, which may come from within or outside its environment (Onuoha, 2007a:4) therefore threats to national security are not static, but dynamic and just as the political, economic military and social cause of threat change, so does the national security posture of a country change (Okodolor, 2014:211). In the context of Nigeria's national security considerations former president Olusegun Obasanjo had contended that:

The primary object of national security shall be to strengthen the federal republic of Nigeria, to advance her interest and objectives to contain instability, control crime, eliminate corruption, enhance genuine development progress and growth, and improve the welfare and well being and quality of life of every citizen (Tyoden, 2015:172-173).

In this sense, national security is an ensemble of two broad focal elements state security and human security (Onuoha, 2012-103). It entails the preservation of the country and the integrity of its assets (Federal Republic of Nigeria 2006:2). Thus a country is secured to the extent that the political leadership is able to anticipate, recognize and respond effectively to these threats, using the available national resources to ensure the safety of life and prosperity of the citizens, and guarantee the integrity of its territorial boundaries as well as strategic assets, both within and outside its territory.

5. A BRIEF OVERVIEW OF THE OIL AND GAS INFRASTRUCTURE NETWORK IN NIGERIA

Nigeria has a monoculture economic that greatly depends on the petroleum industry for survival. The petroleum industry in Nigeria was established about 50 years ago, in 1956, when oil was first discovered in Oloibiri, in the present-day Bayelsa State. Nigeria's oil sector has now been developed into a vast domestic industrial infrastructure, consisting of more than 300 oil fields, 5284 wells, 7,000 km of pipelines, 10 export terminals, 22 petroleum storage depots, 275 flow stations, 0 gas plants, refineries and massive liquefied natural gas (LNG) project (Smith, 2006).

To enhance the distribution of crude oil products from the oil-rich region of the Niger Delta to other parts of the country, a grid of oil pipeline was constructed to link some of the states at strategic locations. The network consists of multi-product pipelines and crude oil pipelines that criss-cross the country and form a grid that links the 22 petroleum storage depots, the 4 refineries at Port Harcourt (I and II), Kaduna and Warri, the off-shore terminals at Bonny and Escravos, and the jetties at Atlas Cove, Calabar, Okirika and Warri.

The pipeline and product marketing company (PPMC), a subsidiary of the Nigerian National Petroleum Corporation (NNPC), uses this system of oil pipelines to transport Crude oil and to the refineries in Port Harcourt (I and II), Warri and Kaduna - a total distance of 719 km. The multi-product pipelines are used to move the country. The storage infrastructure, which consists of 22 loading depots linked by pipeline of various diameters ranging from 6 to 18 inches, has combined installed capacities of 1 266 890 (PMS), 676 400 (DPK), 1 007 900 (AGO) and 740 000 (ATK) m³ tones (Special Committee on the Review of Petroleum Product Supply and Distribution, 2000:10).

To ensure the safety of this infrastructure network which transverse the length and breadth of the country, the government acquired a 3.5m wide right of way on each side of the pipelines before they were laid, and the pipes were buried a meter deep to prevent accidental contact. However recent experiences have shown that their integrity and safety have been compromised by vandals who now unremittingly tap into this huge artery of the lifeblood of Nigeria's economic wealth.

6. THE FORMS, TRENDS, ACTORS AND OBJECTIVES OF OIL AND GAS INFRASTRUCTURE SABOTAGE AND ATTACKS ON THE STAFF OF NNPC AND MULTINATIONAL OIL COMPANIES IN NIGERIA

The tampering with oil and gas infrastructure and lives of staff have assumed huge dimensions and a variety of forms in Nigeria terms, such as *oil bunkering, oil theft, pipeline vandalisation, fuel scooping, kidnappings and oil terrorism* have been used to describe the various forms of theft of crude oil and its refined products, agitations and insurgency. In this

section of the paper, these concepts are examined as different variants under one umbrella concept known as oil and gas infrastructure sabotage. There are, however, four major identifiable forms, namely, **oil bunkering, oil pipeline vandalisation/ fuel scooping, Kidnappings and oil terrorism** are examined in order to highlight the peculiar nature, trends, actors, objectives and processes involved.

Oil bunkering:

Oil bunkering is effectively Nigeria's most profitable illegal private business in the petroleum industry. 'Bunkering' is a term used to describe the process of filling a ship with oil (or coal). 'Illegal oil bunkering' is, therefore, a euphemism for theft of oil (Human Rights Watch, 2003), which involves tapping crude oil directly from the pipelines. Illegal oil bunkering is a hazardous process that is very pervasive in the creeks of the Niger Delta where oil pipeline criss-cross the region like a grid. Thieves build a temporary enclosure and a hole is drilled into the steel casing of the pipe through which the crude passes. The hole is fitted with a pipe and control valve. The creek water is allowed to flow back and fill the enclosure so that the set-up is underwater and, therefore, hidden from oil company inspectors (Junger, 2007:56). When crude oil is being pumped through the pipeline, sometimes at a pressure of 600 pounds per square inch, the bunkers are able to fill up to a 1000 metric tons barge in a matter of hours. The barge is then moved offshore to a transport ship and the oil is sold on the high seas.

Oil bunkering has become a sophisticated operation that does not require the co-operation of oil company staff to operate equipment at wellheads or allow access (though there are reports that some are indeed involved in the theft). The bunkers now tap directly into pipeline at a site removed from oil company facilities and connect the pipes to barges that are hidden in small creeks under cover of mangrove forests (Human Rights watch, 2003). It is estimated that over 10 per cent of the oil exported from Nigeria every year has actually been bunkered.

