



# **An Environmental Genocide: Counting the Human and Environmental Cost of Oil in Bayelsa, Nigeria**

**MAY 2023**





**The Bayelsa State  
Oil & Environmental  
Commission**



# Contents

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<b>Letter to Governor of Bayelsa State Government</b>	<b>5</b>
<b>Executive Summary</b>	<b>6</b>
<b>Chapter 1    Setting the context: Oil in Nigeria and Bayelsa State</b>	<b>38</b>
<b>Chapter 2    The scale and impact of the pollution crisis</b>	<b>56</b>
<b>Chapter 3    The causes of pollution</b>	<b>96</b>
<b>Chapter 4    Fixing the damage</b>	<b>134</b>
<b>Chapter 5    Preventing pollution in the future</b>	<b>152</b>
<b>Chapter 6    A call to action</b>	<b>176</b>
<b>Appendix 1: Bayelsa State Oil and Environmental Commission Terms of Reference</b>	<b>182</b>
<b>Appendix 2: The Remit, Composition and Methodology of the Bayelsa State Oil and Environmental Commission</b>	<b>184</b>
<b>Appendix 3: Statement by Professor Allan Jamieson</b>	<b>185</b>
<b>Appendix 4: Methodology</b>	<b>185</b>
<b>Appendix 5: Biographies</b>	<b>186</b>
<b>Glossary</b>	<b>190</b>
<b>References</b>	<b>192</b>
<b>Acknowledgements</b>	<b>214</b>



## Letter to the Governor of Bayelsa State Government

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Dear Governor of Bayelsa State,

On 26th March 2019, Governor Henry Seriake Dickson, asked me, and I was sworn in by Judge Andrew Seweniowor Arthur, Attorney General Bayelsa State, to chair the Bayelsa State Oil and Environmental Commission.

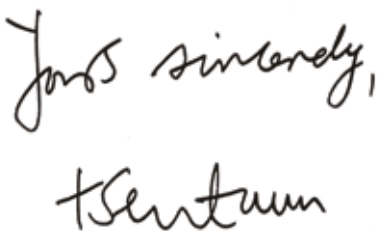
The members appointed and sworn in to serve on the Commission were:

- Chair
  - The Rt Revd and Rt Hon the Lord Sentamu PhD (Cantab), PC
- Honorary Commissioners
  - HE John Kufuor, former President of Ghana
  - The Rt Hon the Baroness Amos LG, Master, University College Oxford
- Commissioners and Expert Working Group members (EWG)
  - Dr Kathryn Nwajiaku-Dahou, Chair, Expert Working Group and Director, Politics and Governance (PoGo), ODI
  - Professor Anna Zalik, Faculty of Environmental and Urban Change at York University, Canada
  - Professor Engobo Emeseh, Head of School of Law, University of Bradford, UK
  - Dr Isaac 'Asume' Osuoka, Social Action International, Nigeria
  - Professor Michael J. Watts, Class of 63 Professor Emeritus, University of California, Berkeley, California, USA & Long-term Non- Resident Fellow Swedish Collegium for Advanced Study, Uppsala, Sweden
  - Professor Roland Hodler, Professor of Economics, University of St Gallen, Switzerland

They have acted as full members of a team in all respects.

I am pleased to tell you that the Commission Report, which I am delivering to you today, is accepted by all members of the Commission in its entirety. The Report therefore sets out our unanimous judgement, based upon the evidence and material put before us during the work of the Commission coupled with our research.

I take personal responsibility for all that is set out in the Report.

  
tSentamu

The Rt Revd and Rt Hon the Lord Sentamu PhD (Cantab), PC

All members of the Commission





## Executive Summary

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Bayelsa, in the Niger Delta, in Southern Nigeria, is in the grip of a human and environmental catastrophe of unimaginable proportions. At one time, the area was home to one of the largest mangrove forests on the planet; an area of unrivalled ecological value. Today, it is one of the most polluted places on Earth. Oil extraction and its impact is the overwhelmingly evident cause of this disaster.





Source: CIA Maps

The Niger Delta is home to Nigeria's oil industry. For over 60 years, international oil companies and the Nigerian Federal Government have rushed to extract billions of barrels of oil from the Niger Delta with scant regard for the consequences.

**The result has been catastrophic. Thousands of oil spills, unrestricted gas flaring, and frequent releases of toxic contaminants have poisoned people's farmlands, the water they drink, and the air they breathe.**

The historic and continued activities of the oil industry have fuelled an environmental emergency, a silent health crisis, and deep economic hardship. This overwhelming tide of oil contamination has turned the Niger Delta – home to some of the planet's largest mangroves and freshwater swamps, forests, and Africa's largest wetlands – into one of the most polluted places on Earth.<sup>1</sup> As much as 40 percent of the mangrove forests have been lost.<sup>2</sup>

The human impact has been just as devastating. One study estimates that in 2012 alone, oil spills in Nigeria, and predominantly in the Niger Delta resulted in over 16,000 additional neonatal deaths.<sup>3</sup> Community after community has seen their livelihoods damaged by oil contamination. Few places have suffered more than the state of Bayelsa, which sits at the heart of the Niger Delta. Despite being one of the Nigerian Federation's smallest, poorest, and

least populous states, it plays a central role in the country's oil industry. Home to Nigeria's first commercial oil well, Oloibiri, Bayelsa accounts for about 18-20 percent of Nigeria's oil production.<sup>4</sup>

Between 1970 and 2014, Nigeria earned an estimated trillion dollars in oil revenue.<sup>5</sup> Since 2006, oil produced in Bayelsa generated over US \$150 billion for the Federal Government and billions for the international oil companies that operate its wells.<sup>6</sup> On average, oil produced in Bayelsa is responsible for approximately US \$10 billion in government revenues per year.<sup>7</sup>

This Commission's findings shine light on the pollution catastrophe engulfing the state and its underlying causes. Chief among them are the systemic failings of international oil company operators with the complicity of Nigeria's political classes and a dysfunctional Nigerian regulatory state. While the state accounts for only slightly over 1 percent of Nigeria's total population, it is estimated to have suffered over a quarter of total recorded instances of oil pollution. The environmental, ecological and health consequences on the Niger Delta as a whole and on the people of Bayelsa have been catastrophic. They have suffered in silence for too long.

The report sets out a proposal to end decades-long cycles of contamination and neglect by the oil and gas industry. Safer and cleaner oil company operations will not be enough to end Bayelsa's pollution nightmare. The fossil fuel generated climate crisis has also destroyed Bayelsa's



ecosystems. The Commission recommends concerted international action to generate and invest at least US \$12 billion over the course of 12 years to repair, remediate and restore the environmental and public health damage caused by oil and gas and to lay the foundations for Bayelsa's just transition towards renewable energy and opportunities for alternative livelihoods.

The last three decades have generated many high-visibility reports, commissions, regulatory initiatives such as the EITI, scholarly research and sustained civil society

advocacy. These have brought the plight of the people of Bayelsa to the world's attention but done little to fundamentally alter their situation. In a fast-evolving geo-political landscape where there are renewed appetites for oil and gas, the Commission's ambitious, forward-looking recommendations may appear counter-intuitive. They will only be achieved with concerted local, national and international action, leadership, solidarity and dedicated support. Now is the time to act.

*A leak at an Agip flow station.*



## Establishing the Bayelsa State Oil and Environmental Commission

Nigeria is Africa's most populous country and historically the continent's largest oil producer. Every day, up to two million barrels of oil are pumped from its wells, mainly to supply the markets of South Asia, North America and Europe.

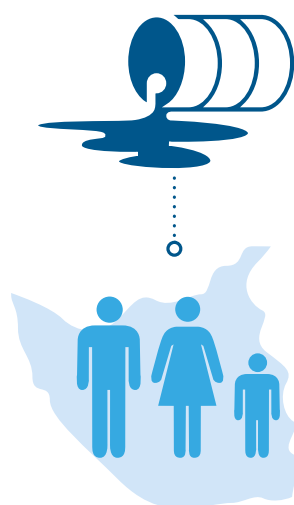
Almost all of the country's onshore oil output comes from the Niger Delta. The region is a 40,000 km<sup>2</sup> labyrinth of wetlands, mangroves, marshland, swamp forests, creeks and farmlands, dotted with over 5,000 oil wells and criss-crossed by over 21,000 km of oil pipelines.<sup>8</sup>

Much of the Delta's oil production comes from the state of Bayelsa, one of nine states in the region. Although smaller than Connecticut in the US, Bayelsa accounts for almost a fifth of Nigeria's total petroleum output.

Nigeria's oil wells are operated primarily by large International Oil and Gas Companies (IOCs) rather than by the state-owned national oil company, the Nigeria National Petroleum Company (NNPC). The five main IOCs – Shell, Chevron, Total, Exxon-Mobil and Eni (Agip) – NAOC (Eni operates through its subsidiary known as the Nigerian Agip Oil Company locally referred to as Agip, which is the former name of Eni) – working through a mix of wholly-owned subsidiaries and joint ventures with NNPC, together account for c.75 percent of the oil extracted in Nigeria.<sup>9</sup>

Over the years, Nigeria's oil and gas resources have generated massive revenues for the IOCs that operate the wells and for the Federal Government, which owns all oil reserves and has rights to auction and tax these under the terms of the Constitution.<sup>10</sup> The oil producers – with the acquiescence of the federal government – have externalised many of the costs and risks of production. It is not an accident that despite the logistical and security challenges it presents, Nigeria is seen as a low cost, high profitability jurisdiction for the oil majors. For instance, in a Shell Group annual report, the company states that it makes a higher profit per barrel and incurs lower production costs in the country than in virtually any other region of the world in which it operates.<sup>11</sup>

However, this oil bonanza has brought limited benefits to Bayelsa and has come at a terrible cost to the state and its people.



# X1.5 BARRELS OF OIL SPILLED

for every man,  
woman and child  
in Bayelsa

**The oil contamination has been so heavy that according to estimates, as much as one and a half barrels of oil has been spilled in Bayelsa for every man, woman and child living in the state today.<sup>12</sup>**

The figures are even higher for some parts of Bayelsa, with, for instance, as many as six barrels of oil spilled for every person in Southern Ijaw Local Government Area (LGA).<sup>13</sup>

The devastating effects have unleashed an environmental and human catastrophe on an enormous scale. Irreversible damage has already been done and so many lives have been blighted or cut short as a result. Time is running out to secure justice for those who have suffered, to mitigate the damage that has already been done, and to prevent further harm in the future.

**Oil producers are already beginning to divest themselves of their onshore assets to evade potential liability for historic pollution. There is an urgent need for action now.**

That is why the Government of Bayelsa State established the Bayelsa State Oil and Environmental Commission (BSOEC) in March 2019. The Commission is chaired by the former Archbishop of York, The Rt Revd and Rt Hon the Lord Sentamu PhD (Cantab), PC, and is made



up of an international panel of experts drawn from a range of academic disciplines. Its purpose is to establish the environmental, human and economic impact of oil pollution on Bayelsa, and to develop a rigorous set of recommendations to address the damage done by the pollution that has already occurred and to prevent further pollution in the future. Over the course of four years, the Commission has undertaken extensive work to uncover the true scope and scale of the catastrophic environmental pollution that has befallen Bayelsa.

As well as reviewing the extensive body of research that already exists, the BSOEC has undertaken a series of scientific field studies into the effects of oil pollution in

Bayelsa, working with leading academic authorities to build up a unique picture of the scale and effects of oil pollution across the state.

It has complemented these studies with site visits and detailed research on specific cases. In addition, it has conducted over 500 interviews with diverse stakeholders, technical experts, and those with extensive, on-the-ground experience.

Throughout its investigation, the BSOEC has sought to listen to the voices of those who have suffered most, holding evidence-gathering sessions in affected communities across the state.

*Fishing is a livelihood source for many families living in Bayelsa, but their trade has been blighted by oil spills.*



## A pollution crisis on an overwhelming scale

The picture that emerges is of a catastrophic pollution crisis, devastating in both its scale and scope. Official government statistics fail to capture the enormity of the disaster. These statistics are notoriously unreliable and there is strong evidence that they grossly and systematically under-report the number and scale of the oil spills that have occurred.

However, independent studies estimate that between at least 9-13 million barrels of oil have been spilled in the Niger Delta between 1958 and 2010.<sup>14</sup> There is evidence that the true figure may be much, much higher. For instance, analysis of data from the NNPC's own Annual Statistical Reports reveals that it lost almost 34 million barrels of 'petroleum products' from its pipelines in the period 2005-2018 alone.<sup>15</sup>

Assuming that the more conservative figures cited above are valid, they describe an almost unprecedented level of oil pollution.

**This would mean that the Niger Delta has suffered the equivalent of a major oil spill, on the scale of the Exxon Valdez disaster - which devastated over a thousand kilometres of the Alaskan coastline - every single year for 50 years.**

Although state-level data is hard to come by, according to our calculations,

**Bayelsa, a state less than half the size of Wales, has been the victim over this period, of spills amounting to 10-15 times that of the Valdez.<sup>16</sup>**

This overwhelming tide of oil contamination and associated activities such as dredging, mangrove and swamp forest clearance, and artisanal refining has turned the Niger Delta – home to some of the planet's largest mangrove and freshwater swamps, forests, and Africa's largest wetlands – into one of the most polluted places on Earth.<sup>17</sup> Bayelsa is one of the states most affected within the Niger Delta. Other highly polluting activities, such as the flaring of around 14 million cubic metres of natural gas a day at 17 facilities across the state, have added to the damage, elevating levels of particulate matter (air pollutants) to over ten times the WHO limits in some communities and causing acid rain that kills crops and leaches into the soil.<sup>18</sup>

**BAYELSA HAS EXPERIENCED THE NOTORIOUS EXXON VALDEZ OIL SPILL 10-15X OVER IN A 50 YEAR PERIOD**

**Alaska  
Exxon  
Valdez spill**

**11**

**MILLION  
GALLONS  
SPILLED**

**Bayelsa**

**110  
-165**

**MILLION  
GALLONS  
SPILLED**



## The toxic impact

To understand the impact of 60 years of sustained pollution, the Commission has undertaken two substantial pieces of scientific research. The first was a review by a team of forensic scientists of research commissioned by the Bayelsa State Government assessing the degree of hydrocarbon contamination of soil, water and air as well as species in the food chain seen across Bayelsa. The second was a health impact study, conducted by a team of public health professionals, based on the collection and analysis of blood samples taken from over 1,600 people in Bayelsa.

The results of both reports are stark. They show that toxins from oil pollution are present at often dangerous

levels across the state and have infiltrated the food chain, ending up in the bloodstreams of those tested in affected communities.

**In some locations, highly toxic oil-related contaminants such as chromium are present in groundwater at over 1,000 times the WHO limit,<sup>19</sup> while in others, concentrations of noxious chemicals, such as Total Petroleum Hydrocarbons, exceed safe levels by a factor of 1 million according to some of the samples taken.<sup>20</sup>**

Given this alarming profile of environmental contamination, it is not surprising that the Commission's sampling confirmed existing studies that showed high levels of toxins in many of the animal and fish species that form a key part of the diet of Bayelsa's communities.<sup>21</sup>

*40 percent of mangrove forest has been lost since oil production began, contaminated waters are a common sight.*



## The environmental, human and economic costs

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The Commission's scientific research demonstrates the extent to which oil pollution has poisoned Bayelsa's soil, water, air and, ultimately, people. The cost of this contamination has been catastrophic.

