

## **TENSIONS LINKED TO THE EXPLOITATION OF ENERGY RESOURCES IN WEST AFRICA: THE CASE OF CÔTE D'IVOIRE AND GHANA ON THE 'JUBILÉE OIL' OIL FIELD**

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### **ABSTRACT**

Raw material essential to the industry, hydrocarbons are unique in that they generate unrivaled profits from surplus to the volume equal investment industries. This annuity(surplus) create massive for producing countries and financial flows as well as goods whose oil is causing denote relations between nations and within nations. The exploitation of these natural resources causes many time conflicts between neighboring countries and are often at the root of social unrest or even civil wars in Africa. In regard to neighboring countries competing for hydrocarbon reserves, Côte d'Ivoire and its neighbor Ghana assign each membership of the "Jubilee oil" deposit located to their known border.

### **1.0 INTRODUCTION**

Côte d'Ivoire and Ghana are two neighboring countries historically linked by nature with a very narrow sedimentary basin containing few energy resources. They have based their economy on agriculture, which suffers, like developing countries, from the fluctuation of the prices of their products on the world market. Thus, in order to diversify their sources of income, these two countries have embarked on the exploitation of their subsoil and in particular in the search for hydrocarbons in the high seas (offshore). In addition, hydrocarbons, which provide the vast majority of current liquid fuels and energy, have become one of the pillars of the world economy and a major resource for the industry. Even today, oil represents about 40% of energy consumption, an important trade in the world (BAD, OCEDE, 2007, p. 5). However, the many economic advantages make hydrocarbons a source of geopolitical tension within countries and between neighboring states, which often dispute ownership of a deposit. Hence the question of what is the cause of the tensions between Côte d'Ivoire and Ghana?

### **2.0 METHODOLOGY**

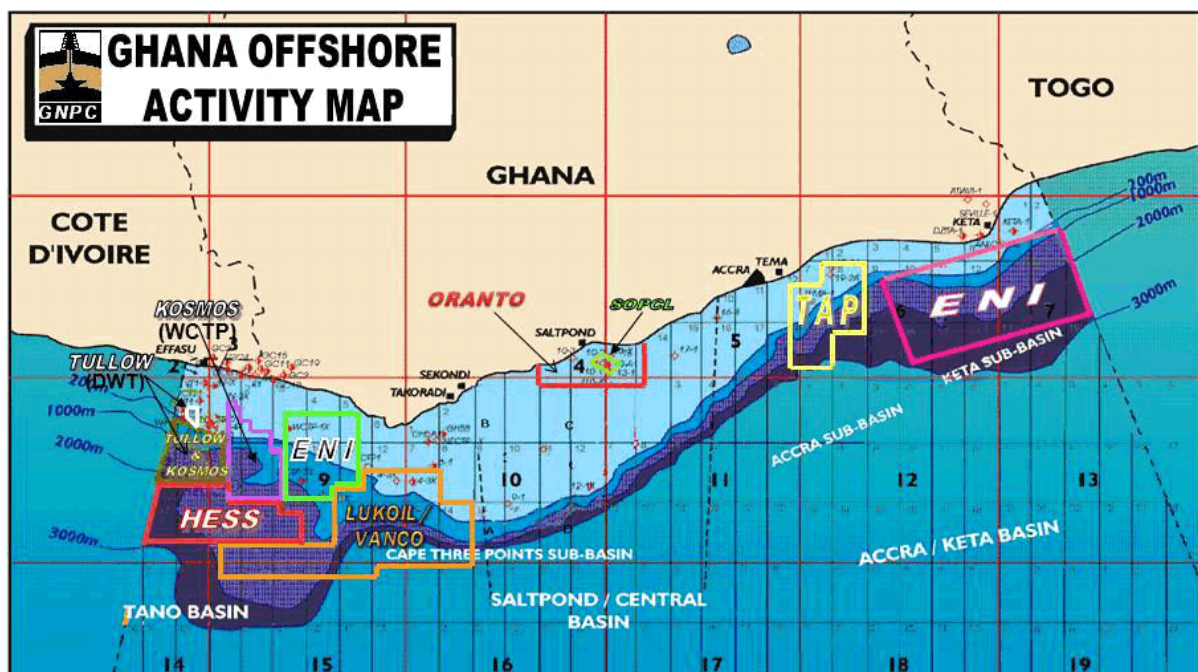
#### **2.1 Presentation of the study area**