Owing to the fact that oil bunkering is a huge and lucrative business in Nigeria, with a whole demand and supply chain, a network of actors has emerged to sustain the activity. These include, but are not limited to, cult leaders, politicians, serving and retired security agents, shipping lines, international oil dealers, and youths conscripted by the cult leaders to puncture the pipelines as well as provide security during the transportation of the oil to the market. Two examples serve to illustrate the magnitude of the operation: in August 2003, the Nigeria Navy announced that it had arrested ten foreigners (among them Senegalese, Burkinabes, Togolese, Ivorians and Beninois) and a number of Nigerians for involvement in oil smuggling and seized four ships; in late October, several more ships were impounded, with a reported combined cargo of oil worth several hundred million dollars (Human Rights watch, 2003).

Oil bunkering operates on two levels. On the one hand are small-scale operations that flourish at the local level and on the other the highly organized oil theft that is perpetrated by syndicate or cartels and is always assisted by disreputable ship owners and corrupt government officials that benefit from the illicit trade.

Although illegal oil bunkering has taken place since the 1980s, it was only in 2000 when it became so extensive that it threatened the nation's OPEC quota supplies, that the Nigerian state instituted rigorous measures to curtail the theft. Even then, up till 2002 the Nigeria Navy could only intercept and arrest barges (Ikelegbe, 2005: 223). The intensification of naval patrols and the intervention of the Nigerian oil industry were losing an average of 160,000 barrels of crude oil per day to criminal elements. This figure has been brought down to less than 30,000 barrels per day (according to NNPC figures) or 10,000 barrels (according to the Nigerian Navy) (Enugu, 2006:1,7). Recently, the Nigerian Navy claimed to have arrested over 236 ships, tugboats and barges engaged in crude oil theft, illegal bunkering and other illegal activities on the high seas, resulting in about an 80 per cent reduction in crude oil theft over the last three years (Omonobi, 2007:5).

Oil Vandalisation/Fuel Scooping:

The vandalisation of oil pipelines, particularly the pipeline for premium motor spirit commonly known as petrol or fuel, became commonplace in the terminal stages of military rule. However, in recent times it has assumed alarming proportions. A closer look at the nature and trend of pipeline vandalisation in the country reveals three important dimensions, namely, an increase in the frequency of attacks on these pipelines, increased sophistication in the technology used, and concentration on the three axes that are crucial to petroleum products distribution in the country.

In the early and mid-1990s, vandals, mainly unemployed youths operating in remote areas and communities through which oil pipelines pass, punctured the pipes or took advantage of ruptured or leaking pipes to siphon fuel or other petroleum products into drums, plastic containers or storage cans for sale on the black market. The technology employed

was quite rudimentary, involving the use of funnels, drilling tools and plastic hoses to siphon the products. Furthermore, only few cases of vandalism occurred for instance, in 1995 there were only seven reported cases of vandalism, and in the next three years 33, 34 and 57 were recorded (Special committee on the Review of petroleum product supply and distribution, 2000:34).

The return to democracy in 1999 witnessed and unprecedented increases in the rate of oil pipeline vandalism. From 497 cases reported in 1999, it increased to 909 cases in 2000. From 2001 to 2003 the numbers declined considerably, but it started rising again in 2004 (to 971 cases) and increased sharply to 2258 cases of pipeline vandalism in 2005 (Onuoha, 2007b:101: Africanoiljournal.com 2007. The rise in incidents had been accompanied by more technologically sophisticated methods and complicity of government officials and security agents also seems to have grown.

Ahmed (2007) puts it as follows:

They no longer use simple funnels and buckets. For instance, it has been determined that the vandals at the Egborode, Ovirri court broke the pipeline through hot yapping, a process restricted to experts in the industry.”

Apart from the issue of changes of technology, there are increasing allegations of complicity between oil markets, traditional rulers, politicians, security agents, and NNPC staff in the growing incidence of vandalism. However, such complicity has been confirmed in confessions by vandals, and suspected vandals caught by the police (Abubakar, 2006:32). In the same vein there are growing allegations that security agents connive with vandals to steal oil from the pipeline and Natural Gas, Senior Staff Association of Nigeria and the National Union of Petroleum and Gas workers of Nigeria submitted that:

“Experiences have shown that security agencies have abdicated their responsibility of providing security for the pipelines. We believe that there can hardly be a successful vandalism without security connivance (cited in Chiedozie, 2007). “

It would thus seem as if the seemingly lucrative nature of the illegal trade has opened up a new dimension to the breaking of oil pipelines to tap crude oil or its finished products, and has attracted even more participants to the business of oil pipeline vandalism. These vandals now focus attention predominantly on three axes that are crucial to petroleum products distribution in the country, namely Atlas cove-Mosimi Abuja- Suleja, and Port Harcourt-Aba –Enugu-Makurdi (Amanze-Nwachukwu, 2007:39).

Oil Terrorism:

Unlike oil bunkering and pipeline vandalism, oil terrorism is a new lexicon introduced by security analysts and scholars to describe the deliberate pipeline system attacks in Iraq and elsewhere in the world by militias, freedom fighters and insurgents. In Nigeria, oil terrorism includes such acts as the blowing up of oil pipelines, installations and platforms with explosives, and the seizure of oil barges, oil wells, flow stations, support vessels and other oil facilities in order to prevent the exploitation and/or distribution of crude oil or its refined products (Onuoha, 2012:107).

The first act of oil terrorism in Nigeria can be traced to December 2005, when the movement for the emancipation of the Niger Delta (MEND) blew up Shell's Oporo pipeline by Delta people's volunteer force in September 2005, militant groups in the Delta region instructed all multinational oil companies to leave the region, as they were preparing for a war with the Nigerian government. Since then militants in the region, seeking to control a greater share of the nation's oil wealth, have objective is to impair the capacity of the petroleum industry to export crude oil. By doing so, they hope that the federal government will lose the substantial revenue needed to sustain the machinery of government, and so be forced to respond to their political, economic and environmental demands (for a list of these demands, see Okafor & Olagoke, 2007:4). The following four instances of actions by the militias represent what is being said here:

- On 16th January 2005, a major crude oil pipeline supplying crude to the forced export terminal was blown up, cutting supplies by about 100 000 barrels per day.
- On 18th March 2005, militants blew up an oil pipeline operated by an Italian company reducing flow by 75000 barrels per day.