### It has driven large-scale environmental degradation and contributed to climate change.

Bayelsa and the surrounding states have lost 40 percent of their mangrove forests since oil production began.<sup>22</sup> This loss of habitat has been accompanied by a significant reduction of biodiversity, with populations of many species being all but wiped out at spill sites. In the words of the Chair of the Commission (Lord Sentamu), Bayelsa has been the victim of 'environmental genocide'. Even if Nigeria's carbon footprint per capita remains low, for decades, Nigeria was among the world's largest gas flarers, because of the activities of the IOC operators in Bayelsa and across the Niger Delta.

### It has led to a silent health crisis.

Hundreds of thousands of people in Bayelsa have been forced to live on contaminated land, drink and fish in contaminated water, while breathing contaminated air. Mortality and morbidity rates have risen sharply, as has the incidence of chronic disease, in communities without the resources to cope. Research suggests that exposure to oil spills before conception killed around 16,000 infants within the first month of their life in 2012 alone.<sup>23</sup> Meanwhile, average life expectancy in Bayelsa is approximately 50 years, four years less than Nigeria's national average of 53 years.<sup>24</sup> This figure is in stark contrast with the average life expectancy of 80 years in the Organisation for Economic Cooperation and Development (OECD) countries.<sup>25</sup>

### It has destroyed countless livelihoods and left many struggling to survive.

Thousands of communities and tens, if not hundreds of thousands, of people have seen their harvests decline and their fisheries poisoned. In a state where 70 percent of the population rely on agriculture and fisheries, the impact on fishing and forest products has been disastrous.<sup>26</sup> According to a national nutrition survey conducted by the University of Ibadan, 97 percent of the communities affected by oil spills suffer from food insecurity, and nearly half of children living in those communities are underweight.<sup>27</sup> This is more than double the rate for a large part of Southern Nigeria as a whole.<sup>28</sup>

### It has destabilised local communities and stoked conflict.

The loss of income and the competition for compensation and contracts from the IOCs has destabilised local communities and fed a cycle of social conflict, depopulation and armed violence often fuelled by the presence and practices of the IOCs themselves. Between 2005 and 2009, this led to an armed insurgency.<sup>29</sup>

Today, while much diminished, violence continues to pervade social and political life in Bayelsa. Flaws in existing structures of relationships between oil companies and host communities continue to stymie development and indirectly stoke intercommunal conflicts.<sup>30</sup> As a result, parts of the state have been included on the UK Foreign and Commonwealth Office's no travel list.<sup>31</sup>



## Testimonies to the BSOEC

“ Shell admitted that it was a failure. I am surprised to know that up till now Shell has not relieved the suffering of the people. Shell is not following best practices. Right close to Agbura and Otuokpotidi there was a spill that occurred during the flood. When it occurs like that it took the oil to the Atlantic Ocean. Shell did divide and rule. We petitioned Shell to the Federal Government of Nigeria. We wrote to the Attorney General and the Minister of Environment. Since 2016 they have done nothing.

**Male Resident, Ayama, Ogbia LGA**



Accompanied by local guides, BSOEC members travelled on polluted waters to access remote sites to collect evidence and testimonies.



Bayelsans are forced to live and work on or near polluted waters, land and air.

“ Nembe, in particular, degenerated into violent conflicts leading to the loss of thousands of lives and properties worth billions of US dollars. That community and many others have been set backwards by about one hundred years or more. Smaller communities like Liama, Beletiana, Emadike and a long list of others across the region were completely wiped off the face of the earth. Their natives have remained refugees for decades completely disconnected from their ancestry because of unscrupulous executors of the IOCs greed for oil in a country that does not regulate the sector.

**HRM King Bubaraye Dakolo JP, FICMC, Agada IV**

“ We are several communities combined into Aghoro 1 affected by the 17 May 2018 spill. I made a clear report to SPDC. All the copies are with them. A JIV\* took place. But when I looked at it, it was not complete. We are 38 communities in Aghoro 1. Only the impacted areas were covered by SPDC. We have given a Power of Attorney to a company to put up all we need. Up to the first moment, we have not seen the payment of the compensation. SPDC was using divide and rule. They told the Aghoro 1 people that they would pay 32 million Naira (US \$58,182\*\*). Bonga oil spill, they gave Aghoro 1 and related communities 60 million Naira. Up to this moment, I have written letters to SPDC. Divide and rule. They sneak in and signed some documents that they want to go and walk. I said, no, do remediation, pay compensation, and do clean-up. We are dying. Many people are dying because of it. I am sick because of this spill. I can't stay in my house. Please take this home and let the government know that we need a thorough clean-up and remediation in our area; the whole area. And pay compensation within the next two weeks.

**HRH, Amananowei of Aghoro 1**



The BSOEC visited communities around Bayelsa to collect testimonies.



Children are vulnerable to the health impacts of oil pollution.

“ JIVs do not integrate community inputs. Use of legal redress is frustrating and expensive for communities and oil companies relying on military repression of communities. They also use divide and rule to enable them to continue clamping. They are also supposed to come back for clean-up and remediation. They send some money to make us fight ourselves and end up doing nothing on the site.

**Chief, Oporoma Council of Chiefs,  
Southern Ijaw LGA**

\*A Joint Investigation Visit (JIV) is part of an oil spill investigation process whereby when an oil spill occurs, a joint investigation team (JIT) is mobilised to visit the spill site. The JIT includes representatives of regulatory agencies, the oil company, and the local community. JIV forms, which are to be signed by the JIT, capture data on the cause of the spill, the volume spilt and the area affected.

\*\*550 = \$1. Exchange rate as at February 2022



## The immediate causes

Our analysis has found that not every single oil spill in every part of Bayelsa is the fault of the oil companies or of the Government of Nigeria. Third party interference can play a role. However, oil companies and the Government of Nigeria are both to blame for creating the conditions for the systemic crisis of oil pollution in Bayelsa - which results from a toxic cocktail of oil producer intransigence, failed regulation, dysfunctional politics, and a lack of international scrutiny.

The Commission's analysis suggests that **blame for the ongoing oil pollution catastrophe engulfing the Niger Delta communities must rest in the first instance at the door of the international oil company operators.**

Failures by the IOCs at every step of the process have fuelled the pollution crisis that Bayelsa faces today.<sup>32</sup>

The four failures the Commission has identified are:

1. Failures of strategy.
2. Failures of prevention.
3. Failures of response.
4. Failures to remediate.

### 1. Failures of strategy.

The historical neglect of Niger Delta communities by international companies dates back to the period of the trans-Atlantic slave trade when people from the hinterland were violently caught and sold as slaves. In the 19th century, when the region was known as 'Oil Rivers', due to its links with palm oil production, international trading companies were also responsible for significant environmental damage. More recently, ongoing oil spills and flaring of associated gas by IOCs and local operators have perpetuated the exploitation and neglect of Bayelsa and its people. This has occurred by design and is the intentional result of oil companies' operating strategy and actions; actions which continue after Nigerian courts ordered an end to the practice of gas flaring over a decade ago.<sup>33</sup> Although gas flaring is banned or heavily restricted in many other jurisdictions, oil operators persist with the practice in Nigeria, including in Bayelsa.<sup>34</sup> The figures are stark; Canada flares 8 percent of its gases whilst international oil producers in Nigeria flare up to 90 percent of associated gas, releasing carbon dioxide and contributing to climate change.<sup>35</sup>

*Oil contaminated waters and farmland in Aghoro, Bayelsa.*





*People continue their daily activities in contaminated waters in Aghoro.*

## Legal evidence of IOC neglect

Recent court judgements suggest that Bayelsa's pollution problem is not the result of accidents, but is rather a problem that has grown by design.<sup>36</sup>

### UK Supreme Court Judgement and Dutch Court of Appeal against Royal Dutch Shell\*

In February 2021 a UK Supreme Court judgement determined that Royal Dutch Shell Plc (RDS), as the parent company of Shell Petroleum Development Company of Nigeria Limited (SPDC), can be held legally responsible for the systemic pollution of the Ogale and Bille communities in Rivers State, and that their case could proceed in the English courts. This case affirms that corporate global policy frameworks and public commitments by multinational parent companies can give rise to liability for environmental and human rights abuses.

According to the Supreme Court, whilst "formal binding decisions" are taken at corporate level, these are taken on the basis of prior advice and consent from the vertical business or functional line, and organisational authority generally precedes corporate approval. Whilst the respondents suggested that RDS could only delegate responsibility for its own corporate governance and group-wide strategy functions, the RDS Control Framework shows that the CEO and the RDS Executive Committee have a wide range of responsibilities, including for "the safe condition and environmentally responsible operation of Shell's facilities and assets".<sup>37</sup>

The UK Supreme Court ruling came just two weeks after the Dutch Court of Appeal's landmark ruling on 29 January 2021 against RDS in litigation brought by four Nigerian farmers and Milieudefensie (Friends of the Earth Netherlands) in 2008. The ruling held RDS liable for pollution caused by its Nigerian subsidiary and ordered it to improve its pipeline network.

SPDC in particular is liable for oil pollution at three locations in the Niger Delta, but according to the court, the parent company RDS also had a duty of care to make sure that a leak detection system was installed. Three of the four Nigerian plaintiffs and their fellow villagers were awarded compensation for the damage caused and Shell had to ensure that there was a leak detection system in the pipelines in Nigeria. It is the first time that a court has held a Dutch multinational accountable for its duty of care abroad.

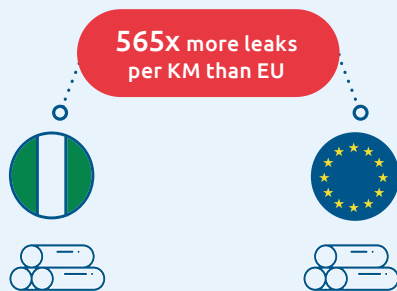
*\*Royal Dutch Shell is known as Shell plc as of 2022 but this report refers to Royal Dutch Shell for historic accuracy and consistency*



## 2. Failures of prevention.

Many of the spills reflect a failure to properly invest in, maintain, manage and protect pipelines and facilities to minimise the risk of spills. The rate at which oil pipelines and facilities develop leaks in Nigeria is unparalleled when compared to other major oil producing countries.

**Analyses suggest that Nigeria's pipelines are 565 times more likely to spring a leak per 1,000 kilometres than those in the EU.<sup>38</sup>**

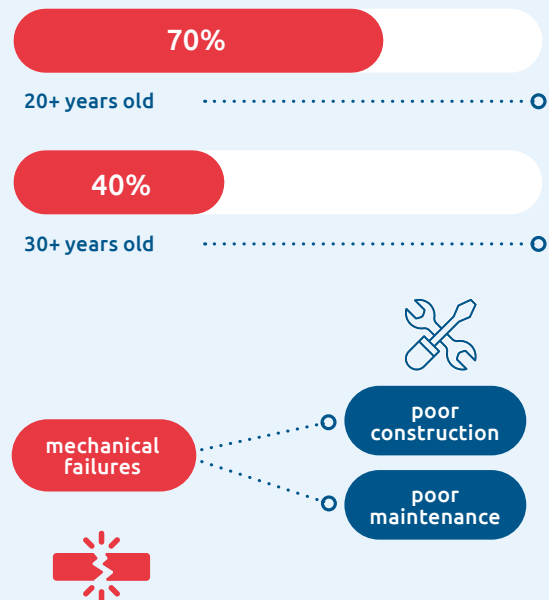


The IOCs often publicly attribute this spill rate to sabotage. But in the recent Dutch Court of Appeal's landmark ruling against Royal Dutch Shell plc, the court ordered Shell to install a leak detection system in the pipelines in Nigeria, as it does in its European pipelines. This highlights the IOCs' responsibilities to protect the environment and local communities from leaks regardless of the cause of an oil spill. It seems clear that in many cases oil producers are not taking sufficient steps to ensure that the risk of leaks is minimised. The IOCs do not appear to be instituting measures they would undertake as a matter of course in other countries to ensure the integrity of their pipelines. Detailed independent studies also paint a very different picture to the IOC claims of sabotage. One recent analysis of specific spill incidents on the borders of Bayelsa suggests that production and corrosion errors may account for as much as 60 percent of all spills.<sup>39</sup>

International standards for inspection, repair and

corrosion-proofing of pipelines do not appear to be observed. Much of the oil infrastructure is nearing the end of its operational life.

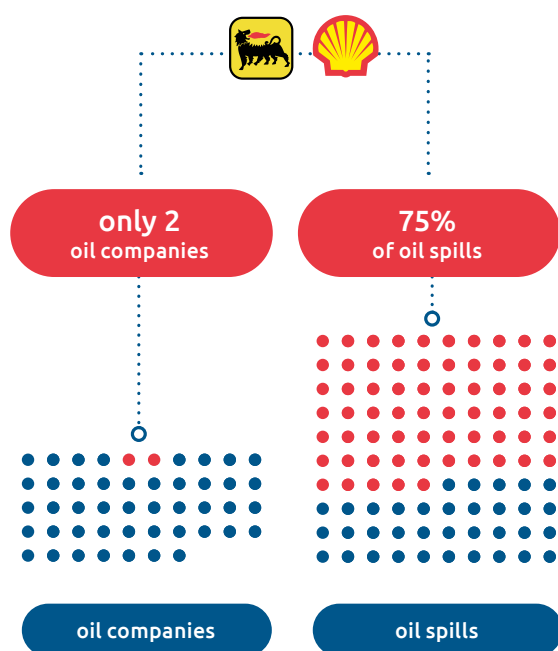
**A study conducted on pipelines in six states in the Niger Delta found that more than 70% of the pipelines were over 20 years old and over 40% were more than 30 years old with much of the infrastructure suffering from mechanical failures due to poor construction and maintenance.<sup>40</sup>**



International standards for inspection, repair and

Furthermore, while sabotage remains a serious issue, evidence suggests that the IOCs are not fully implementing best practice measures to monitor and prevent it. 262 spills were reported down the 92 km length of the Tebidaba-Brass pipeline in Bayelsa between 2014 and 2017,<sup>41</sup> with its operator, Eni (Agip), attributing all but two of them to sabotage. Yet despite that, the regulators had warned Eni (Agip) to improve surveillance on the pipeline on no less than 162 separate occasions before action was taken.<sup>42</sup>

**In the period 2006-2020, 2 of 47 oil companies operating across the Niger Delta - Eni (Agip) and SPDC (Shell) - accounted for 75% of spill incidents.<sup>43</sup>**



### 3. Failures of response.

Once a pollution incident has occurred, IOCs are often slow to respond, compounding the damage done. By law, oil companies are meant to report all spills within 24 hours.

Yet, to take just one example, Shell met this requirement in only 26 percent of cases during the period 2014-2017. And occasionally these delays can be even more extreme; Amnesty International reported a case where it took Eni (Agip) 430 days to respond to a leak in a flow line in Bayelsa.<sup>44</sup>

**Eni (Agip) took 430 days to respond to a leak in a flow line in Bayelsa.<sup>45</sup>**

### Oil spill in Ekeremor LGA, Bayelsa, 2018

In Ekeremor Local Government Area (LGA), a community leader reported concerns to SPDC in May 2018. She raised the alarm over the oil spill from the Trans Ramos pipeline and also on the alleged intimidation of community leaders of Aghoro 1 who were involved in the investigation of an oil spill that occurred in the area. The spill caused destruction to aquatic life and hardship for the communities who had no fresh water to drink for several weeks.

A reconnaissance visit by members of the BSOEC Secretariat to Ekeremor in 2018, prior to the establishment of the BSOEC, saw a site devastated by the oil spill, with the local communities concerned that they had not been supplied with fresh water for three weeks, and that their children were reporting strange illnesses. Only when the incumbent Deputy Governor of Bayelsa State visited the spill site with national media and some much-needed relief materials for members of the community such as drinking water and food, concerted efforts to address the spill began.

