

# COMMUNITIES NOT CRIMINALS

**ILLEGAL OIL REFINING IN THE NIGER DELTA**

trying to understand an informal economy

**SDN**



**“THE GOVERNMENT  
AND OIL COMPANIES  
ARE COLLECTING  
OUR OIL, AND WE  
DON’T HAVE JOBS,  
NO MONEY,  
SO WE HAVE TO  
COLLECT THE OIL  
AND REFINE OUR  
OWN.”**

## CONTENTS

EXECUTIVE SUMMARY	4
INTRODUCTION AND BACKGROUND	6
THE MECHANICS OF ILLEGAL OIL REFINING	11
<b>Stage 1:</b> Tap installation	12
<b>Stage 2:</b> Operating the tapping point	13
<b>Stage 3:</b> Supply of stolen crude for export and local refining	14
<b>Stage 4:</b> Refining stolen crude into products	15
<b>Stage 5:</b> Distribution and sale of refined products	24
ENVIRONMENTAL AND HEALTH IMPACTS OF ILLEGAL OIL REFINING	28
HEAVY-HANDED AND ENVIRONMENTALLY DAMAGING RESPONSES BY GOVERNMENT	29
OTHER LESS DESIRABLE ROLES OF GOVERNMENT - “PRIVATE SECURITY”	34
WHY ILLEGAL OIL REFINING CONTINUES AND THE POSSIBLE POLICY RESPONSES	38
<b>Policy response 1:</b> Cutting off national, regional and international markets for stolen crude	38
<b>Policy response 2:</b> Addressing high unemployment and poverty	39
<b>Policy response 3:</b> Providing public services and access to private goods and services	40
<b>Policy response 4:</b> Filling the local petroleum products supply gap	42
TOPICS FOR FURTHER STUDY	44

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## EXECUTIVE SUMMARY

An estimated 150,000 barrels of crude oil are stolen every day in Nigeria. The vast majority of this is sold internationally, but approximately 25% stays in the Niger Delta for refining and consumption. Illegal oil refining in the region comes with steep economic and social costs. Unless the problem is better understood and key drivers of the illegal economy are analyzed, the trade could come to undermine the stability of Nigeria's legal oil sector. Only five years ago, billions of dollars in oil revenue were effectively locked in because of instability and crime in the Niger Delta.

The United Nations Environmental Program (UNEP) Environment Assessment of Ogoniland highlighted that in addition to poor pipeline maintenance by international oil companies, illegal oil refining in the Niger Delta is a major cause of environmental degradation. Whole communities have lost their traditional livelihoods as fisherman and farmers, as the effects of illegal refining, compounded by equipment failure, pollutes their water and land. The refining process may also pose serious health risks.

The dangers notwithstanding, organized theft of crude oil and the illegal refining business it feeds also support the families, small businesses and social aspirations of many Niger Delta communities. Interviewees for this report described illegal oil refining as an entrepreneurial, free market response to local economic dysfunction, socioeconomic pressures, the Niger Delta's chronic fuel shortages and government's failure to deliver basic public services.

The oil companies operating in the delta and the media regularly draw attention to this illicit industry, noting for instance that some illegal oil refining camps brazenly operate in broad daylight. In response, the military Joint Task Force (JTF), charged with

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patrolling on-shore oil fields, each year destroys thousands of illegal refineries. However, the set up costs are so low and returns so high that within weeks illegal refiners start up new camps. Some claim the problem is worsening, with suspicions that as the 2014/15 election gets closer, oil theft and the associated environmental damage it causes will get even worse. Evidence also suggests that rogue actors within the JTF actively participate in and profit from theft and illegal refining.

This is the first ever study that explores how illegal oil refining in the Niger Delta operates and what is driving its rapid growth. The underlying research attempted to gain an in-depth quantitative and qualitative understanding of how the business works, and to analyze the political, economic and societal drivers, networks and impacts and nature of local oil refining.

The findings of this report are based on 12 weeks of field research, undertaken over four months in early 2013. A team of researchers visited nine illegal refining operations across Rivers, Bayelsa and Delta states. This was supplemented with 120 key informant interviews with oil companies, government representatives and members of civil society<sup>1</sup>. To ensure the safety of those interviewed, identities have been protected and this report does not ascribe any quotes to individuals. This is in keeping with SDN's operational research process which seeks to identify trends and solutions, without risks to those involved in the research process either as researchers or interviewees.

<sup>1</sup> NACGOND's unique support and guidance was central to the success of this research process.

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## INTRODUCTION AND BACKGROUND

The failure of the Nigerian state to provide basic public services and security in the Niger Delta has resulted in a significant breakdown of the social contract. In such a vacuum, communities that see benefits going to political leaders and youth involved in illegal activities do what they can to survive.

A typical sentiment expressed by an interviewee was: “Regarding our suffering, the government has done nothing: “We have oil wells, but no benefits and no employment.” This sentiment was expressed time and again across the communities interviewed, providing strong local justification for illegal oil refining being a community right. Another interviewee said: “The government and oil companies are collecting our oil, and we don’t have jobs, no money, so we have to collect the oil and refine our own. We have no fish in these creeks because of pollution; even the few farmers we have, their farm lands have been polluted with oil, so they all joined the practice of illegal oil refining.” Environmental degradation, lack of jobs and access to affordable fuel has created an interdependent relationship between oil thieves and local communities.

Bayelsa, Rivers and Delta States have some of the highest receipts of income per capita from the federal government under the current 13% derivation allocation of the Federal Budget to oil producing states. Various special funds and agencies have also been set up over time to supplement substantial budgetary derivations. But at the ground level, government allocations of oil wealth are dictated by the political or personal agendas of those in power, rather than any developmental logic. Contracts awarded by state governments or institutions frequently serve as patronage or elite pay-offs. At the same time, a political culture of corruption, waste, and low accountability has entrenched widespread poverty.