- On 3rd October 2006, militants struck at an oil vessel at Cawthorowe Channel, killing five soldiers who were escorting the vessel, and later sank the vessel
- On 8th May 2007, the dreaded group MEND attacked three oil pipelines: two of these pipelines were in the territory of Akassa and the third in Town-Brass.

It is evident from the above that the major perpetrators of this sabotage are armed groups, particularly militant groups who profess to be defending the cause of the Niger Delta people. Gradually, but steadily, these militants have developed both the tactics and weaponry that have enabled them to launch devastating attacks on onshore oil installations and near off-shore rigs.

7. KIDNAPPINGS AND ATTACKS ON THE LIVES OF PERSONS

Another recent but most horrendous feature of the said sabotage is that of kidnapping or hostage-taking of high worth individuals in the region who are mainly staff of NNPC and multinational oil companies, prominent traditional rulers, community leaders, government officials and leaders of rival militia groups, among others. In this, such persons are abducted by the group with arms and taken away to particular hideouts after which the militants begin to demand for huge sums of money that usually amount to millions of naira as ransoms for the release of the victims failing which they threaten to take the lives of their victims. In some instances, such ransoms were paid by relatives or organizations of the victims to secure their release, while in other cases, the victims were killed even after having collected the demanded ransoms.

In certain cases, the staffs of the oil and gas industry are openly attacked by the said militants who would without provocation open fire at their vehicles and ships conveying them to and from their workplaces with many of them losing their lives in the process. It is worthy to note that many writers do discuss this kidnapping or open attacks as part of the grand oil terrorism, but we have decided to treat it separately here because of the centre stage it has come to occupy in the whole picture of the said oil and gas infrastructure sabotage in the country.

8. THE NATIONAL SECURITY IMPLICATIONS OF OIL AND GAS INFRASTRUCTURE SABOTAGE IN NIGERIA

Governments all over worlds, particularly those of developing countries, are increasingly recognizing that threats to national security are more likely to stem from internal than external source. Such threats can assume different forms in different countries at different times'. Against this background the question is how one evaluates the implications of the said oil and gas infrastructure sabotage for national security in Nigeria.

In terms of strict national security considerations, oil pipeline and facilities are sensitive strategic assets that must be protected at all times: oil pipeline sabotage, regardless of whether it is perpetrated by national, foreigners or terrorist groups, is a serious threat to national security particularly for a country that depends heavily on oil exports for survival. This is essentially because in a situation of war with another country, pipelines are usually one of the first targets of an enemy and preserving them could be the difference between victory and defeat (Adeniyi, 2007:72).

For this reason, countries will expend enormous financial and material resources on safeguarding the integrity of their strategic assets. Given that Nigeria has a monoculture economy that largely depends on oil exports for survival oil pipelines and installations are the arteries and veins that supply the lifeblood of Nigeria's economic wealth-crude oil and its refined products- to various parts of the country. It follows that attacks on them, both in peace and war situation, could strangle in Nigerian state and render it incapable of defending itself against internal subversion or external aggression. The impact of the increasing attacks on oil pipelines and facilities by militants in the Niger Delta are instructive in this regard.

For example, in one such attack on an oil facility and pipelines on October 2006, in the Oporoma community of Bayelsa State, it was estimated that more than 800000 barrels of oil was lost. In addition about 872 000 barrels of crude oil per day were lost as result of damaged pipelines to which the oil companies could not gain access for repairs or because they could not resume operations (Onuoha, 2012:109). SPDC's share of the losses was put at 500 000 barrels while Mobil. Agip and Chevron jointly lost 372 000 barrels (Onuoha 2007a:12) More so, in view of the strategic position these

facilities occupy in the political economy with regard to security facilities still remains vulnerable to both militant and terrorist attacks.

Another major implication of pipeline sabotage for national security is the huge loss of revenue by the government. Oil pipeline sabotage undermines the capacity of the government to generate resources needed to fulfill its responsibilities, of which the security of its citizens is a primary consideration. In February 2007, for instance, the NNPC estimated that the nation lost about N10 billion (naira) to pipeline vandalism. The figure included losses incurred because of damage to equipment and losses of product and equipment (Bello- 2007:18). Indeed, the loss to the Nigerian government from illegal oil bunkering amounts to about US\$14 billion a year (Ikoku, 2007:6). In such circumstances the government may have no option but to borrow money from international financial institutions, such as the World Bank and International Monetary Fund.

Such funds represent lost opportunities for funding initiatives to provide basic and quality services to citizens; better equip the security forces to ensure the security of life and property strengthen institutions that promote human rights, and undertake infrastructural development, among others. As Human Right Watch (2003) has argued, reducing illegal bunkering will not in itself necessarily improve government spending practices, but the diversion of revenues before they reach government's coffers means that there is not even the possibility that these resources will be used for the public benefit. Thus threats to national wealth as sabotage of oil pipelines, perceived from a national security prism not only hurt the economy through the base of national strength and power.

In addition, oil pipeline sabotage in the form of illegal bunkering is one of the factors fuelling security in the Niger Delta region. Together with other factors such as poverty and unemployment, it adds to criminality, cult clashes, communal violence, proliferation of small arms, and political instability in the region. Efforts by the Federal Government to check oil bunkering activities have further triggered resistance on the part of the bunkers who recruit and arm youths to sustain their lucrative trade. Oil bunkers and pirates operating in the coastal regions of Nigeria use part of the proceeds from this illegal business for the procurement of sophisticated weapons. Their activities are linked to small arms and light weapons proliferation, in their aim to outspend and outsource perceived enemies in the acquisition of sophisticated weapons (Abayomi et al., 2005:131). Consequently, oil bunkering has contributed significantly to shaping the economy of conflict in the region which has in turn contributed to the threat to national security.