The community leader said, "they have contaminated our communities and we have no drinking water. All the fish and mangroves have died and they want to force us to sign a JIV report. We will not accept this." Eighteen months later, a visit by the BSOEC to the community in November 2019 reported that the spill was still continuing.

The clean-up was completed on 21 February 2020.<sup>46</sup>

Analysis shows that delays are often not linked to site accessibility, with some of the leaks that take the longest to address being within easy reach. Systematic variation in response times between IOCs also point to operational failures rather than external factors as the primary cause of slow responses. For instance, between 2014 and 2017, it took Shell seven days on average to respond to a spill versus just two days for Eni (Agip).<sup>47</sup>



#### 4. Failures to remediate.

IOCs as the operators, even if they operate as part of joint ventures, are responsible for remediating environmental damage associated with their infrastructure and operations. However, all too often, the IOCs take little action to clean up the pollution they have created and to remediate the affected site. An independent analysis of official data relating to over 6,300 spills between 2010 and 2015 showed that remediation work was only undertaken in 4 percent of cases and that in 90 percent of spills there was no post clean-up assessment.<sup>48</sup> For instance, from 2014-2017, 262 spills occurred at Eni (Agip) sites in Bayelsa.<sup>49</sup> A majority of these sites are yet to be remediated, and even where remediation is undertaken, it rarely meets accepted international standards.<sup>50</sup> Even where large remediation initiatives are apparently carried out, all too often little actual recovery or restoration work occurs. For instance, in Ogoni, in neighbouring Rivers State, despite an international report published over a decade ago by the United Nations Environment Programme (UNEP), physical remediation is still yet to begin at scale.<sup>51</sup> The Bodo Mediation Initiative, also in Ogoni, Rivers State, is one example of post oil spill mangrove restoration, the largest ever undertaken in Africa. It began in 2015 and was only undertaken as a result of successful legal action, and the threat of it, by Bodo communities against Shell in the English courts.<sup>52</sup>



*A pipeline leading to an oil spill and pollution on an Agip site in Ogboinbiri.*

### Bodo oil spill, Rivers State

In 2008, two substantial spills from a Shell oil pipeline – estimated to be in the region of 560,000 barrels – had a devastating impact on the Bodo community in the Ogoni area of Rivers State. A community of around 49,000 people dependent on fishing and farming saw more than 1,000 hectares of mangrove ruined and a marine ecosystem on which they relied for sustenance destroyed.

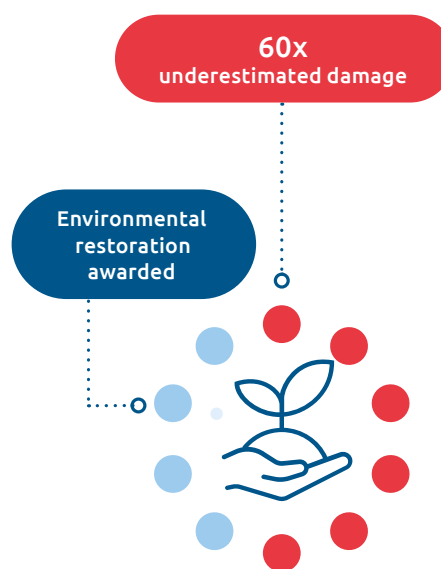
Shell initially offered only food and £4,000 in compensation for the damage resulting from the oil pollution. Three years after the spills, the Bodo community enlisted the UK-based law firm Leigh Day to take their case for better compensation and a thorough clean-up to the High Court in London. Shell immediately admitted their liability, but disputed the quantity of oil released into the environment from the spill. In 2014, four months prior to the case being heard in court, Shell decided to settle for £55 million and paid each one of the 15,600 claimants £3,000.

The case represented a landmark in that a significant number of individuals in Nigeria affected by an oil spill were able to successfully pursue a claim. However, the Bodo community decided to go to the High Court again in 2016 to bring a new case regarding Shell failing to fulfil its clean-up obligations despite an ongoing mediation initiative between the plaintiff and the defendant. A judgement was made allowing the community to retain its case in the court while suspending it to give the mediation process more time. The third and final stage of the Bodo community clean-up operation eventually started in 2021.

As well as failing to address the immediate need for physical rehabilitation of the environment, IOC remediation efforts often fail to adequately address immediate humanitarian and social needs once the damage has been done, including the immediate closure of polluted sites and provision of basic urgent access to clean drinking water.

Underpinning much of this is a flawed approach to community engagement which not only lacks transparency, but blurs the lines between what IOC responsibilities are, under Nigerian law, for physical clean-up and remediation and social investments provided by IOCs to secure their social licence to operate in given

**Bodo is the exception rather than the rule. There is a general absence of any environmental restoration in Bayelsa and beyond. In addition the methods used to assess the extent of damage are often ineffective and do not reflect standard international practice. Partly as a result of this, the compensation offered to individuals and communities is often grossly inadequate. In one case litigated before the English courts, the oil company in question was accused of underestimating damage caused by a factor of 60.<sup>53</sup>**



communities. IOC community engagement in this context itself becomes a source of community conflict. The lack of physical clean-up and remediation to acceptable international standards, poorly planned provision of compensation, and the award of security contracts to favoured community stakeholders, fuels both substandard clean-up and substandard remediation practices, as well as intense competition for resources and social instability. Cycles of conflict resulting in death and destruction of communities as well as forced migration, have become systemic in many parts of Bayelsa. These conflicts also create incentives for sabotage and oil theft.



## The roots of the problem

Much of the responsibility for the current crisis must be borne by the IOCs whose activities, from the period of British colonial rule up to the present time, have inflicted much damage upon Bayelsa. But the failures of the oil producers are themselves rooted in a set of deeper institutional, legal and political problems that must be addressed if the pollution crisis is to be tackled on a sustainable basis.<sup>54</sup>

### A failed regulatory regime

To date, the bodies charged with enforcing environmental standards and the regulatory regime that underpins them, have lacked capacity, independence and influence. They have simply not been fit for purpose.

While this report was in preparation, the Nigerian government introduced the new Petroleum Industry Act (PIA) on 16 August 2021.<sup>55</sup> The new law makes changes to the governance and regulatory architecture and introduces new rules for oil companies' community development interventions. Highlights of the new regime include the reshaping of the Nigerian National Petroleum Corporation (NNPC) into a commercial entity, the Nigeria National Petroleum Company Limited (NNPC Limited). With the PIA coming into effect, the Department of Petroleum Resources (DPR), an arm of the old NNPC that was responsible for regulating the petroleum industry, has been replaced with two new regulatory bodies, the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and the Nigerian Midstream and Downstream Regulatory Authority (NMDPRA), responsible for the upstream and midstream/downstream sectors, respectively.

Like the now defunct DPR, the new Commission and Authority will be responsible for granting licences to companies and ensuring the profitability of the petroleum business as their primary mandate. However, the PIA also gives the new agencies powers relating to environmental regulation that potentially conflict with their commercial duties and undermine other federal agencies like the Federal Ministry of Environment and National Oil Spill Detection and Response Agency (NOSDRA).<sup>56</sup> Concerns over the effectiveness of the new governance structure for the oil sector are further heightened by sections of the PIA that could be interpreted as granting the Commission and Authority powers to override other federal agencies and prioritise the oil industry's profitability above all other considerations.<sup>57</sup>

The PIA has also not adequately addressed conflicting and overlapping roles of different regulatory bodies which would, in particular, continue to hamstring effective environmental regulation. For instance NOSDRA, which sits within the Ministry of the Environment, has traditionally held responsibility for overseeing oil spill preparedness, detection and response, but has not had the power to shut down operations or enforce fines. The DPR, housed within the Ministry of Petroleum Resources, had the power to impose sanctions, though it operated to a different set of standards to NOSDRA and rarely used its powers to discipline oil producers. The standards laid out in DPR's updated "Environmental Guidelines and Standards for the Petroleum Industry in Nigeria" (EGASPIN)<sup>58</sup> are less rigorous in many respects than those mandated by NOSDRA and in many areas do not reflect accepted international practice.<sup>59</sup>

These weaknesses of institutional design and standards have traditionally been compounded by a lack of capacity. For instance, NOSDRA still lacks the powers and capabilities to supervise the IOCs and is reliant on the IOCs to facilitate its access to pollution sites. This not only limits NOSDRA's independence and effectiveness, but also creates a further layer of conflicts of interest. As a result, much of the regulatory process inherently serves and is compromised and captured by the interests of the very companies it is meant to police.

While the Nigerian federal government works out the modalities for the new institutions, our analysis of the failures of the regulatory regime, which we present in detail in the chapters that follow, remain valid as the PIA fails to address the issue of responsibility for historical oil pollution, and the institutional shortcomings that enable the scale of oil industry pollution and societal upheaval as experienced in Bayelsa and elsewhere.

## A flawed legal framework and weak access to justice

Many aspects of Nigeria's legal framework allow polluters to escape scrutiny and accountability. In most advanced industrialised countries, two basic principles - 'polluter pays' and 'no fault liability' - form the cornerstone of the legal regime for regulating extractive industries. Taken together, they mean that those that own and operate facilities are responsible for the damage caused by their pollution even if they are not at fault.

Unfortunately, both of these concepts are at least partially absent from the body of Nigerian law. Consequently, oil companies currently assert that if they can show that a leak was not their fault, they presume that they are not responsible for paying compensation. Perhaps then, it is not surprising that the oil companies claim that almost 90 percent of leaks are due to sabotage, a finding they believe frees them of liability for compensating the victim.<sup>60</sup> However, despite this general perception, Nigerian laws do not in fact give oil companies absolute immunity from liability in all instances of sabotage. Where an oil company has been negligent and failed to take 'reasonable measures to prevent' foreseeable sabotage, they are still legally liable to pay compensation.<sup>61</sup>

This process is reinforced by inconsistency and other weaknesses in the legal framework, including a lack of legislation reflecting international standards on regulating asset integrity, none of which is suitably addressed by PIA legislation.

Moreover, some of the fines laid out in statute for breaches of key elements of legislation have not been updated for many years and, as a result, are sometimes too low to act as a disincentive to poor behaviour by oil producers.<sup>62</sup> Furthermore, unlike other jurisdictions, such as the UK, where regulators can impose administrative fines and other sanctions, this is not so in Nigeria, where the decision by the Court of Appeal prevents regulators imposing fines unless they have a court order, a process which in practice could take years.

The problems posed by the legal framework are further compounded by the huge challenges individuals and communities face in accessing justice.<sup>63</sup> There are no fast-track avenues for gaining compensation and plaintiffs often lack the resources required to pursue action through the courts. It is often the case that well-funded IOC defendants are simply able to bog down proceedings on an almost indefinite basis to prevent any unfavourable rulings.<sup>64</sup> However, the NUPRC may now determine compensation under section 101 of the PIA. If effectively

applied, this section may mean that compensation may be determined by the regulators instead of the courts.

The Nigerian government's new Alternative Resolution Mechanism Centre was launched by the DPR in April 2021 with a six-person Advisory Council and a 20-member Body of Neutrals. The chief executive of DPR at the time hailed it as one of the flagship centres of the National Oil and Gas Excellence Centre (NOGEC). It is situated at the former headquarters of DPR in Lagos which is now occupied by the Nigerian Upstream Regulatory Commission. The Centre is primarily intended to resolve conflicts between parties relating to commercial, contractual, technical, host community and other issues related to the oil industry without recourse to law courts. At present, it remains unclear how communities in the Niger Delta might gain effective access to the NOGEC.<sup>65</sup> It also remains to be seen how this mechanism could be aligned with the provisions of S 234(3) of the PIA which provides that Regulations made should include a grievance resolution mechanism to resolve disputes between settlers and host communities.

*A youth leader demonstrates the impact of oil production on the local community.*





## An insufficient role played by state governments

The Nigerian constitution reserves the right for licensing and regulation of the oil sector to the Federal Government, and courts have interpreted this to include pollution matters. While the states bear the brunt of the human, environmental and economic cost of oil pollution, they are essentially sidelined in the regulatory framework and have a very limited role to ensure effective clean-up following pollution incidents.<sup>66</sup> However, states have some scope to exercise some power over the regulation of the sector under the Land Use Act which grants the state government authority over the administration of all land in any given state including use and sale. State government powers also give them control over the granting of rights of way for oil pipelines and oil mining

leases.<sup>67</sup> However, narrow interpretations of relevant constitutional provisions by the courts, and fears about real and perceived risk of obstruction by federal agencies, also mean that state governments are reluctant to and rarely use their limited powers to police the sector's environmental impacts. Although the new PIA maintains the provisions of the Land Use Act with respect to the midstream and downstream sectors, it is silent on the role and responsibility of state governments in regulatory matters pertaining to environmental pollution by the oil and gas industry.<sup>68</sup> It remains to be seen whether this omission will be clarified in the guidance regulations flowing from the adoption of the Act.

*Members of the community expressing their concerns regarding the oil spills and the negative impacts on their livelihoods.*





*Many Bayelsans rely on agricultural farmland for their livelihoods.*

## A Resource Provisioning Pact

Many of the flaws in the current regulatory regime have their ultimate origin in the mutually beneficial relationships and resultant complicity linking IOCs, politicians and the bureaucracies at federal, state and local government level.<sup>69</sup> Provisions to promote greater transparency outlined in the new PIA, in terms of Commissioner appointments, board appointments, and National Assembly oversight over budget and expenditure statements, do not mean that these relationships between the Nigerian political class and the oil industry have been fundamentally addressed. The PIA affords the new Upstream Commission authority to nominally challenge contribution levels to the environmental fund and the decommissioning fund set by IOCs based on their own internal audits. The PIA also gives the Commission the nominal right to commercialise gas that IOCs continue to flare on sites leased to them. Yet in practice, power asymmetries between the IOCs and the Nigerian state, underpinned by the enmeshing of regulatory and commercial functions in bodies set up to regulate the industry, make it highly unlikely that even the newly established Upstream Commission will change

previous patterns of behaviour. All of these actors, in particular at the federal level, have strong incentives to keep oil flowing. Unimpeded oil production provides not just a stream of profits to the IOCs, but is also the primary source of revenues to the Federal Government. It is these revenues that finance the bulk of state, local and federal government budgets. They also provide the main pool of public funds from which rents linked to public office can be misappropriated.<sup>70</sup> This resource provisioning pact is the fundamental foundation from which many of the problems of oil pollution stem. The reality of climate change is impacting Bayelsa on a daily basis, with rising sea levels and annual floods on scales hitherto unseen a regular occurrence since 2015. Compounded by gas flaring and the destruction of mangrove forests associated with the pollution crisis, this 'resource provisioning pact' remains a serious impediment to addressing systemic pollution and preparing for the post-oil transition in Bayelsa. Until this pact is dismantled, a post oil future remains elusive. At both federal and state levels, a future without oil is not yet a realistic option for many.