So despite tremendous revenues allocated to this region, the government’s record on service delivery remains poor, especially in health, education and infrastructure. The Niger Delta’s public



BATHING IN POLLUTED WATER, LASUKU GBINI COMMUNITY, BAYELSA

health profile is miserable: only half the population has access to safe drinking water, life expectancy is only 47 years, patients can travel an average of 52 miles to see a doctor, 1 in 5 children die before their fifth birthday and student-teacher ratios can be over 100:1<sup>2</sup>.

Inevitably these injustices, mixed with conspicuous consumption by elites, have fueled grassroots unrest. Particularly in the 1990s, a range of activists and political figures began demanding a greater stake for the Niger Delta in the nation's oil wealth. Dissident voices further complained that interests from outside the Delta—particularly Northern politicians—derived the greatest benefits from oil. Such benefits included organized theft of crude oil, which took root under a series of Northern military dictators.

In time, some of the dissenters resorted to illegal activities as a form of socio-economic empowerment from the oil they believed to be rightfully theirs. Local participation in oil theft significantly increased over the 2000s, much of it justified as part of the struggle for greater local “resource control.” One local leader said:

**“The boys started pipeline vandalizing both because of their aggression towards the oil companies and because they saw the amounts of money their communities were offered as compensation [...] Then you had the period of militancy, then negotiations and people waited for an alternative. They then went back to the creeks, not with guns, but with the illegal refining business.”**

<sup>2</sup> The Prospects for Cash Transfers in the Niger Delta: A Sceptical View, October 2011, Centre for Global Development

The basic refining technique, first used during the Biafran Civil War, was resurrected and modernized by members of militant camps between 2005 and 2009, providing fuel and cash to support the Niger Delta insurgency. After an amnesty deal for militants was brokered in 2009, those in the militant camps returned to their villages, taking their knowledge of refining with them. As a result of the failure to prevent this at an early stage and the huge commercial rewards available, the trade grew and became more entrenched in the community. Now illegal refineries are a core part of the local economy of many Niger Delta communities, and refined products from them find their way at least as far as Lagos and into other licit distribution networks.

**BOX 1. EXTRACT FROM NIGERIA EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE, PHYSICAL AND PROCESS REPORT: 2009 - 2011 OIL & GAS AUDIT**

The key NEITI findings on crude oil theft include:

- The total volume of crude oil lost by SPDC, Chevron and NAOC from theft and sabotage between 2009 - 2011 was 136,409,573bbls, about \$11 billion (₦1.737 trillion); and
- If the losses are shared according to the Joint Venture equity holdings then the federal government lost \$4.1 billion from 2009 to 2011 in SPDC operations, \$1.1 billion in Chevron operations and \$1 billion in NAOC operations. This is a total loss to the Federation of \$6.3 billion.

**TOTAL VOLUME OF CRUDE OIL STOLEN AND LOST DUE TO SABOTAGE FROM SPDC, CHEVRON AND NAOC**

YEAR	YEARLY AVG. PRICE/ BARREL		SUM TOTAL OF DAILY LOSSES FROM SPDC, CHEVRON AND NAOC	SUB TOTAL	VALUE OF ANNUAL LOSSES	SUB TOTAL
2009	\$62.02	THEFT	23,074bbls	190,391 BBLs	\$522,334,487	\$4,309,930,494
		SABOTAGE	167,317bbls		\$3,787,596,007	
2010	\$80.92	THEFT	36,006 bbls	77,556 BBLs	\$1,063,463,668	\$2,290,671,465
		SABOTAGE	41,550 bbls		\$2,290,671,465	
2011	\$80.92	THEFT	65,653 bbls	105,778 BBLs	\$2,726,058,182	\$4,392,174,515
		SABOTAGE	40,126bbls		\$1,666,116,333	

Source: SPDC, CNL, NAOC; The Audit was informed by Total Exploration and Production Nigeria Limited that they do not have incidents of crude oil theft. Adapted from Section 9.2: TOTAL VOLUME OF CRUDE OIL STOLEN/LOST DUE TO SABOTAGE FROM SPDC, CHEVRON AND NAOC WITHIN THE AUDIT PERIOD





## THE MECHANICS OF ILLEGAL OIL REFINING

### HOW THE ILLEGAL OIL REFINING BUSINESS OPERATES

The rapid growth of illegal oil refining camps across the Niger Delta has resulted in a semi-structured, informal, and highly entrepreneurial economy that is independently managed in each local area along a discreet value chain. The chain has five key parts:

**STAGE 1.** Tap installation

**STAGE 2.** Operating the tapping point

**STAGE 3.** Supply of stolen crude for export and local refining

**STAGE 4.** Local refining into products

**STAGE 5.** Distribution and sale of refined products

Based on field research and other structured interviews, the following assumptions concerning the current size of the illegal refining business in the Niger Delta are used as baselines throughout the analysis that follows:

Estimated volume crude oil stolen daily	150,000 international barrels
Proportion of stolen crude sold locally and internationally	25:75
Volume of stolen crude processed locally each day	37,500 international barrels
Total number of refining camps	500
Average daily tap output	1,800 Niger Delta Drums <sup>3</sup>
Average daily refined products output of medium-size camp	30 Niger Delta Drums of product
Average camp operating hours	6pm to 6am, 5-6 days per week

Additional work is needed to fully verify these figures, and as such they are offered mainly as a guide for analysis and discussion. Significant variations can be found in different parts of the Delta: for example, refineries in Delta and Rivers state tend to be larger than those in Bayelsa with regards to production capacities.

<sup>3</sup> The Niger Delta Drum holds 200 liters of crude as opposed to the international barrels that hold 160 liters of crude.

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## STAGE 1: TAP INSTALLATION

Most of the stolen crude used in illegal refining comes from illegally installed taps on approximately 1650km of crude oil pipelines that crisscross the Niger Delta. Skilled welders, many who were previously contractors for the oil companies and are now formally unemployed, typically carry this out at night. The most skilled operators can install taps both on dry land and underwater. They often work in small teams of 3 to 6 people and can set up a tapping point in just a few days.