Oil and gas infrastructure sabotage is already threatening the socio-economic stability and national development in Nigeria. Blown pipelines interrupt the supply of crude oil to refineries, and refined products to strategic loading depots. One major danger of the said sabotage to socio-economic stability is its spill-over effect, first, it leads to shortages that cause increases in the price of petroleum products but sabotage of pipelines in the southern part of the country also causes serious shortages and disruptions in the northern and western parts of the country.

For example, since February 2006 two strategic refineries in Nigeria-Warri and Kaduna –have been shut down as a result of the vandalism of the Escravos-Warri pipeline which supplies crude oil to the refineries. The impact of such shortages on overall socio-economic development includes underutilization of the refineries; loss of foreign exchange as a result of importation of fuel; disruption of the transportation of people, goods and services, escalation of prices of goods, wastage of crude oil as a result of the leakage; and loss of revenue spent in repairing the vandalized pipelines.

In Nigeria, the sabotage of pipelines conveying crude oil or gas to power plants has resulted in power cuts. Reliable electricity supply is critical for national development, and by extension, national security. However, the increasing rate of oil pipeline sabotage has negatively affected the supply of electricity in the country. For instance, the vandalism of a major pipeline that transport gas to Egbin and AES thermal stations in February 2006 led to a reduction in power generation from 1620 MW to 403 MW for more than two weeks (Godwin & Ezeobi, 2007:1). The disrupted and dismal power generation contributes to the low inflow of foreign direct investments and the growth of local businesses in Nigeria.

Compared to some other African countries like South Africa and Egypt, Nigeria's available power generation capacity with a population of 170 million people stands at 4,500 MW, whereas South Africa with a population of more than 40 million generates a capacity of 36 GW and Egypt with a population of 79 million generates 23 GW (Ikediashi, 2007:18). Even after the completion of four new gas power plants in 2007 at Geregu, Omotosho, Papalanto and Alaoji, which added

a total of 1 464 MW to the grid, electricity supply throughout the country is still very poor owing to incessant vandalisation of pipelines that transport gas to these power stations by militants in the Niger Delta (Onuoha, 2012:110).

Undoubtedly, this energy crisis hurts the economy as hospitals, industries and manufacturing enterprises have to rely on generators to ensure a continuous power supply. This leads to escalating operating costs and low productivity. Furthermore, these generator sets are not produced in Nigeria, so the country has expended foreign exchange on their importation. For instance, in 2005 Nigeria accounted for over 35 per cent (about US\$152 million) of the 77 per cent share of the UK supplies of generating sets to the African market (see African review of Business and Technology 2006:46). The overall effect is that the country cannot compete in the global market.

Another discernable implication of the said sabotage for national security is its impact on human security. Human security, as was stated at the outset, is an integral element of national security, increasingly, the concept of human security is being co-opted into an understanding of security to serve as an early warning mechanism in order to influence policy actions. Human security is viewed in this context as freedom from actual and potential threats to human life which may arise either as a result of human actions or inactions, or from natural disasters such as floods, earthquakes, famine, drought, disease, and other natural calamitous events resulting in death, human suffering and material damage (Onuoha, 2007b:97).

While it may be difficult to put an accurate figure on the loss of lives associated with fire disasters resulting from oil pipeline sabotage, Amanze-Nwachukwu (2007:23) argues that no fewer than 5000 persons, many of who were innocent bystanders, have been killed in various pipeline explosions since 1998. The deaths and injuries resulting from such explosions impact on individual, family and community levels throughout Nigeria. It has led to fractured family structures; children have been left without parents and husbands without wives (Brume, 2006). When a family unit is disrupted, children suffer and their future outlook is often bleak. In some cases, the children migrate to cities in search of livelihood. The lack of parental care or ability to earn a living may lead some of them to join criminal gangs, such as the groups of armed robbers that now terrorize banks and shop malls in cities in Nigeria.

Often, the injuries resulting from explosions are horrendous, with victims sustaining severe burn injuries and internal damages as a result of exposure to poisonous gas and fumes, invariably adding to the number of people unable to earn a living for themselves or their dependants. The end result is that these destitute children and families further swell the ranks of social miscreants and contribute to social conflict in the cities. Hence, for every death or injury caused by a Pipeline explosion, there are many who suffer the psychological, physical and economic consequences. In this context, the poor are hardest hit (Onuoha, 2007b:107).

Adding to some human cost of explosions is the destruction of livelihoods and property. Both at the individual and community level, oil spillage from sabotaged pipelines negatively affect the environment as well as socio-economic activities. As a result residents lose not only their properties and source of income, but also have to contend with contaminated food and drinking water. Oil spillages are known to destroy important economic crops and contaminate water formations such as streams, rivers and lakes. Accordingly, oil pipeline sabotage poses a threat to environmental sustainability, too.

9. RECOMMENDATIONS

From the forgoing discussions so far, it goes without saying that oil and gas infrastructure sabotage being perpetrated by vandals, militants, insurgents, pirates, and transnational crime organizations (TCOs) poses very grave threats to Nigeria's fragile national security. To counteract the trend of this sabotage in all facets, a number of measures are being recommended by this paper.

First, the integrity and safety of oil and gas infrastructure in Nigeria should be treated as a national security issue. The government should accordingly ensure effective protection and policing of the network of oil pipelines throughout the country. This could be achieved by the establishment of a special unit to be known and called **Pipeline Policing and Protection Force** (PPPF). This agency should be staffed mainly by both security and law enforcement personnel such as Police, Soldiers, Naval, Air Force and Directorate of security services, Counterterrorism Expert, Bomb Donator Specialist. This force which should be structured in such a way that it takes over the assignment of the Joint Task Force

(JTF) should be in the form of a military division with expanded troop level that can boast of enough personnel to patrol the over 7000km of oil and gas pipelines across the country round the clock.