## A lack of international scrutiny

The failures in the Nigerian system are further compounded by the failure of international law, international institutions and the home jurisdictions of IOCs to effectively scrutinise and hold the companies accountable for the harms resulting from their activities. While the same jurisdictions and processes have established a fail-safe system to inoculate investors from risks to their investments in the host countries, there are no similar protections for local citizens from the harmful effects of investor activities. Existing international mechanisms to which Nigeria is committed, such as the Nigeria Extractive Industry Transparency Initiative (NEITI), have, despite their good intentions, failed to rein in poor behaviour by the IOCs or rent-seeking by politicians. In addition, until more recent standards were adopted, ecological costs were never integrated into NEITI analyses. NEITI is part of the EITI - a transnational initiative of influence in setting standards for transparency in the sector. As such, NEITI is focused primarily on transparency in revenue payments and anti-corruption rather than in operational practice. NEITI could further its reputation for setting a high international bar for EITI national implementation but Nigeria could set a leading example by incorporating obligations to report on both environmental and health standards as well as financial transparency.<sup>71</sup> Similarly, while some countries are increasingly enforcing anti-corruption standards on their companies worldwide through measures such as the UK's Bribery Act, they have yet to take the same approach to minimum environmental standards.<sup>72</sup>

In a global context that is increasingly hostile to continued hydrocarbon development, IOCs have scaled up their investments in renewables and are the new champions of zero emissions.<sup>73</sup> A new approach to minimum environmental standards is now more urgently needed than ever to ensure that IOCs cannot opt in to climate action and opt out of historical liabilities for environmental pollution. Climate change is indeed a reality in communities that have borne the brunt of over 60 years of oil and gas production activity and whose traditional livelihoods have been destroyed while their economies remain inextricably intertwined with a systematically polluting oil and gas industry. International action is needed to support Bayelsa's post-oil transition, which means supporting Nigeria's overall efforts to transition away from oil and gas.

Ongoing price volatility in global oil markets, compounded by the COVID pandemic and the Russian invasion of Ukraine, point to the urgent need for Bayelsa to seek productive economic alternatives away from dependence on oil extraction and export. The devastating impacts of climate change – visible in recent flood disasters in Bayelsa – and global demands for the transition from fossil fuel-driven economies further underline the urgency of this need for economic diversification and food sovereignty.<sup>74</sup> As such, recommendations three and four in this report contemplate an economic development fund to support a post-oil future for Bayelsa which could include renewables (e.g. wind and solar projects along with local agricultural processing facilities).

*Shell's "batch" (oil spill clean-up and remediation equipment) cleaning up oil spills in the creeks, collecting the spilled oil from the river.*



## Creating change: a plan to end Bayelsa's pollution crisis

A catastrophic environmental emergency of crisis proportions is underway in Bayelsa today. Tackling Bayelsa's oil pollution crisis will require a total paradigm shift in the way the oil sector works to ensure it puts the interests of the environment and the people of host communities first. Incremental improvements will not be enough and the moment is ripe. The global economic downturn, the COVID-19 pandemic and its disproportionate impact on the poorest and most marginalised, including black people all over the world, has created a historic window of opportunity.<sup>75</sup> Heightened awareness of social and racial injustice, alongside a widespread critique of the fossil fuel industry and global capitalism more broadly, generated by the climate crisis, have all created unique conditions that could enable a radical transformation of the way Bayelsa's environmental crisis has been dealt with to date.

There will need to be immediate and sustained on-the-ground action to mitigate the damage already done and prevent its potential recurrence. This should be combined with parallel reforms to the existing legal framework, policy, regulation and enforcement mechanisms in order to create a totally new regime that deals with pollution and polluters in a fundamentally different manner.

Mitigating the damage done by pollution over the last 60 years will be a mammoth undertaking. Such a vast area

of land, river and sea has been exposed to contamination to the extent that physical clean-up and environmental recovery could take decades.

Any physical remediation will need to be accompanied by a comprehensive programme to address the human, social and economic dimensions of the crisis. Given the health problems that pollution has created, programmes to provide ongoing medical screening and treatment now and in the future for hundreds of thousands of people will be required. Investment in sustainable livelihoods and viable employment opportunities for tens of thousands of people whose land and fishing waters have been blighted by pollution and who are unlikely to be able to return to them will also be required. In addition, investment will urgently be needed to rebuild the social fabric, address the social and political turmoil and widespread disruptions caused by a pervasive lack of access to justice, and remedy the lack of inclusion of those most directly affected by oil pollution in the management of pollution incidents. As part of this approach, drastic action to address the exploitation of the vulnerable and the deep social divisions and competition created by the mismanagement of community level engagement will also be required. The Commission has put forward ten recommendations to bring about a paradigm shift and a permanent end to the pollution crisis.

### Recommendation 1

### A Comprehensive Bayelsa Clean up and Recovery Plan.

This must begin with a comprehensive environmental assessment of the state, as was conducted for Ogoni (by the UN in 2011). To do this, a first step will be to develop and implement a multi-year plan, informed by best practice, to address the main effects of hydrocarbon pollution. Elements of the plan should include a highly tailored physical remediation programme for polluted land and waterways drawing on a variety of best practice techniques, an environmental recovery programme, and a systematic livelihood support programme to address the economic impact of pollution on families and communities. These measures should be supported by

a comprehensive public health programme, featuring immediate interventions to address urgent health risks such as contaminated drinking water and be combined with comprehensive health screening and the establishment of a long-term treatment system to support those who develop chronic or acute conditions related to pollution. Initiatives to foster social cohesion should also be included. As well as long-term remediation, the plan will also need to include immediate action to alert affected communities regarding the health hazards that they face and facilitate urgent access to safe, clean drinking water and food supplies for a sustained period.



**Recommendation 2****A Bayelsa Recovery Fund.**

Set up a fund based on an assessment of the Bayelsa Recovery Plan's requirements and a detailed understanding of implementation costs drawn from other cases with the advice of remediation experts. The Commission estimates that the plan could cost US \$12 billion to implement.<sup>76</sup> A fund should be established endowed through payments from the IOCs, NNPC and other actors following

the broad formula used in the UNEP environmental assessment of Ogoni to cover this cost. The fund should pay particular special attention to best international practice for **governance, transparency and accountability and be overseen by a board including international agencies** to learn the lessons and avoid the pitfalls of past practice in the Niger Delta.<sup>77</sup>

**The Nigerian Upstream Petroleum Regulatory Commission and the Nigerian Midstream and Downstream Regulatory Authority should promptly institute the environmental remediation fund prescribed by the Petroleum Industry Act, and direct oil companies in the region - including NNPC - to fund it. Immediate steps should be taken to recover the millions of dollars of unpaid gas flaring penalties owed by international and indigenous oil companies. The funds could be used to clean up the environment, to affect a transition from fossil fuel exploitation and to invest in renewable energy production and supply.**

**Recommendation 3****A Bayelsa Recovery Agency.**

Establish a specialist agency to manage the delivery of the recovery programme. The Agency should draw on international experts and local staff to ensure best practice implementation and performance management of the Recovery Programme. To minimise the risk of misappropriation of funds, the

Agency should be overseen by an international panel and be subject to regular international on-the-ground audits and assurance. The Agency should operate to international standards of transparency and separate independent scrutiny bodies should be established.

**Recommendation 4****A new compensation scheme for those affected.**

Provide access to compensation for those who have suffered losses as a result of pollution through a new compensation mechanism to help them secure appropriate payments. This should include oil and gas related financial receipts being deposited into a trust fund to cover the costs of cleaning up oil spills that may occur within the next decade from ageing facilities that have been divested. This would include the financing and establishment of a new grievance scheme that could be used if claimants are

not satisfied with the award they are offered. The establishment of this mechanism would provide an alternative for those who do not want, or do not have, the capacity to undertake court action. Legal advice and support should also be made available for those filing claims. The compensation payment scheme should be accompanied by a **robust consultation mechanism** responsible for engaging individuals and communities directly affected by oil pollution in all remediation planning and implementation processes.

These measures will go some way to repairing the decades of damage already done. The Commission is keenly aware that compensatory mechanisms alone, particularly if poorly managed, can also generate new forms of conflict which can be the cause of further instability and injustice. If we are to avoid further pollution, they will need to be accompanied by thorough-going changes in IOC behaviour. This will require the transformation of not only the legal framework for oil extraction in Nigeria, but also ultimately the entire way the sector is regulated.

### Recommendation 5

### Fundamentally reform the regulatory regime.

While the PIA has introduced some new initiatives on the environment, significant gaps remain and a fundamental reform of the existing regulatory regime based on best practices is still needed.<sup>78</sup>

Critical elements of reform should include:

- i. Separate responsibility for promoting oil production from the regulation of the industry.
- ii. Responsibility for regulating the environmental impact of the industry should be transferred from the NUPRC and the Ministry of Petroleum Resources to the Ministry of the Environment (MoE). The Ministry should be empowered to oversee all environmental regulation and ensure its enforcement.
- iii. Expand NOSDRA's remit and overhaul the agency. NOSDRA, which sits within the Ministry of the Environment, should remain focused on pollution clean-up with the MoE taking responsibility for environmental regulation. NOSDRA's remit should also be expanded to cover all forms of hydrocarbon pollution, including gas pollution and effluent waste disposal, and it should also be granted clear powers to enforce its remit.
- iv. Align capacity and resourcing with responsibilities. Transfer enforcement powers to the MoE and establish clear, ring-fenced revenue streams to give the Ministry and its agencies the power to effectively inspect and enforce.
- v. Overhaul EGASPIN to bring the guidance in line with international standards, enshrine the guidance in law, and place responsibility for all environmental standards with the MoE.
- vi. Overhaul detailed regulation in areas such as pipeline integrity.
- vii. Introduce a new proactive inspection regime, including intrusive pipeline integrity supervision measures such as regular site visits and unannounced inspections.
- viii. Replace the JIV process with a best-practice independent process, at arm's length from oil producers, the NUPRC, and the Midstream and Downstream Petroleum Regulatory Authority and based on transparency and easily accessible data.<sup>79</sup>
- ix. Introduce a pro-active enforcement regime including strong and rapid penalties for all breaches.



**Recommendation 6****Introduce a new legal framework and new dispute resolution procedures.**

The PIA fails to address the environmental concerns of oil producing states. Rather, the Act retains most of the original Petroleum Act's provisions, and has failed to adopt a 'no fault' liability system of the kind that has been adopted in several other oil producing countries. To address this shortcoming, statutes should be amended to unambiguously and fully enshrine the concepts of 'polluter pays' and 'no fault liability' at the heart of environmental legislation: **producers should therefore be fully responsible for internalising all environmental externalities, including clean-up and compensation regardless of whether there was third party interference or not.** Legislation should be updated to permit class action suits and

introduce individual as well as corporate liability for pollution incidents. Fines that can be levied for non-compliance should be significantly increased and legislation should be passed to maximise the freedom of regulators to impose penalties without a court order. This should be complemented by an overhaul of compensation legislation to define fairness and establish compensation funds, financed by the oil companies, on the US model\* and by the introduction of an independent, first-of-its-type fast-track dispute resolution and awards body to adjudicate compensation awards. The body should be overseen by a panel of both Nigerian and international experts.<sup>80</sup>

**Legislation** should include firm provisions on liability for pre-divestment oil spills. This should not be left to contract, but should be captured in legislation which clarifies the obligations of all the parties involved when oil companies release their assets. There should also be community participation in asset sales and divestment and transparent resolution of the status of GMOUs. Community participation in asset interest acquisition should be enabled alongside environmental impact assessments as integral to asset sales protocol. The Ministry of Environment and NOSDRA should play a regulatory role in the contract stage.

**Recommendation 7****Enshrine an enhanced role for state governments.**

The role of state government should be enhanced to ensure effective scrutiny of both oil companies and regulators. As part of this, states' legal powers should be strengthened and confirmed. These include the right for state governments to act under existing powers, such as the Land Use Act, should facilities and/or producers repeatedly breach regulations and fail to comply with regulatory directions. State and local governments' role as a channel for the voices of their constituents should also be strengthened.

**The Bayelsa State Government should conduct an immediate review, to be completed within six months, of the social and environmental performance of all companies with Oil Mining Licences in the State. Where companies are found to have a record of unresolved and uncompensated oil spills and pollution, the Bayelsa State Government should immediately revoke their right to operate on state-registered land, pending clean-up of the spills and resolution of compensation claims.**

\* The Oil Spill Liability Trust Fund- 26 USC 9509 was established pursuant to the US Oil Pollution Act 1990. The fund was initially financed by a tax on companies for every barrel of oil produced domestically, as well as on petroleum products imported into the US. Other sources of funding include cost recovered from responsibilities for spills together with any fines or civil penalties imposed. The fund is put towards clean-up and removal costs in instances where the responsible party is not identifiable or where they refuse to pay for clean up. The fund allows the government to step in, in a timely manner, and pursue the polluter for costs at a later date.

**Recommendation 8****Strengthen scrutiny of IOC behaviour both internationally and in their home jurisdictions.**

To drive an enduring change in IOC behaviour, a sea-change in regulation within Nigeria will need to be complemented by increased accountability, scrutiny and oversight internationally and in the IOCs' home jurisdictions. The Bayelsa State Government and stakeholders from within Nigeria and beyond should push for the establishment of **a new international framework on pollution and corporate responsibility** - assessing environmental, social, economic and communal impacts - to complement

those that already exist. In addition, they should lobby governments in key countries such as the UK to update their domestic legislation, as France has done, to place more obligations upon their international companies to ensure their subsidiaries exercise due diligence to mitigate and prevent serious human rights and environmental impacts. Such measures would reflect the approach already taken on issues such as bribery and modern forms of slavery, wherein a number of countries enforce world-wide obligations on their companies.

**Recommendation 9****Overhaul IOC approaches to community engagement to ensure transparency, accountability and voice.**

The PIA has introduced legal requirements for oil and gas companies to standardise practices for development project investments in host communities, including setting up trusts to manage community development expenditure. The Commission is concerned that the PIA disproportionately empowers companies relative to the host communities, local governments and the state government and entrenches and increases the risk of more divide and rule tactics being employed by companies. These tactics pit communities against each other in the competition over development goods and could continue to generate the types of communal conflicts associated with GMOU processes in the past.

By unfairly placing the responsibility for policing petroleum infrastructure on the host communities, the Commission is concerned that PIA would exacerbate conflicts between communities and companies over sabotage claims. The Commission also believes that there is a risk of incentivising those working for the

oil companies to prevent protests, which may then provoke intra-communal wars. The PIA does not define what is meant by 'the community' and how the company may determine who to consult with. The Commission believes that the Government of Bayelsa should intervene, in line with its Constitutional mandate, to bridge this definitional gap and reduce potential tensions. The government and the oil and gas companies should ensure that the new PIA Boards of Trustees, Management Committees, and Host Communities Advisory Committees of the community development trusts are fully inclusive of diverse community interests and are managed with full transparency. In parallel, an independent body that can provide regulatory scrutiny and scientific analysis, should be established to ensure that mechanisms exist to enable the voices of the most affected communities in Bayelsa to be consistently heard throughout the process.<sup>81</sup>



**Recommendation 10****Establish a legally binding, effective legacy and decommissioning regime.**

Steps should be taken to ensure that IOCs are obliged to integrate decommissioning into the entire life cycle planning of their oil and gas operations according to international standards. Such measures will oblige IOCs to fulfil their environmental and social responsibilities for the legacies that their oil and gas operations have left behind. This will include the impacts of pollution and contamination from spills, along with effluent waste disposal, dredging, gas flaring and other associated hazards. While the PIA currently requires licence holders to establish decommissioning and abandonment funds to be domiciled and managed by separate institutions and to prepare and submit decommissioning and abandonment plans, the Commission proposes a contribution should be paid by oil producers for every barrel pumped towards a decommissioning trust for each oil field to cover the costs of cleaning up of oil spills that may occur within the next decade from ageing facilities that have been divested. Previous operators should also be required by law to contribute to the trust fund in proportion to their pollution footprint. Each operator should develop a decommissioning plan for each well it operates. The MoE or an independent body should develop clear decommissioning clean-up standards and processes for auditing, reporting and post-relinquishment monitoring of decommissioning sites.