The rapid rise of such teams, together with the support they receive from the security services and actors within the oil industry, has resulted in the formation of informal oil theft “unions.” Union members can organize the placement of an illegal tap for an average fee of \$6,200. The union’s key role is in regulating access to the trade, even though the business is highly decentralized. One local refiner in Delta State explained, “We have unions here, you don’t just come into the community and start refining.” They provide security and an informal control on illegal pipeline activity across the region. Unions also introduce community-level operators into the industry and provide personal connections to rogue actors within the JTF whose protection is needed to ensure a steady supply of crude.

### BOX 2. THE ROLE OF OIL COMPANY PERSONNEL IN ILLEGAL OIL REFINING

During the tapping process the pressure on pipes must be reduced before a tap can be installed, otherwise the pipe could explode. As oil companies control pipeline pressure from manned control rooms, some of their staff may be complicit in reducing pressure to allow tapping to occur. They would then inform the union members when pressures are being reduced for routine maintenance. According to one source in the field, some control room operators will lower pipeline pressure to a required level after payment of around \$6,000. An oil company representative stated that this would be unlikely, however, as any significant change in pressure gauges would attract the notice of management.

## STAGE 2: OPERATING THE TAPPING POINT

A consortium typically made up of at least three key parties (security, technical capacity and operational access) own each tap point. One respondent said: “We buy [the right to operate a tap] from the JTF and/or indigenes of the host community.” The consortium often includes a well-connected union member who has strong links to one or more security force officials responsible for the area and a contractor to an oil company. Once the tap is installed, a small team of around five workers guards and operates the tap, using the oil pressure and a rubber hose to siphon crude oil from the tap into a boat built to receive oil. Most of the vessels used (called “Cotonou boats”) can load an amount equivalent to between 100 and 600 drums, although most carry around 450 drums. As the crude is pumped directly into the boat, measurement of volumes is rudimentary and based on trust.

Tapping points can be dangerous places, as rights to operate them are secured partly by the threat of force. Local refiners stated that it was risky to approach directly, as they are well protected either by armed local boys or the JTF.

Tap owners control the most lucrative part of the illegal refining business. This research found that an average tap point could earn the consortium around \$1,038,000 per month.

**TABLE 1. ESTIMATED TAP POINT INCOME AND OPERATING COSTS (\$/MONTH)**

Income	Sales (Local)*	261,000
	Sales (International)+	783,000
Total Sales		1,044,000
Operating Cost	Union Fee	540
	Security	1,200
	Labor and Equipment	4,500
Total costs		6,240
Estimated Monthly Estimated (rounded figure)		1,038,000

\*Assumptions: output=18,000 NDD/month; avg. sale price=\$14.50/NDD

+Assumptions: output=54,000 NDD/month; avg. sale price=\$14.50/NDD

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### STAGE 3: SUPPLY OF STOLEN CRUDE FOR EXPORT AND LOCAL REFINING

Once a vessel has received stolen oil from a tap, it distributes it to the camps situated along riverbanks and to oil tankers waiting off the coast for national, regional and possibly, international markets. By analyzing the production capacity and density of refinery camps in the Delta, it is estimated that local camps process about 25% of stolen oil.

The local transport vessels can be owned by the tap owner, a local refiner or by other individuals engaged in export oil theft. When shipping stolen crude, distributors tend to avoid middlemen. This keeps costs low and margins high. Vessels can service one or more buyers in a single trip. Interviewees explained that independent operators either negotiate a single large transaction with a refinery camp or traverse the creeks in order to distribute the 'black' (crude oil) at minor camps close to the tapping point.

#### STAGE 4: REFINING STOLEN CRUDE INTO PRODUCTS

Stolen crude oil that is not shipped out of the Delta is refined locally in camps. When it arrives by boat from the tapping point, camp workers transfer the cold crude oil to a storage tank using a rubber hose and pump. The most common storage tanks are large locally made “GEEPEE” tanks. In some camps open-air pits are also used for storing stolen crude. These pits are simply large holes dug in the ground, clad with plastic or other synthetic material, hopefully dense enough to stop oil from leaking out.

An average-sized camp employs 12-20 people, although larger camps can employ far more. One Bayelsa camp operator said, “I have an on boards-man who escorts my ‘black’ to my camp and is paid ₦10,000 (\$66) per trip”. Another in Rivers who pays more said,

**“I have an escort boat (deck man) paid ₦20,000 (\$132) per trip, my camp manager is paid ₦100,000 (\$666) a month, camp security is ₦2000 (\$13) per person and I have three people on security”.**

One important observation at the refining camps was the wide variety of people working there and well established practices. There were young men and women (16 – 30 years old) working on the refining process and typically older men and women (30 – 60 years old) managing the site, purchasing crude and distributing refined products. The vast majority of the nine operations visited were set-up as well run cottage industries.

The refining process uses a simplified version of fractional distillation (locally called “cooking”), in which crude oil is heated and condensed into separate petroleum products. Aspects of the illegal refining process were also adapted from traditional gin and palm wine distillation<sup>4</sup>. These artisanal techniques were first developed during the Biafra war and further improved during the height of armed militancy in the Niger Delta, particularly from 2005 to 2007.

Typical materials required for a refining camp include land with river access, a main cooking “oven,” one or more storage facilities (GEEPEE tanks), a cooling system, a sequence of drums (typically metal or rubber drums and sometimes jerry cans), pipes, pumping machines, and hoses. Most of these materials can be bought or constructed locally. An informant from Delta State said, “The equipment is everywhere. So we buy them from the market, and also improvise in some cases.” One refiner listed his set-up materials as: “Pumping machine, hose, galvanized pipe, 2 bundles of zinc, 12 by 1 board, 1 kg of Omo [laundry powder for washing drums], pipe range, welder, 3 or 2 mm plate, GEEPEE tanks or containers. Welders will use the 3 or 2mm plate to construct the oven.”