In fact, this new force will be charged with the following specific roles:

- (i) Maritime surveillance and interdiction of vast quality of sophisticated weaponry coming into Niger Delta.
- (ii) The protection of offshore oil platforms from attack and occupation by the militant and angry youths.
- (iii) Protection of flow stations operating terminal and lives and property of nationals and expatriates in the petroleum industry.
- (iv) The role of the force becomes even more critical in the operational context of the geography of the Niger Delta: the 36,000 square kilometers of marshland, creeks, tributaries and lagoons which drain the Niger River into Atlantic at the Bright of Biafra. (Bassey, 2012).

It should be noted that the failure of the armed forces to accomplish the operational objectives of Operational Restore Hope and Operation Flush Out (“arresting the deteriorating security situation in the region and to prevent spread of the crises to other parts of the Niger Delta”) has less to do with the difficult terrain of the Niger delta and the determination and dexterity of youth militancy, but more to governmental equivocation at providing the necessary logistical resources to the Joint Task Force. To this end, therefore, it is recommended here that the new force being suggested here be equipped with the following:

- Adequate logistics support especially of ‘troop carrying gunships, uniforms, petroleum, oil lubricant (POL) and provision for other basic essentials’;
- Specialized equipments such as flat bottom boats (FFB), fast patrol craft (FPCs), inshore patrol craft (IPCs), helicopters and POL storage facilities like bowers. Others include communication equipment, operational vehicles, ballistic floatation vests, night vision devices and appropriate arms and ammunition;
- Surveillance devices like MPA, costal radar, UAVs for extended coverage and intelligence gathering’;
- Dedicated military jetties to enhance operational efficiency of the JTF. The use of civilians control jetties under the Nigerian Ports Authority “exposes the FCPs to possible attacks or sabotage”;
- Specialist training in jungle amphibious and counter-terrorist warfare, to improve performance of troop and
- The imperative need to raise the troop level by additional Brigade to ensure effective controls the difficult environment in the Niger Delta. The mandate of JTF initially recommended troop strength of Brigade level, whereas the current realities suggest a divisional strength for effective response.
- Technological apparatus such as satellites tracking and closed-circuit television (CCTV) monitoring in strategic loading bays. This will enhance surveillance of the pipelines and make it possible to track attacks on or rupture of the pipelines.

Second, the security and law enforcement agencies operating in the Niger Delta region should strive to adopt the modern strategies used for criminal intelligence gathering based on mutual sharing of information among themselves and the various private security contactors, neighborhood-watch groups, community leaders and the local police personnel. This strategy therefore calls for establishment of a common computer data-base from where every security outfit in the region can send criminal intelligence collected out there from the fields and can at the same easily access information factored in by other security groups as well. In fact, in this age of globalization, emphasis on provision security cannot do without the strategy of information sharing across the board.

Third, it is imperative that the recent initiative between by NNPC and the Plymouth University in United Kingdom, aimed at mapping out strategies to ensure that crude oil coming from Nigeria onto the international market is fingerprinted, be implemented. This would enable buyers to determine the legality of origin and characteristics of the product before putting a price on it. The federal government should back up such collaboration with the necessary political will and financial support, as this will further enhance the tracking of stolen oil from Nigeria. In addition to the fingerprinting technology, reliable meters should be installed at oil installations. As this will enable the responsible

agency to ascertain how much oil is being produced, loaded, distributed within the country, or shipped to the international market.

Fourth, there is equally the need for a complete overhaul of the pipeline system. Although most of the pipes being used to convey petroleum products have a lifespan of 50 years, lack of maintenance during at the past 15 years accounts for some leakage and ruptures. It is imperative that these pipelines be replaced, and perhaps that can also be buried deeper in the ground to make access by vandals more difficult. The overhaul process should go hand in hand with periodic integrity checks during lifespan of pipelines and comprehensive clearing of all structures that lie within the right of way along these pipelines.

Fifth, the Nigerian navy need to be supported with the necessary facilities and logistics to enhance their effectiveness in tracking the inflow of small arms, and combating sea piracy and oil bunkering in Nigeria's territorial waters. This should include capacity-building projects such as a maritime awareness capabilities programme designed to enable them use the latest patrol boats, such as US coast guard buoy tenders and defender class response boats, which would improve their ability to successfully apprehend oil bunkers and militants.

In the sixth place, the long years of underdevelopment in the Niger Delta is part of formative environment that contributed significantly to the rise of criminal activities, including oil bunkering, in the region. When the issue of criminality in the region is addressed, it is important to factor in the hydra-headed nature of the situation. Government must separate the genuine agitators from criminals and oil bunkers, and evolve concrete preventive and punitive measures for fighting the crime on the one hand and addressing genuine grievances on the other. To this end the design and effective implementation of a comprehensive and redemptive development plan would contribute significantly to overcoming the problem of militancy and agitation among youths in the region.

- The fight against corruption in the public and private sectors is one strategy that must be strengthened and sustained if other efforts designed to safeguard the oil pipelines are to succeed. Corruption is at the root of the problem. It is behind the rise in poverty and unemployment in the country, resulting in increasing numbers of young people without hope of making a living, which in turn makes it easy to recruit them for criminal activities. Just as corrupt government institutions over the years have allowed oil bunkering to take place on a larger scale, the lack of a comprehensive preventive programme by the Federal Government to arrest the situation has contributed to the persistence of the illegal business.
- Therefore there is the need to strengthen every institution, process and agency that promotes transparency, accountability and good governance in the country. Government should strongly encourage such initiatives as the Nigerian extractive industry and transparency initiative aimed at getting oil companies to be more accountable and transparent in their operations. Nevertheless, institutions such as the economic and financial crimes commission, the independent corrupt practices and other related offences commission, and other security agencies need to be strengthened to make them more effective in tackling corruption and improving the security situation in the country.
- Again, it is worthy to remark that the safety of the oil pipelines cannot be successfully achieved in the face of the growing incidence of poverty and unemployment. Therefore, it is suggested that government (federal, state and local) should judiciously use the available revenue to solve the twin problems of poverty and unemployment through a massive planned investment in public works like power, rail and road rehabilitation and construction, and large-scale farming. Through a private-public partnership government should take the lead in the development of small and medium scale industries by means of a well-designed micro-credit scheme that would create jobs and alleviate poverty in the country. It is here that the on-going Amnesty, SURE-P, YOUWIN and other poverty alleviation and youth empowerment programmes by the Federal Government are highly commended. Efforts should be made to strengthen and prolong the life spans of these programmes for greater effects, particularly in the Niger Delta region.
- Again, the current tendency on the part of the operators of the nation's oil industry to smile back home or the banks with huge profits that accrue from their operations without putting back much in terms of social amenities or wealth-creation projects in the oil-bearing communities has often been fingered as the root cause of the protests, agitations, sabotage and insurgency in the Niger Delta region. To mitigate this trend, efforts should, therefore, be made by NNPC and the multinational oil companies to be more responsive and aggressive in implementing their corporate social responsibility programmes, particularly in the oil-bearing communities in Nigeria. Doing that would go a long