The MoE or an autonomous body should conduct a performance assessment of remediation needed in specific cases, including addressing all environmental, economic, social and health impacts and ensure that IOC plans address legacy damage and pollution from their operations. Full accounting for the liability of transnational JV partners for CO<sub>2</sub> emissions should also be included in such assessments to cover any future liability arising from climate change action for such emissions in Bayelsa. For wells that are no longer producing or face a limited remaining operational life, the MoE should assess the clean-up and decommissioning measures needed and require the well owners to undertake the work. Where companies seek to divest of a well, a portion of the sale price should be set aside by the regulator to cover decommissioning costs. Clawback provisions should also be explored to allow the authorities to recover remediation costs from owners who have already divested of wells and other assets to avoid decommissioning costs.

In addition, targeted investments should be included to expand the MoE's decommissioning review and enforcement capacity. This should include the ability to recommend the immediate revocation of the Oil Mining Licences of those found to be the biggest polluters in Bayelsa.

These recommendations must be part of a larger post-oil green development strategy for the region, providing alternative and sustainable forms of energy and livelihood for the citizens of Bayelsa. None of this will be easy. There are no ready-made strategies for fossil fuel energy transitions that poor oil-dependent states like Nigeria can adopt and implement. Even if the urgent need to reduce carbon emissions and address the costs of climate change are now widely understood, the current moment is hardly propitious. The Russia-Ukraine war has not only contributed to energy shortages, supply disruption and high prices, but a new map of energy geopolitics. In 2022 the profits of the international oil companies and oil traders were higher than ever. The world's five largest oil companies posted record total profits of over US \$200 billion. Many IOCs, despite their rhetorical commitments

to renewable energy, have publicly announced their intentions to significantly expand oil and gas production. Exxon and Chevron alone will invest over US \$40 billion on hydrocarbon projects in 2023.

Debt servicing in Nigeria, in 2023 is estimated to absorb close to 90% of expected oil revenues. Debt-strapped oil producers like Nigeria will be anxious to make the most of buoyant oil prices, and the opportunities. With their US \$3 trillion in assets many Nigerian oil companies who are also carrying large debts, will be in no position to walk away from an attractive oil market. It is little wonder that Nigeria's Presidential candidates in the 2023 elections emphasised the need to upgrade the industry and expand oil and gas output.

## A call to action

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These proposals, taken together, could transform the lives of millions in Bayelsa and beyond. They offer an ambitious platform for change. It will not be easy. Many previous reports by multilateral organisations, governments and NGOs over the last three decades have shone a spotlight on conditions in the Niger Delta, only for their recommendations to gather dust on the shelves. However, a window for real change is opening.

For decades, the oil sector has wrought what the Bishop Lord Sentamu has called 'environmental genocide' in the Niger Delta. But now, the oil industry globally is under scrutiny, profiteering from global price hikes and in the longer term by the growing international recognition of the need to move towards a post-oil future in the face of accelerating climate change. The oil industry has no choice but to pay more heed to its environmental legacy and environmental concerns if its stated commitment to a low carbon world is to be taken seriously.<sup>82</sup>

For years, companies have acted in Nigeria in ways that they would never contemplate in their home markets. They have behaved as though Nigerian lives and the lives of people throughout Bayelsa simply do not matter. Intentional or not, oil producer conduct bears many of the hallmarks not just of gross negligence but also of what the late Oronto Douglas, founding member for Friends of the Earth Nigeria, unabashedly labelled 'environmental racism'.<sup>83</sup> Like the poorest Black communities in the US, communities in Bayelsa are discounted because of who they are and where they are from. The Black Lives Matter movement has brought social injustice and corporate social responsibility and accountability to the fore. This makes it harder for international corporations such as oil companies to shy away from their negative social impact in black communities the world over.<sup>84</sup>

This report can be used as a catalyst for Bayelsa, and Nigeria as a whole to seize the opportunity for change that global activist trends offer to not only Nigeria, but all oil-producing states worldwide grappling with the challenge of transition to a post-oil economy. Capitalising on these trends will require a new strategic approach. Real and lasting change will require a concerted and coordinated effort on the part of the Bayelsa State Government, the Nigerian Government, the IOCs, the governments of their home jurisdictions, and the international community to commit to environmental justice and sustainable development outcomes for the people of Bayelsa.

## The Commission's Work

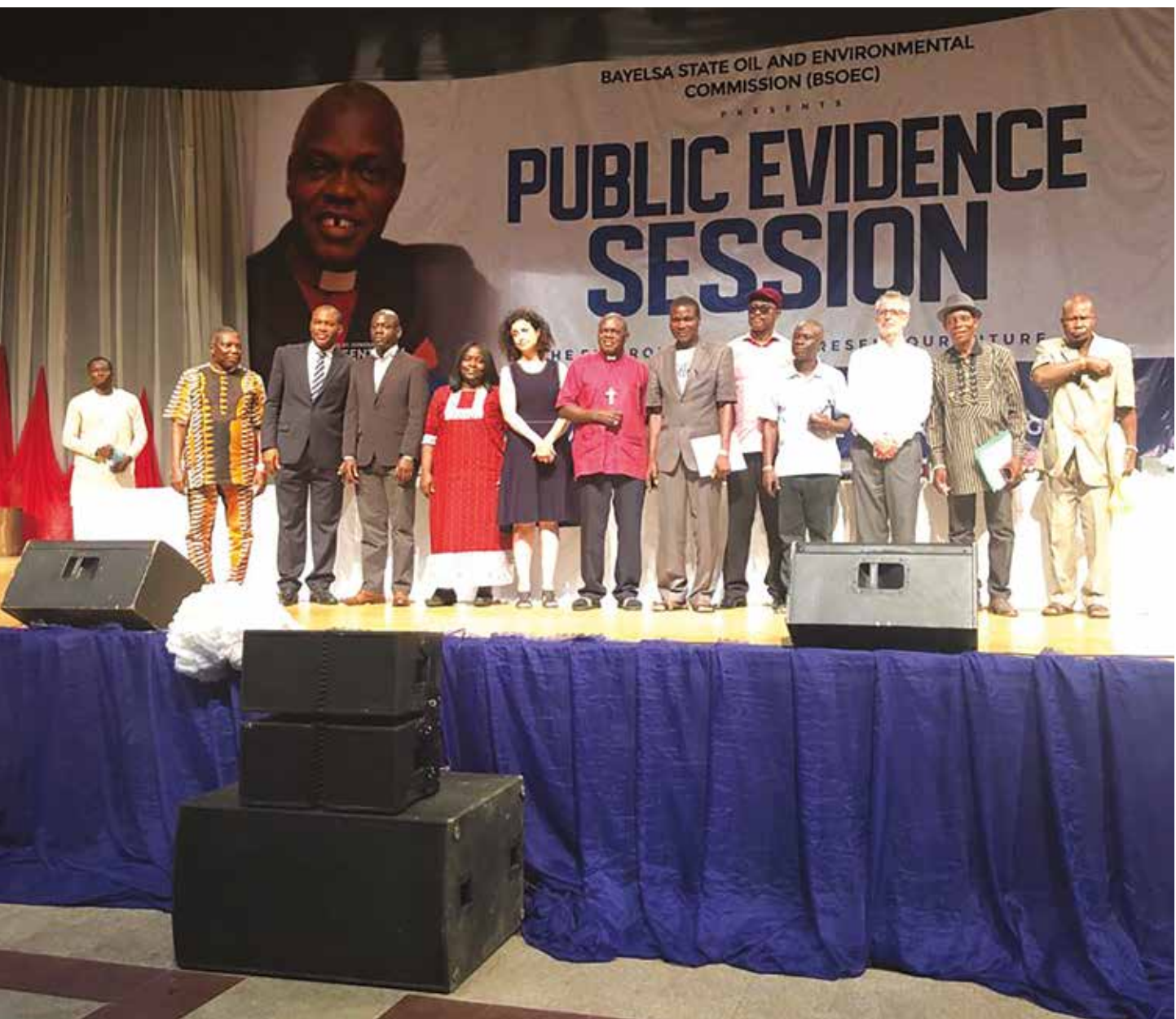
Bayelsa State, situated in the oil-rich Niger Delta, in Southern Nigeria, is in the grip of a human and environmental catastrophe of devastating proportions. Once home to one of the largest mangrove forests on the planet, rich in ecological diversity and value, the region is now one of the most polluted places on Earth.<sup>85</sup> A direct consequence of poorly regulated and unhindered oil exploration.

Over 60 years of oil production in Nigeria has generated enormous profits for international oil companies and hundreds of billions of dollars in tax revenue for the Nigerian Federal and State Governments. But little of this wealth has been shared with most people in the Niger Delta, and the generated wealth comes at an incredibly high price for those living in oil-producing communities.<sup>86</sup> Millions have seen their health, their livelihoods and their

environment blighted by oil pollution. And few have suffered more than the people of Bayelsa.

Located at the heart of the Niger Delta, Bayelsa is Nigeria's smallest state. Less than half the size of Wales, it is home to over 2 million people.<sup>87</sup> Yet despite accounting for only slightly over 1 percent of Nigeria's population, it has suffered over 25 percent of its oil spill incidents.<sup>88</sup>

*The Commission held public hearings across Bayelsa.*





The contamination has been so ubiquitous in Bayelsa, that for every man, woman and child living in the state today, as much as a barrel and a half of oil has been spilled.

The effects have been devastating, unleashing an environmental and human catastrophe on an enormous scale. So much damage has already been done with many lives blighted or cut short. And time is fast running out for justice to be done for those who have suffered, to mitigate the harm done so far, and to prevent further devastation in the future. IOCs are already beginning to divest of their onshore assets to shield themselves from liability for historic pollution. There is an urgent need for action now.

The need for action is why the Government of Bayelsa State established the Bayelsa State Oil and Environmental Commission (BSOEC) in March 2019. The Commission, chaired by the Bishop Lord Sentamu, is made up of an international panel of political leaders and academic experts drawn from a range of disciplines. Its purpose is to document the environmental, human and economic impact of oil pollution on Bayelsa and to develop a rigorous set of recommendations to mitigate the pollution that has already occurred and to prevent further pollution in the future.

Over three years the Commission has undertaken extensive work to uncover the true scope and scale of the pollution catastrophe that has befallen Bayelsa. As well as reviewing the extensive existing body of research, it has undertaken and reviewed original scientific research into the effects of oil pollution in Bayelsa, conducted field research on specific case studies, and carried out numerous site visits.

**In addition, over 500 interviews were conducted with technical experts and diverse stakeholders with in-depth knowledge and first-hand experience of the situation.**

Throughout this time, the Commission has endeavoured to listen to the voices of those who have suffered most, holding evidence-gathering sessions in affected communities across the state.

**From a distance Okoroba looks like any other village in the riverine parts of Southern Nigeria. Its people make a living growing crops and fishing in the waterways that criss-cross the landscape.**

**But look closer and a different, darker picture reveals itself. Okoroba is dying. Leaks from the local oil installation have poisoned the rivers people fish, the water they drink, the land they farm, and the air they breathe. Hundreds have fallen ill. Respiratory failure, skin diseases and cancer are now common. Many have already died and many more may follow as a silent, deadly health crisis engulfs the community.**

**Okoroba's plight is shocking. But it is far from unique. Across the Niger Delta, Nigeria's main oil producing region, thousands of communities are suffering a similar fate.**

## This report lays out the Commission's findings and recommendations across six chapters.



**Chapter 1** explains the historical, legal and regulatory context of the Nigerian oil industry and the management of oil pollution in Nigeria and Bayelsa State.



**Chapter 2** describes the scale of pollution that Bayelsa has suffered and details its environmental, public health, economic and social consequences.



**Chapter 3** examines the evidence on the causes of pollution and establishes a framework for understanding the drivers of oil contamination.



**Chapter 4** lays out the scale of the remediation required, including the measures needed to clean up the pollution that has already occurred and to address the environmental, health, economic and social harms it has caused.



**Chapter 5** sets out the Commission's recommendations to address the impacts of existing oil pollution and to prevent further pollution in future.



**Chapter 6** articulates the broader strategy required to translate the Commission's recommendations into action to catalyse genuine, lasting change.



**Tackling Bayelsa's oil pollution crisis must be the highest priority for all who care about ending environmental injustice that has, for over six decades, blighted the lives of Bayelsa's people.**

*This document sets out why action is needed and what can be done to end the suffering and bring about a paradigm shift for the people of Bayelsa.*



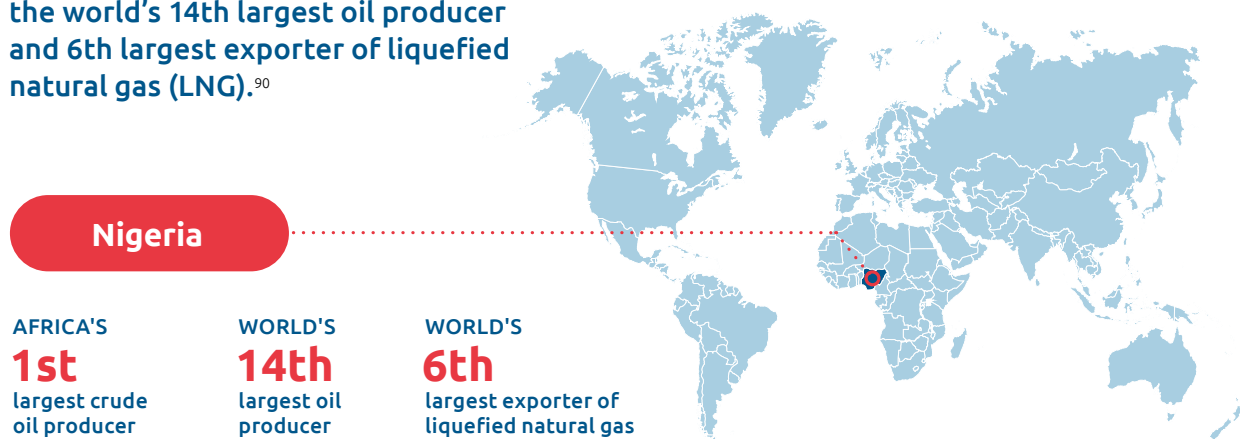
## 1

# Setting the scene: oil in Nigeria and Bayelsa State

Oil has played an important role in Nigeria's history long before the foundation of the Nigerian state as we know it today. The first licences for bitumen exploration were granted by the British colonial administration in 1903. In pursuit of commercially available petroleum, a joint venture of Royal Dutch Shell and British Petroleum found oil in Oloibiri, Bayelsa State in 1956. In 1958 full-scale export production commenced from the Oloibiri oil wells.