The refining process begins when the ‘black’ is heated in an ‘oven’, burning crude oil to start the distillation process. This releases dense

<sup>4</sup> Usually called kai-kai and ogogoro respectively.



**STAGE 3**

**CRUDE OIL IS SIPHONED INTO A SUPPLY BOAT WHICH TRAVERSES THE CREEKS, DELIVERING THE CRUDE TO RIVERSIDE REFINING CAMPS. SUPPLY BOATS ARE ALSO KNOWN AS 'COTONOU' BOATS**

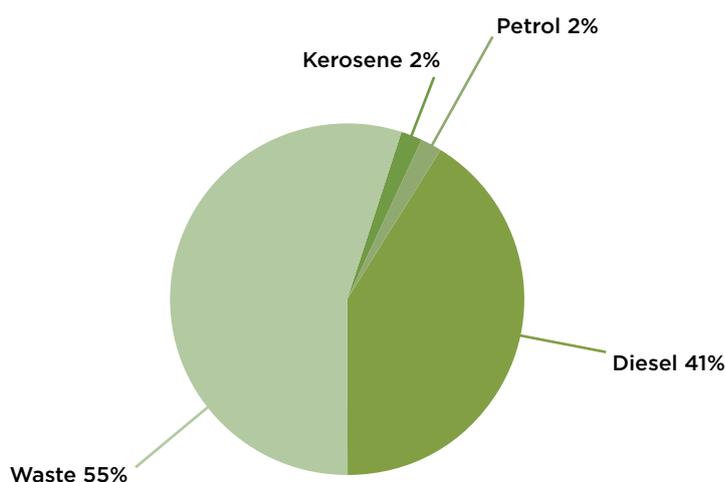


**STAGE 4**  
CAMP WORKERS TRANSFER COLD CRUDE OIL TO A STORAGE  
TANK

black clouds into the camp, which, if not kept under control by sloshing water onto the fire under the oven, can cause explosions. Much of the process is kept cool through cold-water pumps and storage tanks. The vast extent of fire damage around the camps is evidence enough of how highly explosive the practice can be.

The illegal refining process yields diesel, petrol, kerosene, bitumen and waste products<sup>5</sup>. The yields of each product depend on the refining methods and the geological properties of the particular crude. Most Nigerian crude oil grades are heavily diesel-rich.

#### **REFINING CAMP PRODUCT YIELDS**



The quality of products obtained varies widely. To address this, refiners sometimes purify diesel by mixing it with kerosene to reach a large refining standard. One interviewee said:

**“We mix the diesel with kerosene and fuel, no chemical is used because the quality is standard (Delta). Before now we used to buy a chemical from NNPC staff but when we discovered mixing diesel with our refined fuel and kerosene improves the quality, we stopped buying it (the chemical)... I still have some of those chemicals in my possession (Rivers).”**

Because of the risk of detection by the JTF, most local refining occurs at night, when oil companies and security organizations have embargoes on staff field movements. Some larger and better-protected refineries cook throughout the day, showing their status as an accepted, politically protected and active part of the local economy. Certain camps also see their operations as untouchable due to their close relationships with local representatives of the security services.

The average illegal oil refining camp would incur capital costs for camp setup of around ₦750,000 (\$4700). Setup costs are difficult to breakdown into individual items, as much of the equipment is

<sup>5</sup> Bitumen is used to heat the ovens.

made within the community. Interviewees at different camps also reported the following substantial variations in set up costs:

- In Bayelsa, where the camps tend to be smaller, one interviewee revealed that “set up costs between N250,000 to N800,000, depending on the production capacity of the camp. My camp was set up with N720,000 and I produce 30 drums daily.”

- A Delta camp interviewee recalled that “setting up cost me about N500, 000 to N750, 000 or N1,000,000. My oven produces 30-35 drums of diesel from 6pm to 6am.”

- According to a Rivers state interviewee, who owned a large illegal oil refinery camp: “Setting up cost me N3 million and my camp produces 150 drums of diesel daily.”

An average-sized camp could earn up to \$7,800 per month. The position of camp owner is the least profitable area of the value chain.

**TABLE 2. ESTIMATED AVERAGE-SIZE CAMP INCOME AND OPERATING COSTS AFTER SETUP COSTS (\$/MONTH)**

Income	Kerosene Sales <sup>*</sup>	1,700
	Diesel Sales <sup>+</sup>	41,000
	Other Sales <sup>#</sup>	1,900
Operating Cost	Crude Oil Purchase <sup>**</sup>	19,000
	Boat Hire	4,100
	Labor	13,000
	JTF Transport Tax	600
	Regional Security Payment	100
Estimated Monthly Earnings (rounded figure)		7,800

\* Assumptions: output=20 NDD/month; avg. sale price=\$87.50/NDD

+ Assumptions: output=550 NDD/month; avg. sale price=\$75/NDD

# Assumptions: output=25 NDD/month; avg. sale price=\$75/NDD

\*\* Assumptions: input=1,300 NDD/month; avg. purchase price=\$14.50/NDD



**STAGE 4**

**COOKING INSTALLATION AT ILLEGAL OIL REFINING CAMP. THE REFINING PROCESS OR 'COOKING' USES A SIMPLIFIED VERSION OF FRACTIONAL DISTILLATION**



**STAGE 4**

CAMP WORKER ATTENDS TO THE FIRE, POWERING THE OVEN TO COOK THE CRUDE. UNCONTROLLED OVEN FIRES DESTROY THE CAMP AND SURROUNDING ENVIRONMENT



**STAGE 4**

**CAMP WORKER DISPLAYS THE 'BLUE' OR REFINED PRODUCT**

STILL TAKEN FROM MOVING IMAGE



**STAGE 5**

REFINED PRODUCT IS TRANSPORTED ON 'COTONOU' BOATS TO  
SECONDARY DISTRIBUTORS

## STAGE 5: DISTRIBUTION AND SALE OF REFINED PRODUCTS

Distribution is the second most profitable area of the business to be involved in after owning a tapping point. This is because the risks associated with distribution are relatively high. Those involved in distribution face not only the challenges of dealing with the JTF but also armed robbery, as the ships involved carry both cash and valuable cargo.