way in cleaning up the image of the operators of the nation's oil industry as the merciless killers of the geese that lay the golden egg- (i.e. oil-bearing communities).

Finally, in view of the growing role effective security of life and installations play in modern day business as both strategic resource and a competitive advantage, NNPC and the multinational oil companies in Nigeria should, therefore, strive to map out strategies to entrench or embed security culture (SC) within their organizations. What is security culture (SC) and how can it be embedded into organizations such as NNPC and oil companies in Nigeria? Security culture can be defined as "the totality of patterns of behaviour in an organization that contribute to the protection of all kinds" (Dhillon, 1997) or as what is done in organizations in relation to security practice (Martins & Eloff, 2002; Veiga & Eloff, (2009). Employees are often found to be careless and are often unaware of security directive, failing to comply with organizational security policies and procedures. This may be caused by organizations possessing weak security culture.

The framework here proposes that the extent to which SC is embedded into an organization depends on senior management involvement in security practices; assignment of security responsibility, security polices enforcement, security awareness, security training, and allocation of security budget.

10. SENIOR MANAGEMENT INVOLVEMENT

Senior management involvement is essential in implementing security practices. Hone & Eloff (2002) posit that employees will adhere to security policies and procedures if senior management shows concern for it. Similarly, Dutta & McCrohan, (2002) assert that organizational security starts with senior management support. This is further confirmed by recent research that shows that senior management commitment to security is vital in promoting compliant and proactive security conscious users (D'Arcy & Greene, 2009). In short, senior management must show support by active participation in security activities.

11. ASSUAGEMENT OF SECURITY RESPONSIBILITIES

Assuagement of responsibilities refers to the person or department that is responsible for ensuring the compliance of security policies. Researchers contend that security polices need to clearly delineate the responsibility of every one in organization to protect organizational information (Baskerville & Siponen, 2002; Doherty & Fulford, 2006). However, past researchers found evidence to suggest that only a small group of people is involved in security activities (Chia et al, 2002). It suggests that further research is still need to understand why organizations only assign security responsibility to a small group of people.

12. ENFORCEMENT OF SECURITY POLICIES

Information security policy may be one of the most important controls to protect organizational information. The main objective of security policy is to influence and direct the actions and behaviours of organization members (Hone & Eloff, 2002). Security policy also helps to develop SC by specifying what is an acceptable or unacceptable behaviour in relation to security practices (Thomson et al, 2006). However, Chia et al. (2002) point out that organizational culture support is needed for its development, implementation, and compliance. Their findings show the importance of SC in the context of security policy enforcement toward achieving an optimal level of compliance.

13. SECURITY AWARENESS

Security awareness is not training. Awareness programs teach employees to be conscious about security policies and procedures. Past researcher suggest that investing in security awareness and culture is more effective than in security policies (Straub, D. W. & Welke, 1998; Knapp, K.J., Marshall, Rainer, & Ford, 2006). Although security awareness is widely accepted to raise employees' consciousness in security matters, however, recent research still found that employees are not aware of security policies and procedures (Pahnila, Sipone & Maghmood, 2007). Their findings indicate that awareness programs are still not been effectively carried out in organization. This paper argues that organizations may not achieve high level of ISC if there is little awareness among employees.

14. SECURITY TRAINING

Security training is important in order to raise the awareness of organizational members. Organizational members must be trained to handle security problems (Straub & Welke, 1998). In the United States, a National Security Telecommunication and Information Systems Security Committee (NSTISSC) directive established the requirement for all federal agencies to develop and implement education, training, and awareness programs for national security system (Hentea, Dhillon, & Dhillon 2006). However, recent research shows that training is still not part of most of the SC (Knapp, K.I, et al., 2006). We argue that senior management has to be convinced and education of the importance of training in raising employees' awareness.

15. ALLOCATION OF SECURITY BUDGET

Security managers have always found it difficult to get adequate funding from senior management. Senior management may continue to be reluctant to commit resources to the security function as (Keefe, 1983). In a more recent study, Shedder, Ahmad, & Ruighaver (2006) found that organizations are inclined to treat security spending as a cost, and often struggle to gain funding for security implementation. The finding suggests that there is a need for security managers to educate and convince senior management that without sufficient allocation, it is almost impossible to have effective information security practices in place.

16. CONCLUSION

The incidence of oil and gas infrastructure sabotage and attacks on the lives of the staff of NNPC and the multinational oil companies operating in Nigeria have since assumed frightening proportions so much that they have posed severe threats to the country's national security. In this paper, attempts have been made to delineate the various dimensions of the two twin phenomena, their trends, actors and objectives behind them. It was also stoutly argued that in addition to being serious crimes, the two phenomena, no doubt pose serious internal threat to the nation's security in various fronts. The paper contends that if concerted efforts are not made by both the Federal Government and the operators of the nation's oil industry, government's capacity to discharge its strategic corporate responsibility will be endangered or compromised sooner or later. As part of its concluding remarks, the paper proffered a number of far-reaching recommendations on the way forward in the concerted effort to curb such sabotage and attacks.