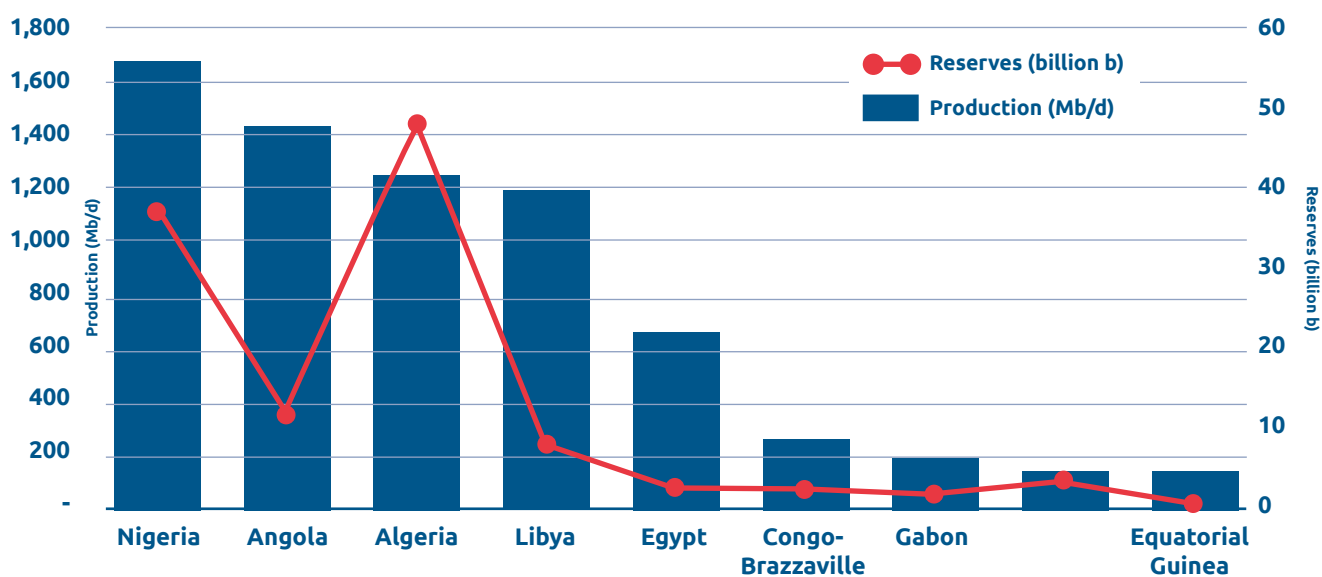
In those early days, Nigeria produced barely 5,000 barrels of oil a day. However, within a decade, production had jumped almost a hundred-fold to over 400,000 barrels a day and by 1974, Nigeria’s oil output exceeded 2.2 million barrels a day.<sup>89</sup>

**Nigeria is Africa’s largest producer of crude oil,\* the world’s 14th largest oil producer and 6th largest exporter of liquefied natural gas (LNG).**<sup>90</sup>



Its 258 oil fields and over 2,000 well heads produce up to 2 million barrels a day.<sup>91</sup> In addition to holding substantial reserves of crude oil, Nigeria also holds the world’s ninth largest reservoir of natural gas.

**Major oil producing countries in Africa - millions of barrels of oil per day<sup>92</sup>**



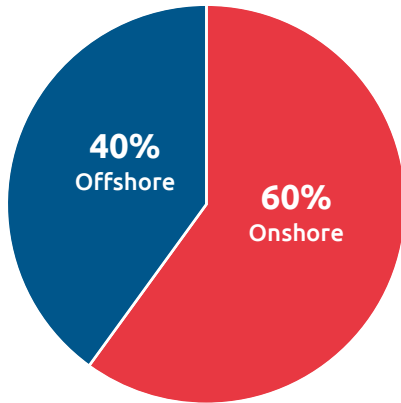
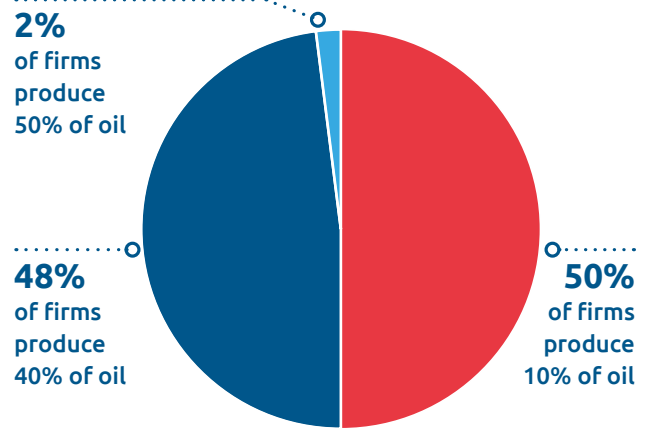
While a few large fields account for a significant proportion of oil output, the industry also features a long tail of smaller and lower productivity wells, which are spread across the entire region, often close to local communities, and with some often located in hard-to-access locations deep within the Niger Delta. The Niger Delta environment - dominated by a dense network of rivers, marshland, swamps and mangrove forests – as well as its uncertain security situation, can render some

of these smaller wells difficult to access and maintain effectively, especially if there is a lack of suitably adapted operational infrastructure.

While a majority of production was for many years generated by onshore wells, a growing proportion of Nigeria’s output - currently 40 percent - is produced offshore, with many new finds in deep water. However, with the increased volatility of global oil prices, it is unclear how quickly these finds will enter into full production.<sup>93</sup>

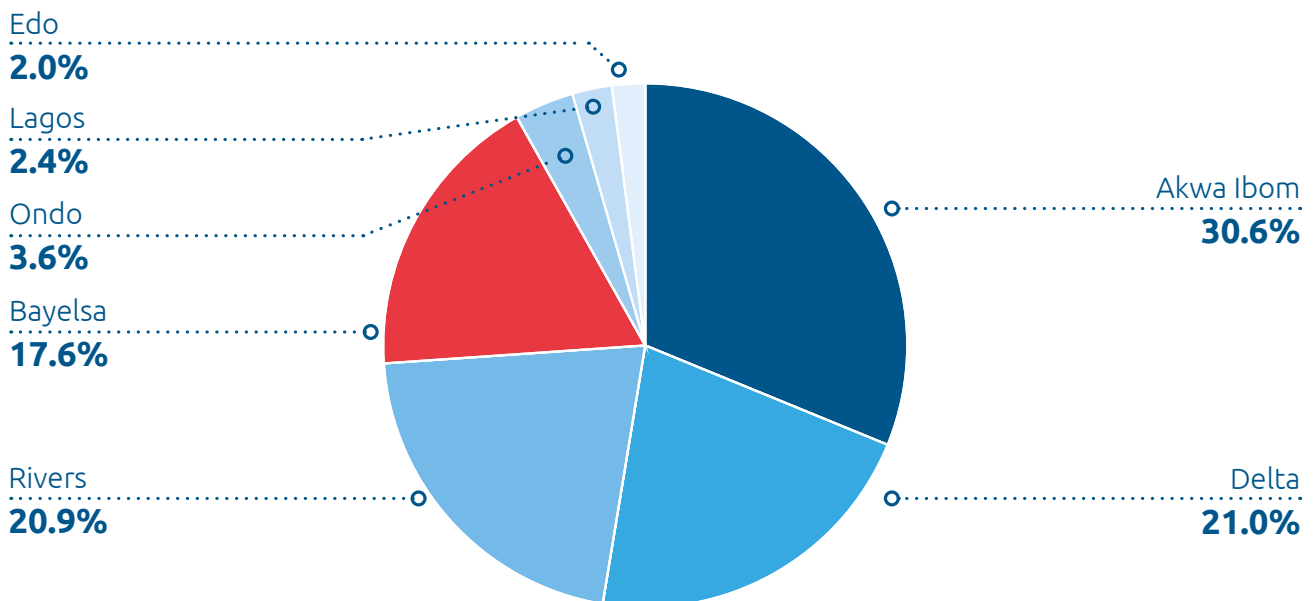
\* In recent years Nigeria and Angola have fluctuated in ranking as Africa’s largest oil producer, with Nigeria ranked first on the continent as this report goes to press.

Composition of Nigerian oil output (2020)

Production share of oil companies as a percentage of production (2018)<sup>94</sup>

Almost **95% of Nigeria's total hydrocarbon output comes from the Niger Delta**, a 40,000 km labyrinth of wetlands, mangroves, swamp forests, creeks and farmlands located in the country's south.

Total oil output by state\*



**At the heart of the Niger Delta sits Bayelsa.** Despite being one of Nigeria's smallest, poorest and least populous states, it plays an outsized role in its oil industry. Home to Nigeria's first commercial oil well, Bayelsa

accounts for just over 1 percent of Nigeria's population, but produces between 18-20 percent of its oil, generating an output of around 290,000 barrels per day as well as 18 trillion cubic feet of gas.<sup>95</sup>

*\*These figures are intensely contested. Bayelsa is one of Nigeria's largest oil producing states. According to Bayelsa Government's own figures via the Investment Promotion Agency, Bayelsa is the country's second largest oil producer, whilst federal figures (hotly contested by the Bayelsa State Government) suggest that Bayelsa is the country's third (Derivation Fund Information, National Bureau of Statistics). These differences reflect the real challenges associated with calculating precision volumes of oil produced particularly when oil fields cut across states, but as importantly, the intense political battles associated with volumes produced, which determine the levels of federally distributed grants allocated to each state, in line with volumes of crude produced.*



## The structure of the oil industry

The structure of Nigeria's oil industry has some unique features, but shared with most oil exporters from emerging markets is the history of IOC control over the development, and in many cases, current operations of the industry.<sup>96</sup>

Nigeria's Constitution and the patchwork of laws that govern the oil sector vest ownership of all oil resources and responsibility for the oversight of their extraction at the federal level rather than at the state level. All tax revenues, royalties and associated income generated by oil production go to the Federal Government, which controls the sector and distributes generated income between the three tiers of government - federal, state and local – through a system of monthly allocations.<sup>97</sup> All states receive a monthly grant based on their population size and assessed need. On top of that, the Federal Government puts aside 13 percent of its tax revenue and royalties from oil production for monthly distribution to oil-producing states in proportion to their contribution.

Although the ownership of oil resources remains in the hands of the Federal Government, actual oil production

is undertaken by private companies, primarily the IOCs, often operating through various types of joint ventures (JVs), of which there are six, undertaken with the Nigerian National Petroleum Corporation (NNPC).<sup>98</sup> Crucially, the IOCs hold the actual licences for exploration and extraction, retain operational responsibility, and run the majority of production facilities on a day-to-day basis. In stark contrast to the practice seen in other oil producing countries, the NNPC acts mainly as a silent partner in these arrangements.

While more than 100 companies operate through their subsidiaries in Nigeria's upstream oil sector, the five IOCs – Shell, Chevron, Total, Eni (AGIP) and Exxon-Mobil – together account for around c.75 percent of Nigeria's hydrocarbon output.<sup>99</sup>

*The Etelebou Flow Station owned by Shell Petroleum Development Company of Nigeria (SPDC) Gbarain/ Ekpetiama area of Bayelsa.*



## The IOCs' Nigerian Subsidiaries

Five IOCs, namely Shell, Chevron, Total, Eni (Agip) and Exxon-Mobil, operate in Nigeria through numerous subsidiaries and a network of 15 joint ventures (JVs) with different activities and holding structures. Holding structures are often highly complex, with subsidiaries often holding interests in JVs.<sup>100</sup> As outlined above, the IOCs as operators of the JVs manage the production activities of the JVs even where they hold a minority stake, relative to the Nigerian company, NNPC.<sup>101</sup>

**Shell** operates as four subsidiaries in Nigeria: the Shell Petroleum Development Company (SPDC), the Shell Nigeria Exploration and Production Company (SNEPCo), Shell Nigeria Gas Ltd and Nigeria Liquefied Natural Gas (NLNG). By far the largest of these companies is SPDC. SPDC was the first Shell company to be active in Nigeria and the first company in the country to pump oil commercially. Today, it is Nigeria's largest operator, producing 39 percent of the country's oil output. It manages an area of over 30,000 km<sup>2</sup>, over 1,000 producing wells and 6,000 km of pipeline. NNPC holds a 55 percent stake in SPDC, with Shell owning 30 percent and Total and Eni (Agip) holding the remaining 15 percent through their subsidiaries.<sup>102</sup>



**Eni (Agip)** operates three companies in Nigeria through its Agip subsidiary: the Nigerian Agip Company (NAOC); Agip Energy and Natural Resources, and Nigerian Agip Exploration (NAE). NAOC operates in the land and swamp areas of the Niger Delta, including across Bayelsa, while the other two companies operate offshore ventures. Eni (Agip) operates and holds a 20 percent stake in NAOC, while NNPC holds a 60 percent stake.



**Chevron** operates in Nigeria primarily through Chevron Nigeria Limited (CNL). CNL holds a 40 percent stake and operates eight onshore or near-onshore concessions in the Niger Delta, as well as participating in a number of multi-partner deep water operations. In 2018, its daily production averaged almost 200,000 barrels per day with additional significant outputs of natural gas and liquified petroleum gas.



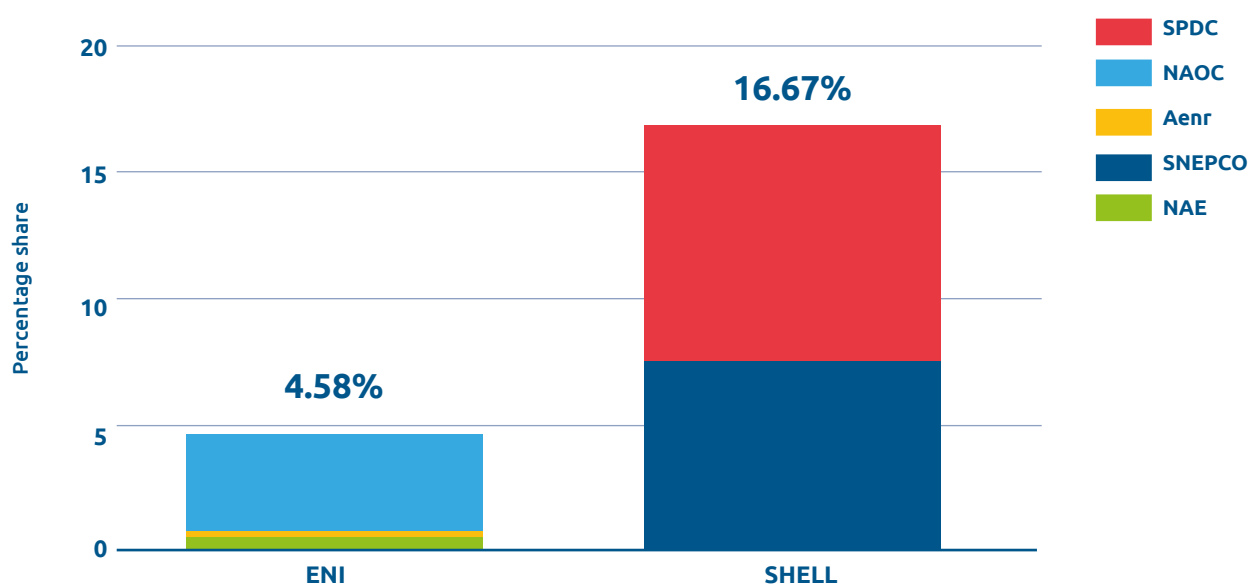
**Total** operates three companies in Nigeria: Total E&P Nigeria Limited (TEPNG); Total Upstream Nigeria (TUPNI), and Total Nigeria PLC. TEPNG operates and holds a 40 percent share in a JV producing oil and natural gas from a number of onshore and shallow water concessions, while TUPNI operates a deep water concession and holds non-operating stakes in a range of other fields.



**ExxonMobil** operates two subsidiaries in Nigeria – Mobil Producing Nigeria Unlimited (MPN) and Esso Exploration and Production Nigeria Limited (EEPNL) – both of which are involved in several exploration and production activities via JV arrangements. The company also owns and operates a number of deep-water operations.



A growing number of smaller international and domestic producers are now entering the market as the IOCs step up their divestment of marginal onshore fields. Many of these divestments take place under conditions of secrecy, with the exact terms and sometimes even the facts of transactions remaining closely guarded secrets. As a result, it is sometimes unclear where liability sits for addressing historic pollution.