As the cost of buying stolen crude oil is a fraction of its true market price, the demand for cheap illegally refined products is tremendous in local, regional and national markets. Illegally refined diesel has become so intermixed with legal diesel distribution networks that it is impossible to say how far illegal products are spreading without further study. According to the initial findings of this research, extensive mixing of illegally refined diesel with legal products allows access to legal markets, helping “launder” the illegal product. The usual mix is estimated to be at a ratio of 1:2 (illegal: legal). Locally, this blended diesel is sold through pre-negotiated sales or along the roads or near filling stations. The average market price at the end of 2012 was around N130 per liter for this blended fuel as compared with the price of N150 for diesel found in Abuja.

An interviewee said: “[The sellers] either get to town (waterside) to sell at N18,000 – N22,000 per drum or N100 a litre (\$120-\$146 for 200 litres) to traders and filling station owners, or go to the high sea and sell to other middlemen at N15,000 – N18,000 per drum (200 litres). These buyers later sell to vessels (big vessels in the sea). At this point, security threat and interference is less. The price can also go lower, depending on the buyers’ bargaining power and quality demanded.”

A large distributor would own a Cotonou boat capable of transporting 600 Niger Delta Drums of diesel or kerosene. This could earn them around \$83,000 per month.

**TABLE 3. ESTIMATED AVERAGE LARGE DISTRIBUTORS INCOME AND OPERATING COSTS AFTER INVESTMENT IN CAPITAL/ASSETS (\$/MONTH)**

Income	Kerosene Sales *	5,800
	Diesel Sales +	248,000
	Other Sales #	6,900
<b>Operating Cost</b>		
Operating Cost	Crude Oil Purchase **	173,000
	Boat Hire	1,800
	Labor	2,400
	JTF Transport Tax	600
	Regional Security Payment	177,800
Total Costs		177,800
Estimated Monthly Earnings (rounded figure)		83,000

\* Assumptions: output=40 NDD/month; avg. sale price=\$145/NDD

+Assumptions: output=2,200 NDD/month; avg. sale price=\$112.50/NDD

# Assumptions: output=55 NDD/month; avg. sale price=\$125/NDD

\*\*Assumptions: input=2,300 NDD/month; avg. purchase price=\$75/NDD

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Illegal refined products are distributed and sold in the following ways:

◦ **SHIPMENTS BY SEA TO LARGE DOMESTIC AND REGIONAL MARKETS:**

It is thought that a significant quantity of refined diesel is shipped out of the Delta to large domestic markets such as Lagos (a key emerging market for illegally refined Niger Delta diesel)<sup>6</sup>.

◦ **DIESEL SALES TO NEARBY TOWNS AND CITIES:** Camps sell drums of diesel to middlemen and secondary distributors for an average of N12,000 (\$75) per 200-litre drum. One interviewee said: “Sometimes I can send some to Warri town, but some female marketers also come to buy from us here at the camps, they later sell to others.” Diesel sold elsewhere typically leaves the camp by boat. Middlemen in the major towns in the region sell this to local traders, petrol stations or to truck owners who transport the diesel to other parts of the country.

◦ **SUPPLYING SURPLUS KEROSENE WITHIN COMMUNITIES:** Some larger camps produce kerosene that they sell for up to N120 per liter to small end-users from outside the community. One interviewee said: “We have people who come to buy from the community and some of them sell it in town. We also get buyers from town.”

◦ **GIFTS OF KEROSENE TO LOCAL COMMUNITIES:** Many refiners give their host communities’ small quantities of kerosene for lighting and cooking at no charge. One interviewee said: “We give out kerosene and fuel to our people here at home and fuel our community generator with our diesel. We don’t sell at home, we dash.”

◦ **PERSONAL USE OF DIESEL:** Refiners often use portions of the diesel they produce to fuel their own boats and generator sets or those of elites in the local community.

<sup>6</sup> Further research is needed to establish how important this fuel is to the market demands of one of the fastest growing cities in the world.



**STAGE 5**

**SECURITY PERSONNEL SURVEY ILLEGAL TRADE ZONE**



**STAGE 5**

**MERCHANTS SELL DRUMS WITH ILLEGALLY REFINED PRODUCTS TO TRADERS AND TRUCK OWNERS WHO TRANSPORT PRODUCT TO REGIONAL PETROL STATIONS**

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## ENVIRONMENTAL AND HEALTH IMPACTS OF ILLEGAL OIL REFINING

One of the first formal recordings of the ecological impacts oil theft in the Niger Delta was UNEP's Environmental Assessment of Ogoniland in Rivers State. The study offered details of the trade's devastating impacts on a small part of the Niger Delta region and its communities.<sup>7</sup> Environmental degradation is the most visible and direct impact of illegal refining and oil theft. Photographic evidence gathered at sites visited across Delta, Bayelsa and Rivers show the terrible impacts of artisanal refining to the local environment. Vegetation is visibly affected by the resulting pollution; crude saturates the mangroves and oil disturbs the surface water.

Community members interviewed expressed the following sentiments: "Bunkering has affected our environment negatively for us who go into the camps to buy; we see the way they pour the waste in a very shallow pit. But we have also built houses with the money from this business."