REFERENCES

- [1] Abayomi. F Atilade, D. Matseambe, M. Onwurah, U. and Okpegho, I (2005) Report of small arms and light weapons (SALW) survey in Delta State. In O Ibeanu and F.K Mohammed (eds), *Oiling Violence the proliferation of small arms and light weapons in then Niger Delta*. Lagos: Frankard Publishers.
- [2] Abubakar, A (2006) Pipeline vandalisation causes fuel shortage at Northern depots. *Weekly Trust*, 7-13 October.
- [3] Adeniyi, O. (2007) Playing with fire! (1). *Thisday*. January 18.
- [4] *African Review of Business and Technology* (2006) Huge surge in world exports of Gensets, April.
- [5] *AfricanOilJournal.com* (2007) Union calls for a meeting to investigate Nigerian Pipeline disaster. Available at http://www.africanjournal.com/01-03-2007%20union_calls_for_a_meeting_to_investigate%20nigerian%20pipeline%20disaster.htm [accessed 15 September 2007].
- [6] Ahmed, A (2007) Pipeline sabotage in Nigeria and oil pollution damage out of context. Available at http://www.amanaonline.com/art_pipeline.htm [accessed 21 October 2006].
- [7] Al-Mashat, A M (1985), *National security in the Third World*. Boulder. Colo: Westview Press.
- [8] Amanze-Nwachukwu, C (2007a) oil firms face a bleak 2007: *Thisday*, 4 February.
- [9] Amanze-Nwachukwu, C (2007b) Boxing day tragedy; it is time for solution. *Thisday*, 2 January.
- [10] Amanze-Nwachukwu, C and Ogbu, A (2007) *Kupuloku*
- [11] Bassey C. (2001) Defence and security: An African perspective. Paper presented at the Inter-organizational Seminar on conflict research and Techniques, Abuja, 14 June. Abuja institute for peace and conflict resolution.

- [12] Bello, O. (2007) Frequent pipeline vandalization cost then nation N10bn. *Businessday*, 19th February.
- [13] Brume, F. (2006) Oil pipeline vandalization in the Niger Delta: the way out Available at <http://punchng.com> accessed February, 2014.
- [14] Chiedozie, I. (2007) Niger Delta: why we having taken military action-Obasanjo available at <http://punchng.com> accessed February, 2014.
- [15] EFCC. (2007) Oil bunkering fleeing traditional ruler arrested. 28 August. Available at <http://www.efccnigeria.org>.
- [16] Egua, H. (2006) Anti-bunkering operations save Nigeria N1.1bn daily, says Navy, *Businessday*, November 28.
- [17] Falk, R (1975) *A study of future worlds*. New York: Free Press.
- [18] Federal Republic of Nigeria (1990) *Laws of the federations of Nigeria*., Lagos: FG press.
- [19] Federal Republic of Nigeria (1991) *Constitution of 1999*, Lagos: FG Press.
- [20] Federal Republic of Nigeria (2006) *National Defense Policy*, Abuja: FG Press.
- [21] Godwin, A and Ezeobi, O. (2007) Blackout may linger till may: *Punch*, 7 March.
- [22] Hartmann, F.H (1983) *The relations of nations*, New York: Macmillan.
- [23] Human Rights Watch (2003) *Illegal oil bunkering November*. Available at <http://www.hrw.org/>.
- [24] Human Rights watch (2002). *The Niger Delta: no Democratic dividend*. Short Report, New York: Human Rights Watch.
- [25] Ibinabo, J. (2007) Port-Harcourt gunmen, *The News*, 4 June.
- [26] Ikediashi, R. (2007) *infrastructural decay in Nigeria*. *Thisday* 24th August.
- [27] Ikelegbe, A. (2005). *The economy of conflict in the oil rich Niger Delta region of Nigeria*, *Nordic Journal of African studies*, 14 (2) 208-234.
- [28] Ikwu, C. (2007) *Nigeria: oil theft costs Nigeria \$14 billion yearly* *Thisday*, 28 August.
- [29] Junger, S (2007) *Blood on Nigeria's Delta Creeks*. *The Guardian*. 14 January.
- [30] Lipman, W. (1943) *US foreign policy: shield of the Republic*, Boston: Little Brown.
- [31] McNamara, R.S. (1968) *The Essence of security: reflections in office* New York: Harper & Row.
- [32] Mumuni, M. and Onyekunle J. (2007) *Generals behind bunkering*, *Sunday Sun*, 10 June.
- [33] Okafor, C. and Olagoke, A. (2007) *militants free 24 Filipino hostages*, *The Guardian*, 14 February.
- [34] Okodolor, C. (2004) *National security and foreign policy: towards a review of Nigeria's Afro-centric policy*, *Nigerian Forum*, 25 (7-8). July –August.
- [35] Omonubi, K. (2007) *Navy arrest 236 ships for illegal bunkering other vices in three years*, *Vanguard*, 8 Sept.
- [36] Onuoha F. C. (2007a) *Ethnic militias and national security: transformation of conflicts in the Niger Delta*, Paper presented at the national conference on *Nigeria beyond 2007: issues, perspectives and challenges*. Faculty of business social sciences, University of Ilorin, 27-28 Feb.
- [37] Onuoha, F.C (2007b) *Poverty, pipeline vandilization/explosion and human security: Integrating disaster management into poverty reduction in Nigeria*, *African Security Review*, 16(2) 94-108.
- [38] Paul, O. (2007) *US warns of terrorist attacks in Nigeria*, *Thisday* 7 Sept.
- [39] Prins, G. (1984) *the paradox of security*, in G Prins (ed) *The choice: nuclear weapons versus security*, London: windus.
- [40] Smith, J. (2006) *Imperial oil*, available at <http://indybay.org/newsitems>. accessed 21st October.
- [41] *Special Committee on the Review of Petroleum Product Supply and Distribution (2000) Report*, Abuja: FG Press.