Share of oil pumped by Shell and Eni (Agip) in Nigeria (in 2018):<sup>103</sup>

*Barge (stationary) used for loading crude oil and refined automotive gas oil (AGO) in a tight creek area.*



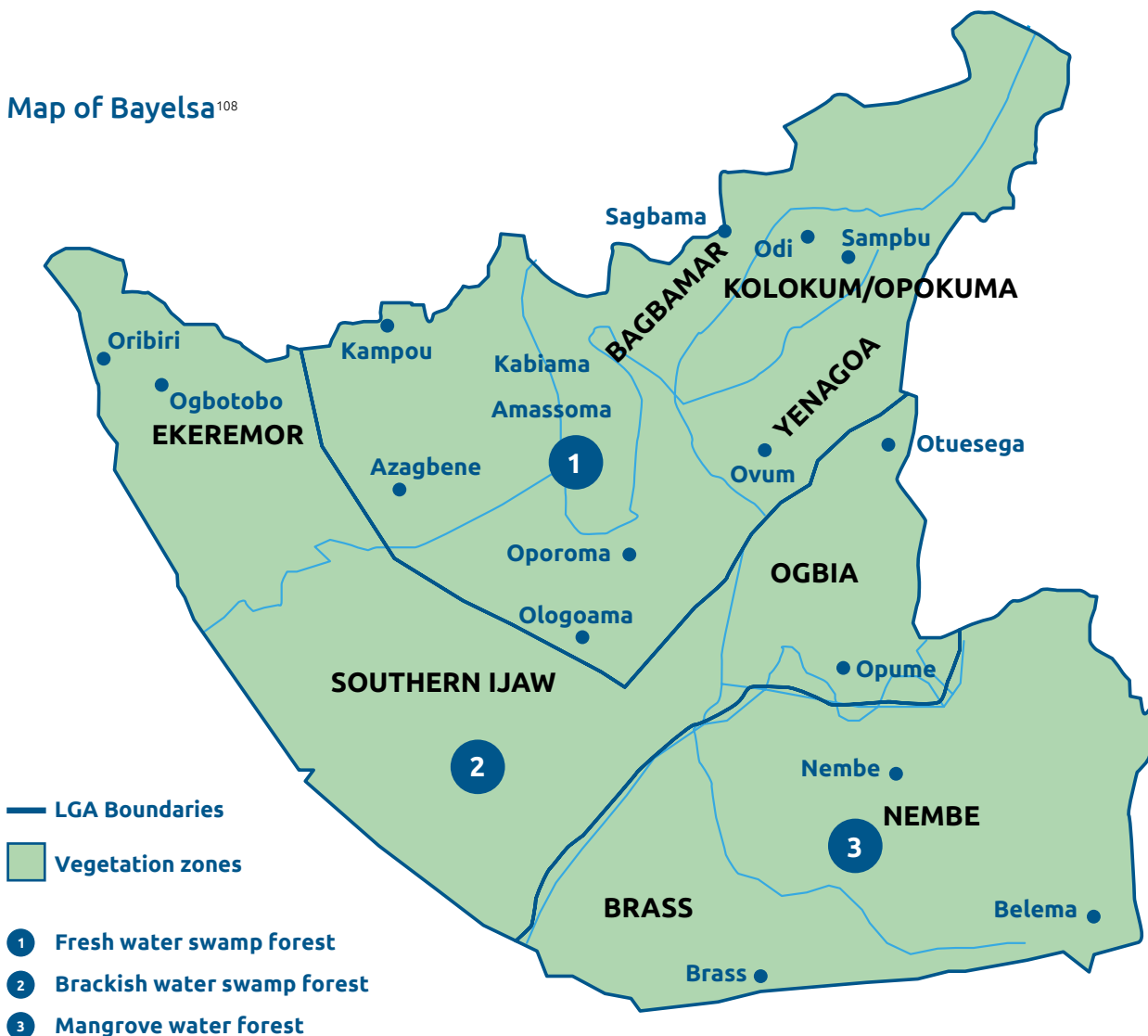


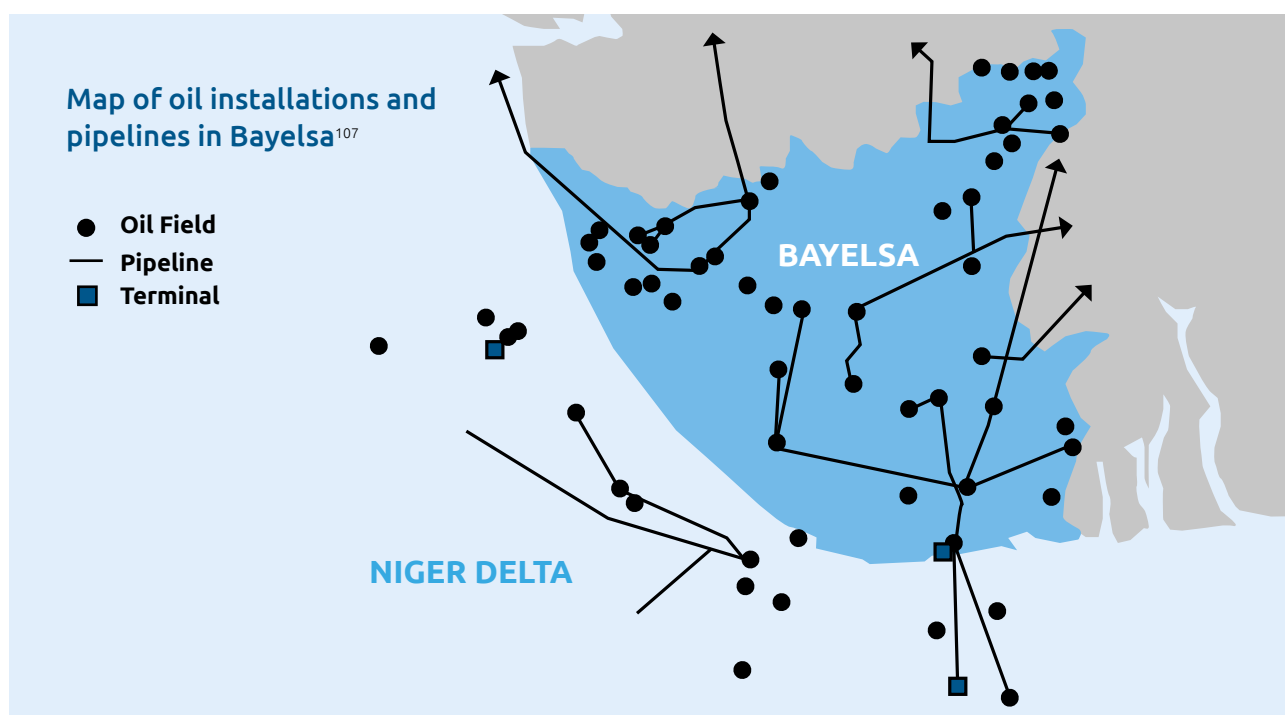
## Oil in Bayelsa

Bayelsa's landscape is dominated by rivers, marshes and mangrove swamps, and many of its 2.3 million inhabitants live in communities that are mainly or exclusively accessible by water.<sup>104</sup> The majority of the population speaks Ijaw or related languages, and the state is divided into eight administrative divisions, called Local Government Areas (LGAs), that map onto the three senatorial districts of Bayelsa East, Bayelsa Central and Bayelsa West.

The state is dotted with 2,616 oil wells, 232 oil facilities and criss-crossed by 5,000 km of pipelines.<sup>105</sup> Over 500,000 people in Bayelsa - a third of the population - live within walking distance of oil infrastructure.<sup>106</sup>

Map of Bayelsa<sup>108</sup>





SPDC operates about 4,000 km of pipelines and flow lines, 87 flow stations, nine gas plants; more than 1,200 producing wells, and two export terminals (Bonny in Rivers State and Forcados in Delta State). NAOC operates 11 flow stations, two gas plants, one oil centre and one export terminal (Brass). The flow stations are connected to the Brass terminal by a 460 km pipeline network, with an additional 180 km pipeline transporting gas to Indorama. The information provided by Shell is not disaggregated to show locations, especially of the wells in the Niger Delta thus making it difficult to determine what range of facilities are located in Bayelsa.<sup>109</sup>

In 2019, Bayelsa produced roughly 290,000 barrels of oil per day.<sup>110</sup> On a per capita basis, Bayelsa's oil output exceeds all other states. The state currently has 12 Oil Mining Licences (OMLs) and four Oil Prospecting Licences (OPLs) and accounts for roughly 15 percent of the country's 159 oil fields. The state's oil and gas reserves are substantial and of Nigeria's three giant oil reservoirs (in excess of 1 billion barrels), two – the Nembe Creek and Gbarain fields – are located in Bayelsa. Oil is widely distributed across the state's eight LGAs, but most of the state's oil output originates in four: Brass, Nembe, Ekeremor, and Southern Ijaw. According to the DPR, as of 2014, 70 percent of the Niger Delta's onshore mature reservoirs are in their secondary and tertiary production stages (i.e. final stages), requiring the injection of liquids or gases to aid extraction.<sup>111</sup>

The primary markets for Bayelsa's oil lie in Europe, Asia and the Americas. Europe and India consume the bulk of

Nigeria's output, with the US's share declining as its shale production rises.<sup>112</sup>

These oil and gas exports play a crucial role in Nigeria's economy, contributing 75 percent of the country's export earnings in 2020 and generating virtually all of its hard currency reserves.<sup>113</sup> They also provide a critical source of revenue to the Federal Government, accounting for almost half of its tax take, although this proportion is declining.<sup>114</sup>

The oil sector's role as a broader driver of economic growth and shared prosperity is, however, far more muted. In 2021, the oil sector accounted for only 7.25 percent of Nigeria's Gross Domestic Product (GDP), down from 32.8 percent two decades earlier, and contributed only 0.01 percent of total employment.<sup>115</sup> Recent volatile global oil prices, insecurity in the Niger Delta region and a global charge for increased green and renewable energy may see the importance of the oil sector in Nigeria diminish further.

The oil sector has made only a minimal contribution to Nigeria's rapid economic growth, measured by its GDP, over the last twenty years, yet continues to exert a powerful gravitational pull on the rest of the economy and the politics of the country, playing a major role in driving the performance of the currency, the credit cycle and demand for imports, as well as fuelling corruption and competition for the control of oil resources.

So while oil's contribution as a percentage of GDP has fallen, the crucial issue is foreign exchange earnings, and the importance of oil to government revenues at a federal level and state level in the delta.

The corporate structure of oil production in Bayelsa reflects the pattern seen across the country as a whole. Through their subsidiaries SPDC and NAOC, Shell and Eni (Agip) together account for the lion's share of Bayelsa's production, with the state's total output amounting to 23.4 percent of Nigeria's total production of 2.2 million barrels per day. The bulk of this production is pumped by Shell and Eni via a network of wellheads and fuel stations linked to three onshore terminals - Bonny, Forcados (both Shell) and Brass (Eni) - located in Bayelsa and its neighbouring states. The Brass Terminal accounts for 4 percent of Nigeria's overall oil production, whereas Bonny and Forcados account for 22 percent.<sup>116</sup> Chevron also has a presence as a 40 percent stakeholder operator in Joint Ventures with the NNPC in onshore and near onshore areas, and in deep-water projects off Bayelsa's coast, with other subsidiaries.<sup>117</sup> The composition of extraction activity is, however, changing as Shell (SPDC) in particular, but other IOCs too, divest from some of the more mature onshore fields and focus activities on offshore deepwater sites.

Bayelsa is one of Nigeria's largest oil producing states. According to Bayelsa Government's own figures via the Investment Promotion Agency, Bayelsa is the country's second largest oil producer, whilst Federal (Derivation Fund Information, National Bureau of Statistics) figures, contested by the Bayelsa State Government, suggest that Bayelsa is the country's third largest oil producer. These differences reflect the real challenges associated with calculating precision volumes of oil produced, particularly when oil fields cut across states. This also explains the

intense political battles that occur over determining production volumes because federally distributed grants are allocated to each state, in line with volumes of crude produced.<sup>118</sup>

While IOCs dominate hydrocarbon production both at national level and in Bayelsa, the NNPC occupies an important niche. Effectively a 'state within a state', the company undertakes a limited range of exploration, production, refining and maintenance work. But its main role, other than acting as a vehicle for managing the Nigerian Federal Government's stakes in oil production ventures, is to monitor and regulate overall national oil output. The NNPC's lack of operational visibility limits its effective oversight at the site of production. This means that whilst NNPC is liable for paying the highest investment contribution for future exploration activities,<sup>119</sup> relative to its ownership of JVs, it is the IOCs that determine how much production in terms of volume they choose to declare to the Nigerian government.

It is an example of how removed NNPC is from operational management of much of Nigeria's oil resources that the monitoring of production volumes takes place at export terminals, rather than at the wellhead and the flow stations as best practice would recommend. Research indicates that this failure to apply international standards contributes to revenue losses amounting to billions of dollars a year due to under-reporting and oil theft, with, for instance, the NEITI identifying over US \$9.8 billion of unpaid royalties, of which less than US \$3 billion have ever been recovered.<sup>120</sup>

*Creek water contaminated with oil.*





## The regulatory and legal framework (Pre-PIA)

### Industry Regulators

<b>Ministry of Petroleum Resources (MPR)</b>	<b>Department of Petroleum Resources (DPR)</b>	<b>Department of Gas Resources (DGR)</b>
Responsible for articulating, implementing and regulating policies in the oil and gas industry and ensuring compliance.	DPR is the technical department of the MPR, responsible for monitoring and regulating the Oil & Gas activities	An MPR department established under the 2008 National Gas Supply and Pricing regulation to allocate domestic gas supply obligations and to regulate the gas sector
<b>Federal Ministry of Environment (MoE)</b>	<b>Nigerian Content Development Monitoring Board (NCDMB)</b>	<b>National Oil Spill Detection &amp; Response Agency (NOSDRA)</b>
The Ministry carries out environmental impact assessments (EIAs) for proposed major projects in line with the 2004 EIA Act	The board is responsible for the implementation of the Nigerian Oil and Gas Industry Content Development Act	NOSDRA responsible for ensuring preparedness, detection and responses to oil spillages in Nigeria and companies' compliance with relevant legislation
<b>Nigerian National Petroleum Corporation (NNPC)</b>	<b>Nigeria-Sao Tome &amp; Principe Joint Development Authority (JDA)</b>	<b>National Environmental Standards &amp; Regulations Enforcement Agency</b>
Oversees and promotes the commercial interest of the FGN, with subsidiaries positioned across the Oil & Gas value chain	The JDA is a treaty between both countries to manage activities relating to the exploration of resources in the region of maritime overlap between both countries	NESREA is charged with the protecting and developing the environment as well as coordinating and liaising with stakeholders within and beyond Nigeria

Source: PWC. 2001. *The Petroleum Industry Act: Redefining the Nigerian oil and gas landscape*

Several legislative instruments provide the legal foundation for oil exploration and production in Nigeria. As previously outlined, the Constitution vests ownership of oil resources in the Federation and grants the Federal Government exclusive powers to oversee and regulate the oil industry.

Until August 2021, the Federal Government vested responsibility both for collecting revenue in the form of rents and royalties due from the oil sector and regulating its activities to the DPR. The agency thus played a hybrid commercial and regulatory role, promoting and selling hydrocarbon concessions and collecting revenues from

them while simultaneously regulating their activities. The DPR issued the EGASPIN and the Petroleum (Drilling and Production) Regulations (DAPR) that formed the core body of regulations for the industry as a whole. As part of its remit, the DPR also had oversight over the NNPC, which acts as an important vehicle for managing the Federal Government's commercial holdings in hydrocarbon JVs and for monitoring oil sector performance.