Ghana and Ivory Coast are comparable in many ways: two of the largest cocoa producers in the world; both producers of mineral raw materials and oil (although in different proportions) with similar subsoil (B. Auge, 2018, p.6). These two countries have a sedimentary basin composed of two (2) large zones: the onshore zone (emerged part) and the offshore zone (submerged part). This coastal area has enormous oil potential. Thus, the Ivorian Onshore stretches from East to West over 360 km. It has a curved crescent shape towards the ocean

and covers an area of 8000 km<sup>2</sup>; which represents 2.5% of the Ivorian territory. Regarding its Offshore zone, it is very vast (80 to 150 km wide), it constitutes the bulk of the Ivorian sedimentary basin. It extends from east to west from the coast to water depths greater than 3,000 m (F. S. Ayenon, 2013, p. 30)

The Offshore is subdivided into two margins: The San Pedro margin which extends from the Liberian border to the town of Grand Lahu. It is characterized by a shallow bedrock and a steep continental shelf, the Abidjan margin extends from Grand-Lahou to the Ghanaian border. Its base is deeper and the thickness of the sediments increases from west to east (towards the Ghanaian basin). It is precisely in this area where the conflict between Côte d'Ivoire and Ghana is located. (fig 2).

**Figure 1: location of the conflicting deposit 'jubilee field'**



**Source:** GNPC Map, 2013

Therefore, despite these potentials, Côte d'Ivoire and Ghana remain oil dwarfs with respective production of 50,000 bpd and 179,500 bpd in 2018. However, Côte d'Ivoire is one step ahead of Ghana. . The latter started its oil production only in 2010, in the Jubilee field (west) whose reserves are estimated at 1.8 billion barrels.

## 2.2 Method and material

This study aims to know the conflicts that can lead to the production of hydrocarbons within Côte d'Ivoire and between it and neighboring countries such as Ghana. To achieve this objective, the method of data collection was based on documentary research, the analysis of secondary data from audience reports, and semi-structured interviews with the 5 people from the Hydrocarbons Department of the Côte d'Ivoire and 3 officials from Ghana National Petroleum Corp. (GNPC). Interviews were conducted with local populations near

hydrocarbon exploitation areas such as Jacqueline and in the department of Aboisso. Thus, 70 people were randomly selected, including 40 in the area close to the conflicting oil field on the Ivorian side and 30 in Jacqueline, in the oil production area par excellence in Côte d'Ivoire. The empirical or reasoned choice method is used. did we use a tape recorder to record the interviews?

### **3.0 RESULTS AND DISCUSSION**

#### **3.1 Economic stakes of the exploitation of hydrocarbons in Côte d'Ivoire**

##### **3.2.1 Ivorian oil policy focused on offshore production**

The first signs of interest in oil exploration in Côte d'Ivoire date back to the end of the last century. In 1904, the African and Eastern Corporation (British Company) implanted shallow soundings in the South-East region where the surface indices were observable. In 1941 a pilot plant, installed in the same region at Eboinda (Aboisso), obtained by cracking despite the difficult conditions, bitumen extracted (10 tons), and large quantities of petroleum products. The African Petroleum Company (SAP) drilled between 1957 and 1963, ten (10) wells which did not give convincing results, so much so that this company "condemned" the Ivorian subsoil in terms of oil (PETROCI, 1988, p.1).

It is really from 1971, that is to say after independence and with technical progress, particularly in geophysics and offshore drilling, that oil research will experience a renewed interest in Côte d'Ivoire. From this moment on, major orientations will be given to the state structures put in place for this purpose.