The environmental destruction associated with illegal oil refining harms traditional livelihoods tied to the land and water. One interviewee said: "I will say fishing is more impacted because all the water/rivers are polluted. All the fish don die finish". When asked about the impact on fishing and farming, a female respondent stated: "Negatively; people now buy fish, 'ice fish', from upland. The pollution also affects growth of crops." Oil pollution is a significant barrier to cooperative integrated fish farming, one of the few businesses that could provide sustainable employment and incomes. Nigeria spent over N100 billion on the importation of frozen fish in 2010, some of which is necessary for Niger Delta communities to replace the fish they once caught.<sup>8</sup>

Illegal oil refining also carries significant health risks. The handling and heating of the crude oil pollutes the air. The camps have a toxic feel and the health impacts of those working there are unknown. Communities are constantly exposed to inhalation of poisonous gasses, causing coughing and breathing problems. However, many are in denial about the potential medium to long-term health implications. A community member said:

**"Some of the refiners have persistent coughs and rashes all over their body. The crude is not something that someone should joke with. Some of them [the refiners] had bad cough; they were taken to hospital and treated." Another interviewee said: "Those in the community complain of inability to breathe and all sorts of things. I think they are just exaggerating to stop us from surviving."**

<sup>7</sup> United Nations Environment Program's report, Environmental Assessment of Ogoniland, (Nairobi: UNEP, 2011) and UNEP's press release titled: UNEP Ogoniland Oil Assessment Reveals Extent of Environmental Contamination and Threats to Human Health (Abuja, 4 August 2011).

<sup>8</sup> Minister of Agriculture and Rural Development, Dr. Akinwumi Adesina.

## HEAVY-HANDED AND ENVIRONMENTALLY DAMAGING RESPONSES BY GOVERNMENT

The Nigerian government continues to address the problem of illegal oil refining principally through JTF raids on refining camps. This is not an effective long-term strategy. The JTF's activities temporarily interrupt some of the refining operations, but not the organized trade in crude oil theft for national, regional and international markets. In 2012, the JTF claimed it carried out 7,585 creek patrols; destroyed 4,349 illegal oil refining camps; captured 133 barges, 1,215 Cotonou boats, 187 tanker trucks, 5 storage tanks, and 18 seagoing vessels suspected of carrying stolen crude or illegal refined products. Given the ease of rebuilding camps most camp owners and workers interviewed did not see the JTF's activities as a major threat to the sustainability of their businesses.

Furthermore, the JTF's tactics can be brutal and the human rights abuses deepen the sense of alienation between communities and the state. "Our problem is the JTF," one source in Delta State said. "They set our camps ablaze and kill our children".

The violent and destructive approach of the JTF causes significant environmental harm as products, barges and camps are burnt to the ground. Illegal oil refining is now too deeply embedded in communal structures and is too much a part of the local economy for violent, ad-hoc military raids to contain it. Well-planned clampdowns that respect human rights, local norms and the environment could be made part of a larger, crosscutting strategy for combating illegal oil refining. However, without alternative means of livelihood, improved service delivery and legal product distribution networks they will find their own way to survive.

Following an attack by the JTF, camp owners can quickly rebuild their operations in new locations.

TABLE 4. ESTIMATED EASE OF REBUILDING DESTROYED REFINING CAMPS

QUESTIONS	DELTA STATE	BAYELSA STATE	RIVERS STATE
Length of time taken to re-build a camp which has been destroyed (Months)	0.5	1	3
Cost of re-building a camp (N)	1,000,000	500,000	4,800,000
Estimated rebuilding costs as a % of total annual profits	6%	3%	7%



CRUDE SATURATES THE MANGROVES AND OIL DISTURBS  
THE SURFACE WATER



ENVIRONMENTAL DEGRADATION SURROUNDING A CAMP



VEGETATION IS VISIBLY AFFECTED BY OIL SPILLS AND  
CAMP REFINERY FIRES



**CRUDE OIL DRENCHES THE GROUND SOIL AT LOCAL  
REFINERY CAMPS**

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## OTHER LESS DESIRABLE ROLES OF GOVERNMENT - “PRIVATE SECURITY”

There is extensive evidence that some corrupt members of the JTF actively participate and profit from oil theft and illegal oil refining.<sup>9</sup> This research suggests that a relatively small number of senior officers must have criminal ties to the tap point owners, unions and camps managers, as this is where most profits are made. Because of the relatively small size of protection payments for vessels, it is likely they leave other lower ranking officers to share the relatively small “transportation taxes” from distributor vessels as a supplement to their official wages.

The JTF involvement occurs in the following ways:

- **PROVISION OF SECURITY WHILE INSTALLING THE TAP:** During the tapping process, the JTF ensure the surrounding waterways are clear so workers can install the tap without disturbance. Camp operators described how they pay security fees to the JTF to avoid raids. This is often done by a collective group of camp owners in a local community, but does not guarantee they will not be targeted if a clampdown is ordered.

- **COLLECTION OF “TRANSPORTATION TAX”:** Some members of the JTF and Marine Police collect cargo-by-cargo “transportation taxes” from boats carrying stolen crude or illegally refined products. Essentially a kind of protection money, these fees grant vessels open passage through the transport corridor. During their routine patrols of the inland waterways, officers will stop vessels and demand payments in cash. Interviewees claimed that there is a flat rate fee for each trip; however sometimes the amount varied depending on how much product a ship was carrying (pay-by-volume).

- A key informant in Delta State reported: “If harassed by the security agencies during transportation, the middlemen pay security fees ranging from ₦20, 000–₦30, 000 per trip (\$133–\$200).” By contrast, one source in Bayelsa claimed “Sometimes the JTF collect ₦10, 000 from us per trip but still seize our products.”

- **COLLECTION OF “REGIONAL SECURITY PAYMENTS” FOR ONGOING PROTECTION:** In some cases, camps in a given area pool their funds to make “regional payments” to security force members involved in protection rackets. An interviewee said: “Where the need arises, we pay a security fee to the security agencies of ₦300,000 monthly. We group together to make payments of ₦20,000 per refining camp, which is collected and handed over to them; they then advise us to “be careful.” The location, size and number of camps involved all seems to affect the level of payments made to the JTF and others.

<sup>9</sup> The role of the JTF needs much more investigation. In order to ensure the safety of our research team, we deliberately avoided asking detailed questions about who was involved from the JTF. The findings are thus based on general references made by those questioned as part of this research.