- [42] Thomas, C. (1987) *In search of security: the third world in international relations*, Brighton: Lynne Rienner.
- [43] Tyoden, S.G. (2005) *State and security in Nigeria republic*. In A T Gana and Y B Omelle (eds) *Democratic Rebirth in Nigeria vol 1. 1999-2003*, Abuja: AFRIGOV.
- [44] Vanguard (2008) *Solders, Policemen caught aiding pipeline vandals*, Vanguard 17 April.
- [45] Bassey C.O (2012), *Oil and conflict in the Niger Delta: A Reflection of the politics of state response to armed militancy in Nigeria*, *Mediterranean Journal of Social Science*, 3(11), November.
- [46] Onuoha, F.C (2012), *oil pipeline sabotage in Nigeria: dimension, actors, and implications for national security*, *African security review* 17 (3).
- [47] Baskerville, r., & Siponen, M. (2002), *An Information Security Meta-Policy for Emergent organizations*. *Logistics Information Management*, 15(5/6), 337-346.
- [48] Chia, P. A., Maynard, S.B., & Ruighaver, A.B (2002) *Understanding Organizational Security Culture*. In preceding of PACIS2002. Japan.
- [49] D'Arcy, J., & Greene, G. (2009). *The Multifaceted Nature of security culture and its influence on end user behavior*. In IFIP TC 8 International workshop on information system security Research.
- [50] Dohert, N.F., & Fulford H. (2006) *Aligning the Information security policy with the strategic Information System Plan*. *Computers & security*, 25 (1), 55-63.
- [51] Dutta, A., & McCrohan, K. (2002). *Management's Role in Information Security in a Cyber Economy*. *Californina Management Review*, 45(1), 67-87.
- [52] Hone, K. & Eloff, J.H.P. (2002). *What Makes an Effective Information Security Policy?* *Network Security*, 2002(6), 14-16.
- [53] Hentea, M., Dhillon, S., & Dhillon, M. (2006). *Toward Changes in Information Security Education*. *Information Technology Education*,
- [54] Keefe, P. (1983). *Computer Crime Insurance, Available-for a Price*,. *Computer world*, 20-21.
- [55] Knapp, K. J., Franklin, M.R., Marshall, T.e., & Byrd, T.A. (2009). *Information Security policy: an Organization-Level process Model*. *Computer & security*; 28(7), 493-508.
- [56] Knapp, K. J., Marshall, T.E., Rainer, R.K., & Ford, F.N (2006). *Information security: management's effect on culture and policy*. *Information and computer security* 1491) 24-36.
- [57] Martins, A., &, Ahmad, A. & Ruighaver, A.B (2006). *Risk Management Standard-the perception of Ease of Use*. In proceedings of the fifth annual security conferences, las Vegas, Nevada, USA. *Computer security Environment* Bloomington, IN: Indiana University School of Business.
- [58] Straub, D.W., & Welke, R.J (1998). *Coping with systems Risk security planning models for management decision Making MIS Quarterly*, 22(4), 441-469.
- [59] Thomson, K., Von Solms, R., & Louw, L. (2006) *Cultivating an Organizational Information security culture* *computer Fraud & Security*, 2006 (10), 7-11.
- [60] Van Niekerk, J.F., & Von Solms, R. (2009) *Information Security culture culture: A Management perspective*. *Computers & security*, in press corrected proof.
- [61] Veiga, A.D., & Eloff, J.H.P (2009). *A framework and assessment instrument for information security Culture*. *Computers & security* 29, 196-207.
- [62] Von Solms, B. (2000). *Information security – the Third Wave?* *Computers & security*, 19(7), 615-620 .
- [63] Zems, M. (2013), *Crime is Normal China: Guangzhou Quick Publishing Co. Ltd.*
- [64] Zems, M. (2013), *Understanding Crime: Analysis for intelligence, investigation and security. (Key Issues in Criminology) China: Guangzhou Quick Publishing Co. Ltd.*

About The Author:

SP. Zems, Mathias Advanced Dip, PGD, MSc.Crim. **He is a doctoral candidate in Criminal Intelligence.** He is an Author, Publisher, Facilitator, Instructor, Advisor and Criminologist.

He is a criminal intelligence analyst and investigative professional with over thirty year's practical and empirical experience. He held several positions which include: Intelligence Coordinator, Field Officer, Operation Officer, Security intelligence Analyst and Criminal Intelligence Analyst. The scopes of his investigations include: Bank Fraud; Wire Fraud, Cyber-Crime, Militancy, Kidnapping, Homicide, Cultism, Terrorism, Narco-Terrorism, Robberies, Surveillance and Undercover investigations, evaluating and analyzing intelligence, etc.

He facilitates at National Open University of Nigeria, (NOUN) on professional studies. He is also a guest lecturer at the Novena University Ogume-Nigeria at the Department of Intelligence & Security Studies.

The author's area of academic competencies include Criminology, Intelligence and crime correlation, Spy and Espionage, Victimology, Penology, Security Studies, Cyber-Criminology, Criminal Investigation, Corporate Investigation, Undercover and Surveillance Investigations, Policing & Crime Prevention, Terrorism and Counter-Terrorism, Crime & Punishment, etc.

He has authored several journals and books such as: *Understanding Crime: Analysis for Intelligence, Investigation and Security*, *Crime is Normal*, *Understanding Principles, Practice of Crime and Criminology*, *Understanding Criminological Theory and Terminology*, etc.

He is a recipient of several awards such as Rotary Club International's **Vocational Service Award** and **International Award for Excellence in Intelligence and Crime Investigation** by BE – Great Security and Intelligence Academy Accra, Ghana.

He is currently the Chief Superintendent of Police Administration (CSPA) in the Nigeria Police Force.