##### **3.1.2 Orientations of the Ivorian State**

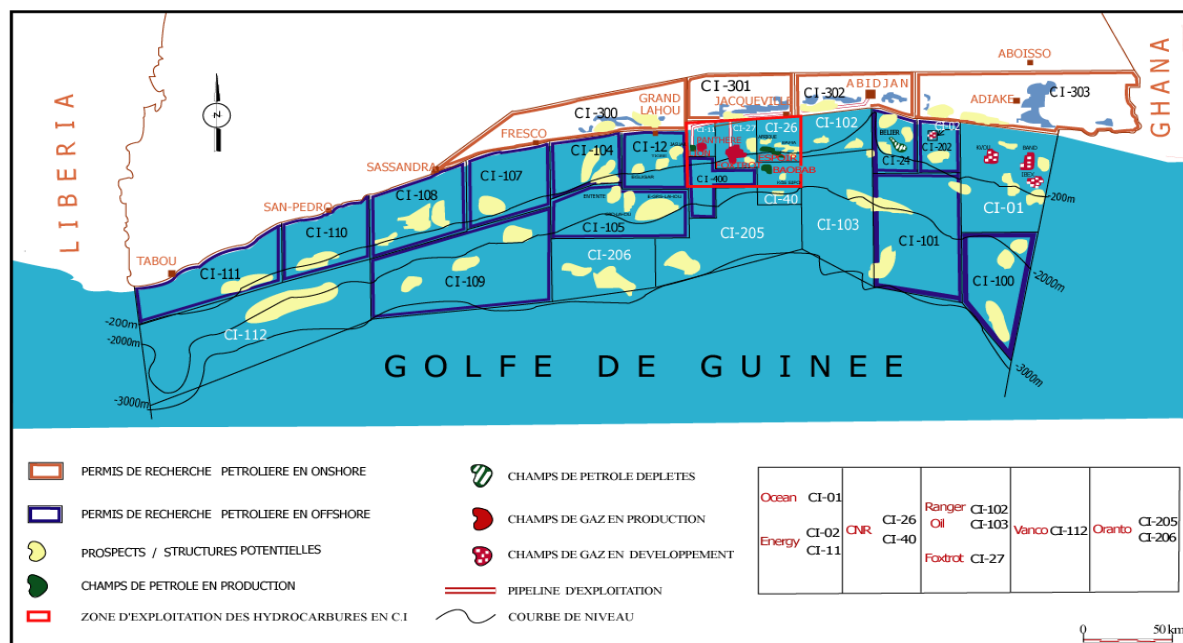
The action of the State obeys the following principles: the definition of the energy policy by the public authorities and the execution of the programs by the private sector. To ensure its orientation mission, the State has resorted not only to regulatory actions, but it has also associated itself by taking minority shares in private structures. Thus, oil operations are carried out by private structures and capital. The State through PETROCI does not participate in the risks of exploitation activities. It participates in the development of products within the limits of a maximum of 20%. All these principles are part of the concern to achieve very specific objectives which boil down to making available to the industry and summarizing the technical information acquired on the basin. Subsequently, the State reformed the contractual framework to make it competitive (new oil code) by taking steps (through PETROCI) to reduce the costs of research operations for operations. And finally, he showed a desire to make the hydrocarbons sector a support sector for the development policy and the improvement of the standard of living of the populations through the exploration of the Ivorian sedimentary basin, including more in-depth studies carried out with more sophisticated techniques have yielded promising results (PETROCI, 1988, p.3).

##### **3.1.3 Gradual but constant exploitation of the sedimentary basin**

Petroleum research began with a progressive exploration of the sedimentary basin. It was made by division into blocks and their allocation to oil companies in the form of a project

supervised by PETROCI. Of the twenty-eight (28) concessions in the sedimentary basin of Côte d'Ivoire, twenty-four (24) have already been awarded to oil companies while the remaining four (4) are being promoted. with other international companies. This exploration has made it possible to make estimates of economically exploitable deposits called proven reserves. Thus Côte d'Ivoire, although it does not have the large marine deposits of Nigeria, nevertheless has a modest upstream industry whose crude oil reserves are estimated at 25 billion barrels (ipetrolenews, 2008, p.6) and more than 27 trillion cubic feet, or 700 billion m<sup>3</sup> of natural gas. Today, more than 207 boreholes have been drilled in the Ivorian sedimentary basin and have led to the discovery of twelve (12) fields, eight of which are currently in production (Fig. 1). These are oil (LION, ESPOIR, BAOBAB, ACAJOU on block CI-26) and gas (PANTHERE, FOXTROT, GAZELLE (CI-202) and MAHI-MARLIN on block CI-27) fields. The oil windfall resulting from the progressive production reaching more than 90,000 barrels/day on average in 2007 (PLQVP, 2009, p.10) should enable the Ivorian State to increase and diversify its sources of income.

**Figure 2: Oil potential and hydrocarbon production area in Côte d'Ivoire**



source: Diagnostic sur le littoral, 2003 Modification AYENON S. FERNAND

### 3.2 Socio-economic characteristics of hydrocarbons

One wonders about the potential use value of oil for the non-industrialized country. A particularly convenient source of energy that allowed the extraordinary growth of the dominant societies during the 1960s, oil is also the raw material at the origin of a fantastic variety of products that today's world cannot do without the diversification of energy resources (Paul, 1984). This means that oil is concentrated on two factors essential to the construction of a modern economy, which the producing countries could use to develop, namely the resolution of the thorny problem of unemployment with the creation of industry and the many estimates that it drains to the State.