FORMERLY FUNCTIONAL CREEK SIDE REFINING CAMP,  
DESTROYED BY THE JOINT TASK FORCE IN 2012



**SECURITY BOATS PHOTOGRAPHED COLLECTING BRIBES AT  
TRADE ZONES**

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## WHY ILLEGAL OIL REFINING CONTINUES AND THE POSSIBLE POLICY RESPONSES

Crude oil theft and the illegal oil refining business it feeds supports the families, small businesses and social aspirations of many Niger Delta communities. Interviewees for this report described illegal oil refining as an entrepreneurial, free market response to local economic dysfunction, socioeconomic pressures and government's failure to provide basic services. As the communities' living environment worsens because of equipment failure and oil released into the environment as part of the refining process, fishing and farming livelihoods deteriorate as water sources are contaminated. This increases the need for cash to buy bottled water and imported frozen fish. When so few other economic opportunities exist outside of illegal oil refining, the vicious circle intensifies.

Unless the economic and political drivers of crude oil theft are dealt with through a credible and more appropriate strategy, the stability of Nigeria's oil sector could worsen. This risks a return to instability and the country's primary revenue stream being locked in. An urgent multi-stakeholder response is required of government, civil society and the oil majors to combine efforts to raise awareness of the health and environmental impacts of illegal oil refining.

### **POLICY RESPONSE 1: CUTTING OFF NATIONAL, REGIONAL AND INTERNATIONAL MARKETS FOR STOLEN CRUDE**

Illegal oil refining relies almost exclusively on the international trade in stolen crude, which consumes an estimated 75% of all volumes stolen. The oil tapped and delivered to local refining camps is their payment for staying in business and consumes only a small part of their costs. As such, addressing Nigerian oil theft's transnational dimensions could have positive knock-on effects for the fight against the social, economic and environmental damage caused by illegal oil refining.

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So far the government has focused more on interrupting production and sales of illegal refined products, diesel and kerosene than on the main game of stopping the supply of stolen crude oil.

The Nigerian government should articulate a strategy for dismantling the trade in stolen crude oil. The strategy should include measures for interdicting shipments of stolen oil, following the money trail and tackling associated security and environmental concerns.

Oil companies should turn off pipelines with known tapping points to help curtail supply from the system.

Civil society should demand that the Nigerian government takes a proactive, holistic response to oil theft that addresses the trade's immediate manifestations and root causes.

## **POLICY RESPONSE 2: ADDRESSING HIGH UNEMPLOYMENT AND POVERTY**

High unemployment and poverty were regularly cited as the primary drivers of illegal oil refining. Although good socio-economic data for the region is scarce, government surveys found that at least half of residents in the Delta lived on \$2 or less a day and spent over half of their total incomes on food. Because of the large amounts of money made from this illegal trade, the traditional forms of livelihood are not viable for 'ex-bunkerers'. Fishing, farming, mat and basket weaving, carpentry, welding and bricklaying cannot compete with the income generated through illegal oil refining. It is estimated that ground-level workers in the business earn significantly more than in any other local job. Our research found for instance that:

- Tap point workers and camp workers earn an average salary of N6,000 (\$37) per day or N150,000 (\$925) per month.
- Large camp owners hire "deck men" to escort shipments of their crude and products. These men are compensated at N10,000 - N20,000 per trip in Rivers and Bayelsa (\$66 - \$132). Some workers are paid by the drum: interviewees quoted per drum rates ranging from N1, 200 (\$7.50, Bayelsa State) to N3, 000 (\$18.50, Rivers and Delta States). When fishing and farming pay an average of \$8 a day and construction \$13 a day, there is no comparison.

Interviewees and focus group discussion participants described their participation in illegal oil refining as a necessary and a justified form of economic self-help. Popular responses were: "What leads to bunkering is joblessness. In order to survive you have to get involved. "When you don't make enough to live on, when government provisions don't go around, people have to fight for themselves."

Interviewees confirmed that their earnings go towards helping locals afford food, bottled water and other necessities.

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One female interviewee living in an oil spill damaged community that does not have pipe-borne water explained how before illegal oil refining started in the community people could not afford treated (bottled) water. The woman would travel to the nearest city, as she could not afford the bottled water sold in her village. Now, however, water was easily affordable to her thanks to her family's participation in illegal oil refining. According to her: "People even train their children in the business, and feed their extended families with earnings from the business."

Local women play a role in illegal oil refining. Interviewees explained that women's participation in the business also included work in camp management and sales. "The women are our middle-women. They buy from us at a cheaper price and sell to whosoever at their own price. Some of our wives also assist us at the camps. The women are marketers of our finished products. Some of them are even camp owners". Against this harsh backdrop, illegal oil refining creates employment in a region rife with formal unemployment.

Failure to address the lack of jobs will increase the chances of another destructive wave of militancy financed in part by the growing illegal oil refining economy. However, if new economic opportunities can be supported and jobs created, much more will be at stake and the risks higher for those who might become part of future violence in the Niger Delta region.

The Presidency must lead a unified response by the Amnesty Committee, Niger Delta Development Commission(NDDC), Ministry of the Niger Delta and the local States to provide a strategic plan that will ensure the rapid delivery of infrastructure and training necessary to support the future economies of the Niger Delta.

Oil companies should support government plans to support the future economies of the Niger Delta by focusing efforts on access to fuel and electricity across the region.

Civil society could identify actionable strategies along key value chains to support economic diversification in the Niger Delta and demand more from the money paid by the IOCs to NDDC and others.

The international community should focus efforts on generating employment opportunities as alternatives to crude oil theft.