### 3.2.1 Contribution of oil income to society

Upon analysis, non-renewable energy resources promote the development of several activities. Indeed, it is involved in the manufacture of several industrial products: in the manufacture of motor oils, inks, rubber (plastic), polystyrene, fertilizer, waxes... There is also petroleum in some cleaning products (adhesives), certain insecticides, certain pesticides... The pharmaceutical industry uses oil to manufacture certain drugs. Petroleum is also found in the manufacture of bitumen, that is to say road surfaces and in many construction materials such as insulation. The textile industry also uses a lot of oil to manufacture certain fabrics such as nylon, for example. Some solvents and detergents are made from petroleum. Consequently, they attract a lot of workers (B. Fatima 1984, p.76). The Ivorian oil sector employs either directly or indirectly thousands of people. Unfortunately, the competitive environment between oil entities explains this lack of statistics to confirm this information.

In addition to the job-providing character of crude oil, hydrocarbons in general make it possible to improve the living conditions of the population by supplying electricity and butane gas for Ivorian households. However, oil revenues are very badly distributed and do not benefit the middle class of the population. This oil windfall of more than CFAF 1,060 billion in oil revenue paid to the State in 2005 (PLQVP, 2009, p. 5) was to benefit the populations through subsidies granted for the improvement and development of infrastructure, particularly roads. . An initiative that should be included in the specifications of producers. But these oil fields, which have been operational for years, have not changed the daily lives of the populations. Far from satisfactory, the infrastructures have become increasingly dilapidated. Living conditions have become more dramatic with a poverty rate at an intolerable level. In addition, in Côte d'Ivoire, the rise in the price of crude oil, which should be a breath of fresh air for Ivorian consumers, was immediately passed on to the prices of petroleum products at the pump, further increasing the suffering of consumers.

### 3.2.2 Oil and an economic windfall of the two countries

Oil production has increased considerably. It went from 50,000 barrels/day in 2005 to more than 90,000 barrels/day on average in 2007, i.e. a total production of 102,350 barrels/day (NGO, PLQVP, 2009, p. 8).

The collection is done through PETROCI which collects them from the oil companies to pay it back to the General Directorate of Taxes, there can be no loss. The bonus (signatures and productions) is paid directly to the General Directorate of Taxes by the contractor. And these bonuses have already brought in millions of dollars for the State, i.e. approximately 8 million dollars in 2006, the equivalent of 4 billion FCFA (NGO PLQVP, 2009, p. 10). In addition, the revenues of Côte d'Ivoire directly from oil are enormous. Customs statistics for 2006 show revenue of 267 billion CFA francs which represents the share of crude oil and 73 billion CFA francs for oil derivatives in 2005. Thus the amount of approximately 1,060 billion CFA francs of revenue oil paid to the State in 2005, represents 28% of the total revenue from foreign trade. Moreover, all the international financial organizations BCEAO, World Bank, International Monetary Fund (IMF), and others have estimated at about 1,570 billion FCFA, the contribution of petroleum products to the country's trade balance in 2006, where cocoa beans only represented 744 billion FCFA. Sales of crude oil reported 684 billion FCFA, which indicates an increase of 156% compared to the year 2005 given above, and this is



because of the very sharp rise in the price of a barrel of crude oil in this year. (SME Magazine, 2008, p.4).

As for natural gas, the main source of supply for processing industries, it provides almost all the energy to Ivorian industries and allows 60% of electricity production in Côte d'Ivoire.

In short, the cumulative oil and gas production for some old platforms still in operation would be estimated in 2008 at more than 80,000 barrels/day for crude oil and more than 1.3 million cubic feet for natural gas (daily Economy, 2008, p. 3) (table 1).

**Table n°1: Cumulative annual gas and oil production between 2003-2008**

Year	Crude oil (in millions of barrels)	Natural gas (in billions of m3)
2003	4,015	-
2004	4,015	1,350
2005	14,8	1,350
2006	22,2	1,300
2007	33	1,300
2008	36,5	1,247

**Source:** magazine, the Tribune de l'Economie, 2008

It is estimated at 14.8 million barrels in 2005 and rose to 36.5 million in 2008, an increase of 21.7 million barrels of oil in 5 years. This growth represents 59.5% of production. The daily production of crude oil is just as increasing according to official figures published by the Ivorian government. It reached nearly 60,000 barrels/d on average in 2009. On the other hand, Ghanaian national production amounted to 179,500 bpd in 2018. Ghana's reserves, which are between 5 and 7 billion barrels, would make it possible to reach a peak production of 420,000 bpd by 2023.

Ghana, which only started its oil production in 2011, holds an important share of hydrocarbons in the growth of its GDP. It amounted to 5.6% in 2011, 3.5% in 2017, and 2.8% in 2019, thus corresponding to the years of production start-up of the three main Ghanaian oil fields (the Jubilee, Tweneboa, Enyenra, and Ntomme (known as TEN) and Sankofa-GyeNyame). The oil sector was the country's second export item (2.9 billion USD in 2017, behind gold at 8.4 billion USD in 2017) (DG tresor, 2020, p. 2)

Faced with the considerable contribution and the important role played by hydrocarbons in the Ivorian economy, the State does not expect to stop in such a good way. It is revitalizing the hydrocarbon sector and does not intend to cede the slightest parcel of its sedimentary basin to a third party, hence the dispute over the ownership of an oil field on the Ghanaian border (B.Neumann, 2010, p.6).

### 3.3 Cause of tensions due to hydrocarbons

The sedimentary basin of the Ivorian coast being narrow, the search for hydrocarbons has been more accentuated in deep water, where significant oil indices have been found. Since then the EEZ (Exclusive Economic Zone) of Côte d'Ivoire has become a preserve of the Ivorian authorities who spare no effort for effective and efficient exploitation of the offshore zone.

Moreover, the delimitation of the EEZs of neighboring countries in Africa is not correctly marked and in particular, the maritime borders of Ghana and Côte d'Ivoire have never been precisely drawn. But the two neighbors have been respecting a "median line" for years. However, after the discovery of oil, the Ivory Coast and Ghana are at the center of a controversy over their maritime borders.

#### 3.3.1 Oil litigation between Côte d'Ivoire and Ghana

Neighbors and "twins" by geography, the two countries (Côte d'Ivoire and Ghana) must settle a delicate border dispute caused by the exploitation of an offshore oil field discovered at the limit of the two borders. Indeed, these two countries with economies based on agriculture will try to diversify their sources of income through the search for oil indices. However, having similar geological conditions, i.e. a narrow sedimentary basin, oil exploration is done in the different EEZs of these countries close to the coasts.

This discovery, one of the largest in West Africa for ten years, was made by the British junior Tullow Oil from the giant Jubilee oil field in 2007 (1 billion barrels), then that two years later from Tweneboa, Enyanra and Ntomme (TEN) deposit, even closer to the so-called customary border (. The deposit is more than 3,000 m from the coast, according to a document sent to AFP by the Ivorian Ministry of Energy Since March 2010, Côte d'Ivoire has claimed ownership of the oil field in question and intends to deploy its own facilities for oil extraction (Jeune Afrique, 2010, p. 3).

This claim is justified for two reasons, firstly by the fact that the Jubilee deposit would be located at the limit of the two borders, one of the solutions of which could be the 'unitization', that is to say, the setting common means of exploitation with a view to an equitable sharing of the proceeds of the exploitation of oil found within the maritime space subject to discussion. But in addition, the oil-bearing system of the Tano basin, which notably contains the Jubilee field in Ghana, extends as far as block CI-100, an Ivorian block whose operating permit was bought by the Total group, which discovered a layer of "good quality" oil 28 meters thick, 5,000 meters deep (including 2,300 meters of water).

#### 3.3.2 Dispute Resolution through UN Arbitration

To reach a negotiated solution to this crisis, Ghana announced the opening of negotiations between Côte d'Ivoire and Ghana but also with other neighboring countries in the West African sub-region, namely Nigeria, Togo, and Benin to delimit the maritime borders once and for all and ensure peace in the sub-region. The two countries mentioned in particular the creation of a possible joint development zone (ZDC). This solution should make it possible to share the income from the deposits near the border, in particular those on the Ghanaian side

(Tweneboaa, Enyanra, and Ntomme – TEN), and possibly those discovered on the Ivorian side on Total's new block, CI-100. This type of settlement was particularly favored between Nigeria and Sao Tome and Principe as well as between Senegal and Guinea-Bissau (B. AUGE, 2018, p. 13). However, as attempts to resolve this dispute continued, Ivorian authorities are reaching out to oil companies in Ghana asking them to stop prospecting for oil in waters considered to be under Ivorian jurisdiction. This is likely to disturb the peace of the oil companies, partners of Jubilee in Ghana, in particular Tullow Oil Plc, Kosmos Energy, Anadarko Petroleum, and Ghana National Petroleum Corp. (GNPC) who fear that development in the Deepwater Tano Block will stop if changes are made to the maritime border between Ghana and Côte d'Ivoire. 18% of what the consortium holds is in the Deepwater Tano Block in the Gulf of Guinea. (F.L. Sackitey, 2012, p. 2)