### **POLICY RESPONSE 3: PROVIDING PUBLIC SERVICES AND ACCESS TO PRIVATE GOODS AND SERVICES**

The Niger Delta suffers from significant economic dysfunction at the local level. Communities are rural, isolated, and live a hand-to-mouth existence. For most people, the village is the basic unit of economic life—an estimated 94% of the area's 13,000 settlements have fewer than 5,000 residents.<sup>10</sup> Subsistence-level farming,

<sup>10</sup> NDDC Master Plan 2007

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fishing, gathering and trading occupy perhaps 80% of the work force.<sup>11</sup>

Supplies of power, water, transport, and communications services are particularly inadequate in the remote areas where most illegal oil refining takes place. The lack of infrastructure across the Delta raises the costs and risks of starting local businesses. For some communities, participation in illegal oil refining generates desperately needed cash to purchase the following items:

- **SCHOOL FEES AND SUPPLIES:** Some interviewees said their communities used the proceeds to improve conditions in local schools. “We used community effort to buy generator and mattresses for the teachers.” Others paid for tuition and transport to schools both in and outside the region. “Where will we get the money to send them to schools distant from the community? That’s why we are all refining.” When asked why they engaged in illegal oil refining one refiner stated: “To send my children to school in the cities to read petrochemical engineering. I do it as a temporal means of survival, not a lifetime business.”

- **LOCAL BUSINESS STARTUP:** Some interviewees claimed to have started hotels, beer parlors, restaurants and other legitimate businesses with money from illegal oil refining. This reinforces the perception that it is good for the community and as such should not be illegal. “I have built houses, my children are in the university, I bought extra speed boats for business,” “[Other] business is now booming in the community because money is in circulation,” The benefits of this positive economic knock-on effect should not be underestimated.

<sup>11</sup> Ibid; Ministry of Finance Economic Sector Statistics. Abuja: Federal Ministry of Finance, 2009a.

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#### **POLICY RESPONSE 4: FILLING THE LOCAL PETROLEUM PRODUCTS SUPPLY GAP**

Supplies of legal diesel, petrol and kerosene to the Niger Delta have been inadequate for years. One interviewee said: “We don’t have filling stations here. There are no filling stations, you can see the NNPC station is not functioning. It has not functioned for years now.” The ‘fuel poverty’ faced by many in the Niger Delta was highlighted in the 2012 report by the Farouk Lawan committee on fuel subsidy fraud. It stated that of the 24,226 retail outlets across the entire country, there were only 68 in Bayelsa (the lowest), as compared with 742 in Delta and 719 in Rivers.<sup>12</sup> The second lowest was Zamfara with 207 and highest Lagos with 1751 retail outlets.

The product supply gap has occurred for the following reasons:

- **REFINERY DYSFUNCTION:** NNPC’s four petroleum refineries chronically underperform, typically running at around 20% of installed capacity. The three facilities in Warri and Port Harcourt produce only small amounts of kerosene and diesel. Past subsidies on diesel and kerosene discouraged the private sector from building new refineries. NNPC retains a de-facto monopoly over kerosene, operating a nationwide distribution scheme that has been accused of being corrupt, inefficient and inadequate to meet demand. Illegally refined products sell in the Delta at discounts over legal products and gifts to communities of illegally refined kerosene may impact on the prices or supply in the region. This research estimates the total petroleum supply coming from the camps could be around 40% so it is bound to have an impact on demand for legal products.
- **INSECURITY:** The militancy and other unrest of 2005-09 further damaged infrastructure and chased legitimate suppliers out of the Niger Delta market for kerosene and diesel.
- **POOR TRANSPORT AND SALES INFRASTRUCTURE:** High transport costs discourage legal product sales into the Niger Delta. NNPC controls the region’s product pipeline network, much of which sits idle due to poor maintenance and sabotage. Transporting products over land can be prohibitively expensive given the Delta’s poor roads and difficult riverine terrain.

The Niger Delta’s energy needs will continue to rise as its economy and population density grow. Absent major shifts in local energy supply patterns, the demand for illegally refined diesel and kerosene will probably keep pace. The region desperately needs an adequate and reliable distribution network for legal diesel. The challenges to achieving this are daunting yet must be tackled.

<sup>12</sup> Page 62 of the Report of the Ad Hoc Committee ‘to verify and determine the actual subsidy requirements and monitor the implementation of the subsidy regime in Nigeria submitted House of Representatives on Wednesday 18th April 2012.

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The Nigerian government should:

- Facilitate a Niger Delta energy needs assessment. A comprehensive modeling exercise should evaluate what infrastructure and product flows would be needed to ensure a sufficient supply of legal products to the region.
- Push ahead with the deregulation of the downstream sector including the supply of kerosene and address the challenges that make large scale refining unattractive for private investors in Nigeria.
- Remove tariffs on solar lanterns to allow citizens greater access to alternative and renewable solar products to light homes and businesses in a clean, low cost and sustainable manner.
- Support decentralized and private sector-driven energy distribution systems.
- Create incentives for off-grid power solutions for rural communities and other measures to reduce community reliance on diesel generators.

Oil companies and private sector should:

- Pilot projects to supply flared gas to micro power turbines.
- Support the creation of gas bottling plants as an alternative to kerosene stoves.

Civil society should:

- Pilot advocacy for uptake of solar lamps to reduce local reliance on kerosene lamps as a light source.
- Push the Federal Government to develop a Niger Delta energy plan that includes off-grid solutions that reduce local demand for kerosene and diesel.

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## TOPICS FOR FURTHER STUDY

There were many important issues that were beyond the ambit of this research but require further study. These include:

- What purpose would law enforcement activity serve? Have the full effects of the current JTF approach of torching camps been properly studied and considered?
- What is the full extent of the JTF, Marine Police and Nigerian Navy in allowing theft to continue?
- What are the full environmental impacts of this illegal trade and how frequently are there explosions and fires at camps?
- How are the tapping points controlled and owned, and what are their links to militants and the JTF?
- What is the role of oil company personnel in this illegal business?
- How important has fuel from illegal oil refining become in fulfilling market demands in the country?
- What would a legal local production and distribution network look like to meet the energy needs of the Niger Delta.



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BACK IMAGE: WORKERS NAVIGATE A COTONOU BOAT CARRYING ILLEGALLY REFINED  
CRUDE OIL TO MARKETS AND SECONDARY DISTRIBUTORS DOWN RIVER