Moreover, like the solution found in the Bakassi peninsula, an oil-rich area disputed at the time by Cameroon and Nigeria, following the persistence of the border dispute over Jubilee Oil, Ghana, and the Côte d'Ivoire, having started work in Accra to decide on the terms of the negotiations, have already made their proposals to the UN on the demarcation. As a last resort, this file will be forwarded to the International Court of Arbitration and a delimitation of the maritime border between the two countries is approved (fig. 3).

**Figure 3: Delimitation of the border between Côte d'Ivoire and Ghana**



**Source:** Francis L. Sackitey, 2012

However, beyond border disputes, internal conflicts related to the exploitation of hydrocarbons exist and constitute the major cause of the destabilization of nations.

### 3.3.3 Internal conflicts linked to the exploitation of hydrocarbons



Subsoil resources have always been the basis of many conflicts around the world, particularly in Africa. Indeed, the manna resulting from these activities is badly redistributed by the States or even monopolized by a minority which often arrogates to itself a right of control over the deposits. These situations cause serious turmoil in society and in most cases cause sabotage of installations, especially oil installations, by armed groups, as was the case in Nigeria and many other African countries (B. OLE, H PER., 1984, p.303)

Particularly in Côte d'Ivoire, pipeline sabotage has never occurred, but the rent that would come from the conflicting Jubilee Oil deposit is claimed by the King of Sanwi. Indeed, King Amon N'Douffou V, who presides over the destinies of Sanwi, a kingdom in the south-east of Côte d'Ivoire bordering Ghana, demands his share of the (future) cake, in the name of a signed treaty, there is a century and a half. By virtue of a treaty of protectorate recognizing his internal sovereignty, concluded in 1843 with France, then colonial power, the king of Sanwi wishes to take part in the negotiations. "Côte d'Ivoire recognizes the acquired rights. It is inconceivable that we are absent from the discussions", he assures, proposing an agreement with the two States to avoid "irreparable damage.

Beyond this fact, oil exploitation off the coast of Jacqueville, which remains an open-up area, is likely to cause tension. In addition, surveys conducted among these populations during a study in 2006, mention the beginnings of dissatisfaction expressed by them because of the lack of profit from oil production that can be converted into infrastructure in the area. On the contrary, they suffer repetitive upwellings of hydrocarbons from oil platforms causing damage to activities such as fishing.

In this regard, another type of conflict arises, engendered indirectly by the offshore oil industry. These are disputes that arise following the encroachment of fishing areas between artisanal fishermen and industrial fishing owners. Indeed, oil pollution leads to the reduction of fishing activities in the areas closer to the coast and in certain lagoons around which strong economic activities are concentrated, likely to generate the least pollution by hydrocarbons. The observation made in this regard is the remoteness of artisanal maritime fishing from the coast, precisely in the sector of Jacqueville up to Abidjan (F. S. AYENON, 2007, p. 20). In this part of the eastern coast, many industrial activities have developed respectively oil fields in operation for the first as well as port and industrial activities for the second, thus constituting a zone with high discharge of hydrocarbon residues. This pollution forces the fish to move away from the coasts by fleeing towards the open sea, which leads to a displacement of fishing areas, thus creating conflicts between fishermen. The different types of fishing take place at specific kilometers offshore. However, the artisanal fishermen who carry out their activity at 2 miles or approximately 3.218 km are obliged to push the installation of their nets by encroaching on the industrial fishing zone, that is to say beyond the 2 miles. Thus, industrialized fishing boats damage the nets set up by artisanal fishermen or sometimes carry them away in their wake. This destruction causes many losses at the level of artisanal fishermen due to the high cost of fishing equipment.

#### 4.0 CONCLUSION

Ivory Coast and Ghana have many oil potentials located in deep offshore. These resources, which benefit from the technical means necessary for their extraction, are undeniable and essential in the economic development of these two countries. However, the exploitation of

these oil deposits which are located on either side of the border between these two countries becomes a source of conflict because of a not-too-clear delimitation of the EEZ (Exclusive Economic Zone) of the countries in question. This dispute over the boundary between these neighboring countries, which has not yet developed into an armed conflict, should find a happy outcome with the intervention of the UN International Court of Arbitration in order to delimit the maritime boundary between the two countries.

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