Since the enactment of the Petroleum Act 1969, 20 pieces of legislation relating to the oil industry have also been passed. Whilst the original statute itself has not been not

fully updated for decades, some of the new legislation dealt with pollution and environmental protection. The regulatory system for pollution issues under the outdated regime was characterised by limited clarity, competition between institutions with overlapping and occasionally contradictory remits, and a mismatch between the statutory powers available and departmental remits. The DPR issued the primary environmental guidelines for the oil industry's operations in the form of EGASPIN. The guidelines, introduced in 1991 and updated in 2002 and 2018, were ostensibly based on a framework previously adopted by the Dutch government. However, the DPR rarely, if ever, undertook any enforcement activity against oil company activity that breached EGASPIN provisions.<sup>121</sup> At the same time, the Ministry of the Environment – through the National Oil Spill Detection and Response Agency (NOSDRA) – retained responsibility for detecting oil spills and ensuring they are effectively cleaned up. However, NOSDRA is purely intended as an emergency response agency and possesses no ongoing regulatory powers. Its remit is also tightly drawn, excluding responsibility for gas flaring and some forms of effluent discharge. Over time, the responsibilities of the Ministry of the Environment have been progressively curtailed.

To complicate matters further, the Nigerian Maritime Administration and Safety Agency (NIMASA) retains responsibility for maritime pollution,<sup>122</sup> while the National Environmental Standards and Regulations Enforcement Agency (NESREA) has a remit to inspect vessels related to the oil industry, but not to supervise or regulate oil production or pollution.<sup>123</sup> State level environmental protection agencies also play a role, as does the Nigerian navy in enforcement against illegal refining.

With such a tangle of agencies and remits, it is perhaps not surprising that regulatory standards and processes are often in conflict and regulators sometimes stray beyond their competencies. For instance, NOSDRA operates to standards that differ from those set out in the now defunct DPR's EGASPIN guidelines, though the former Department often enacted regulatory provisions that related to NOSDRA's work. In addition, NOSDRA also tracks gas flaring, despite gas being explicitly excluded from its remit.<sup>124</sup>

One theme, however, unites this fractured and top heavy regulatory structure: a lack of enforcement. While the DPR, until the passing of the PIA 2021, retained sweeping powers over the oil sector as a whole, it had limited statutory authority to penalise oil producers for pollution incidents or for failing to fulfil their clean-up obligations.

The Department's foundational piece of legislation, the Petroleum Act 1969, did not stipulate any sanctions for environmental damage and did not impose liabilities on oil producers for spills and other pollution. Although the DPR did possess other powers under its remit, it was usually reluctant to use them. Under legislation, NOSDRA's ability to levy fines is highly circumscribed. The maximum fine it can impose is 5,000,000 Naira (US \$12,200) and an additional 500,000 Naira per day - less than US \$1,220 at current exchange rates<sup>125</sup> - so long as operators remain in breach of their responsibilities to clean up a spill.<sup>126</sup> And even that power is contested; in recent cases, the Nigerian Court of Appeal ruled that NOSDRA could not impose sanctions without a court decision to establish liability.

Such constraints are particularly binding given the nature of the liability rules enshrined within the legislation. In most oil producing countries, the law on oil production is underpinned by two simple concepts: 'Polluter Pays' and 'No Fault Liability'. Taken together, these two principles dictate that polluters should pay for any pollution arising from their activities, even if it was not their fault. Neither of these principles are fully enshrined in Nigerian law. Under the terms of federal legislation, oil producers are theoretically responsible for the clean up of any spills or pollution from their operations according to standards laid out in regulatory guidelines that are heavily informed by Dutch regulations.

The statutory framework for compensation for those affected by spills is minimal. The Petroleum Act 1969 was largely silent on the issue of liability for pollution, containing only limited provisions concerning the disturbance of surface rights. Like the previous act, the recently passed PIA attempts to place responsibility for pollution on concession holders.<sup>127</sup> The still extant Oil Pipelines Act holds a pipeline operator to be liable for compensation if the pollution can be shown to have arisen from their failure to maintain their assets effectively. The legislation does not set out any standards for fair compensation in the event of contamination.

Nothing demonstrates this better than the structure and operation of the formal investigation process for pollution incidents. Under the terms of the 'Joint Investigation Visit', once a spill is reported, NOSDRA is required to investigate.

**However, it is the oil producer that facilitates access to the site, determines in most cases when visits will take place, provides the logistics, and submits the initial notification of the spill. As a consequence, it is the operators-**

### producers that almost always determine what regulators see on the ground and who they talk to.

It is also the producer who pays for the investigation. Furthermore, due to a lack of resources, NOSDRA almost never makes follow-up inspections: according to an independent study, these occur in less than 13 percent of cases.<sup>128</sup>

Since 2010, the IOCs have been divesting from their onshore and shallow water assets and selling these concerns to indigenous Nigerian firms. However, most divestment decisions end up as private contractual arrangements hurriedly agreed upon by IOCs and the Federal Government, often with responsibilities for environmental and social liabilities left underspecified and with the communities 'hosting the assets' effectively kept in the dark. This has created a widespread perception among many local communities that divestment of oil and gas assets to indigenous oil firms is simply an attempt by IOC operating companies to evade their ecological liabilities. Indigenous firms eager to acquire the assets and subsequently the lease upon expiration are prone to accepting contracts absolving the seller of responsibility in the case of defects associated with the asset after decommissioning, as well as liabilities for other legacy issues that may arise. An illustrative example of this took place in 2014-2015, when Shell's SPDC subsidiary sold its asset interests in oil block OML 29 and Nembe Creek Trunk Line - both notorious for associated oil spill pollution - to the Nigerian company Aiteo. Since the sale, local Nembe communities have been locked in legal battles with both Aiteo and Shell in the Nigerian courts over pollution-related and social investment liability issues.<sup>129</sup>

In recognition of the insufficient legal frameworks surrounding the oil sector in Nigeria, the Federal Government made attempts to consolidate the legislation governing oil exploration, production and pollution into a single legislation through the Petroleum Industry Bill (PIB) which was first introduced to the National Assembly in 2008. Repeated attempts at passing the bill into law failed, due largely to industry and political opposition, with later drafts of the bill changed beyond recognition. The following proposed Petroleum Industry Governance Bill (PIGB), proved to be just as problematic having been passed by the Federal House of Assembly and Senate in 2018, but ultimately opposed by the incumbent President.<sup>130</sup> Many 'host' communities in oil producing areas welcomed rejection of the PIGB as it did not address health, safety and environment concerns or host communities' interests, though the National Assembly later explained that it was working on a separate Host Communities Bill. The PIGB also contained no provisions for ending gas flaring, did not address the issue of the independence of regulators, and it removed all powers of the Federal Ministry of Environment and its agencies over environmental regulation and enforcement in the petroleum sector.<sup>131</sup>

Ultimately, a new comprehensive version of the Petroleum Industry Bill was submitted to the Nigerian House of Assembly in October 2020, which was eventually enacted into law in August 2021 as the Petroleum Industry Act.

*Many Bayelsans live on or near the water and some communities are only accessible by boat.*





## The 2021 Petroleum Industry Act

The PIA signed into law in August 2021 appeared to signify a landmark in Nigeria's protracted reform of its petroleum industry. The Act has 319 sections, divided into five chapters, that collectively represent a framework for the regulatory governance of the Nigerian Petroleum Industry (NPI), the administration of the industry, the development of host communities, and a progressive fiscal framework along with other miscellaneous provisions. The Act also consolidates certain aspects of the NPI that had hitherto been addressed across a wide range of statutes.

### However, the PIA still falls short of aspirations for comprehensive environmental standards and for establishing a rigorous supervision and enforcement regime.

The Minister of Petroleum will formulate policy and oversee the industry in general, while establishing two principal regulatory agencies with responsibilities for the upstream and downstream aspects of the industry.<sup>132</sup> These agencies are the Nigerian Upstream Petroleum Regulatory Commission (NUPRC)<sup>133</sup> and the Midstream and Downstream Petroleum Regulatory Authority (NMDPRA).<sup>134</sup> The NUPRC and the NMDPRA will grant licences and permits to upstream and midstream/downstream sectors respectively.<sup>135</sup> In addition, the Act makes elaborate provision for the NNPC to be restructured and eventually fully corporatised to enable it to operate in a liberalised commercial environment, moving beyond its traditional regulatory role.<sup>136</sup>

With respect to host communities, which have borne the brunt of petroleum operations for over six decades with little show for it in terms of development, chapter three of the Act mandates lease and licence holders (concessionaires) to establish host communities' development trust funds to finance projects for the benefit and sustainable development of the host communities, including infrastructure, economic empowerment opportunities, educational development, healthcare provision, and environmental protection measures among others.<sup>137</sup>

The PIA establishes a new framework for taxing oil company profits, with companies operating onshore and in shallow waters to pay a hydrocarbon tax along with a company's income tax (CIT), and deep offshore companies to pay CIT.<sup>138</sup> An immediate concern is that the trend is for greater offshore exploration to increase and dominate

the oil industry in Nigeria, but they will not be paying a hydrocarbon tax.

A cause for concern is that NUPRC can veto any regulatory action by all other concerned agencies relating to upstream activities. This runs counter to the need for strong, independent, well-resourced institutions and also prevents all other concerned agencies, including NOSDRA, from taking independent action to regulate the industry's practices. Arguably, this provision blatantly codifies the prioritisation of profits from the industry over effective regulation and therefore foreshadows the continuation of the Nigerian government policies that resulted in the devastation seen in Bayelsa.

Regarding the environment, the PIA grants oversight functions to NUPRC and the NMDPRA to ensure that future licensing and leasing are conditional on the viability of environmental management and decommissioning plans submitted by the operating oil companies.

Disappointingly, gas flaring is allowed to continue subject to companies paying a fine, with companies only required to provide plans for the elimination of flaring within 12 months of the effective date of the Act.

The PIA now addresses a topic hitherto ignored by the Petroleum Act 1969 and subsequent legislation, specifically liability for decommissioning and abandonment of petroleum installations. Oil companies will be required to commit funds for running down their operations and to submit decommissioning plans to either the NUPRC or NMDPRA. There is also limited guidance for how oil companies should engage with host communities.<sup>139</sup> Until the passage of the PIA, most of the relationships between producers and local communities were determined by Global Memoranda of Understanding (GMOUs), wherein oil companies entered into specific arrangements for social investment with particular communities or clusters of communities. However, arrangements under GMOUs were intended to enable IOCs to secure and retain their social licence to operate rather than to address their pollution-related liabilities; in reality, the absence of effective redress has meant the lines have been constantly blurred. Companies will be obliged to contribute a proportion of their annual income to an environmental remediation fund and a decommissioning and abandonment fund at levels determined by the companies' own internal audits. The PIA also establishes a Host Communities Trust Fund, to which operating companies will be expected to contribute three percent of their annual spend to community development

projects. This support is modelled on the GMOU approach in that the oil companies will be responsible for the composition of the Board of Trustees.

**Under the PIA, deductions will be made from the entitlements of communities if oil production is interrupted as a result of vandalism or sabotage of petroleum infrastructure.**

**This deduction from community entitlements in case of sabotage only extends a policy critiqued for decades by local communities and environmental justice advocates. Not only has non-compensation in case of sabotage acted as a form of collective punishment, perhaps more egregiously, it has allowed transnational firms to shift blame concerning their own inability to secure their installations onto the affected communities.**

The PIA appears to confer considerable powers on the operating companies, NUPRC and NMDPRA. But it is silent on the role of the Ministry of the Environment and associated agencies such as NOSDRA with respect to both existing environmental guidelines on regulation and remediation and liability for historical spills. How the law will operate in terms of precise guidance and regulations in relation to the powers previously exercised by other Federal and State level agencies is yet to be determined. Many of Nigeria's existing regulatory standards, in addition to the conflicting and overlapping roles of regulatory bodies are maintained under the new PIA, so concerns about the impact on environmental regulation remain under the new regime, as does the problem of the country's lack of a rigorous supervision and enforcement regime for critical elements of regulation, such as overseeing asset integrity. With precise regulation and enforcement powers yet to be decided, there is uncertainty over how the new PIA regime will fulfil its goal of promoting compliance with international standards.<sup>140</sup>

### A brief introduction to the Petroleum Industry Act 2021

The Petroleum Industry Act was passed into law on 16 August 2021. The Act attempts to overhaul the regulatory framework for the Nigerian petroleum industry and supersedes the complex often dated plethora of legislation that had formerly governed the sector. The new law is intended to enable increased investment in the sector and further facilitate the entry of local Nigerian businesses into the oil and gas industry.

The Act clarifies the powers of the Minister of Petroleum, reinvents the NNPC into a limited liability (private) company, overhauls fiscal obligations, and transfers powers previously exercised by the Department of Petroleum Resources to two newly formed institutions. These are the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), which will be responsible for overseeing the technical and commercial regulation of the upstream sector, and the Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), which will have technical and commercial oversight over the midstream and downstream sectors.

Whilst ambitious in some areas, as the analysis in this report highlights, the Commission believes there are gaps in the PIA's plans for decommissioning, environmental management and host community development and compensation.

## The regulatory process for dealing with oil spills

### The nature of liability law and the dynamic of institutional competition shape the regulatory process for dealing with oil spills and other pollution.

The core of the process is the Joint Investigation Visit (JIV). The clean-up regulations developed in line with the legislation that established NOSDRA dictate that all oil spills should be reported to the authorities within 24 hours. Immediately upon reporting, a Joint Investigation Team (JIT) consisting of the owner or operator of the facility, officials from NOSDRA, and representatives from the local community and state government, should be formed. This team visits the spill site and investigates its cause and the extent of any contamination. The team develops a report, which all participants are to endorse, identifying the causes and scale of the oil spill.<sup>141</sup>

This JIV report is the central instrument for determining the response to a spill and the liability for compensation and clean-up.<sup>142</sup> As previously outlined, if the spill is found to be due to sabotage or third-party interference, the oil operator is not liable and the community receives no compensation as a result. However, the oil company is still expected to clean up the pollution itself.

Where compensation is due or remediation required, it is based on the damage assessment made by the JIV. Where

post-spill action is mandated, NOSDRA is responsible for a follow-up inspection. In practice, where compensation is paid at all, IOCs often rely on compensation rates set by the Oil Producers Trade Section (OPTS) of the Lagos Chamber of Commerce and Industry in 1997 which are considered to be inadequate.<sup>143</sup>

The JIV process only covers oil spills and is rarely applied to offshore spillages, including cases where the Nigerian navy sinks intercepted tankers carrying crude or destroys artisanal refining activities. Nor is the JIV process applied to instances of spills associated with artisanal refining itself. The processes for assessing and remediating other forms of hydrocarbon pollution vary by type and are the responsibility of different agencies. Other forms of pollution include gas flaring and leaks associated with gas production (which can be hard to detect), effluent disposal (particularly in the Brass Canal), and the dumping of drilling mud waste. However, in practice, NOSDRA normally acts as the primary investigator and oversight body for all kinds of pollution cases.

Drawing the threads together, it is evident that the challenges raised by the structure of the Nigerian oil sector and the dominance of the IOCs are compounded by an overlapping and sometimes contradictory regulatory landscape and by a legal framework that limits the liabilities of operators in certain circumstances.

*Local farmers despair the destruction of farmland caused by oil spills.*





## Prospects for Nigeria's post-oil transition

**During The UN Climate Change Conference in Glasgow (COP26) in 2021, President Muhammadu Buhari pledged to cut Nigeria's carbon emissions and reach net-zero by 2060, underlining the key role of gas in the country's energy transition roadmap.**

Nigeria has, on paper, consistently demonstrated a commitment to reducing carbon emissions and to mitigation policies. In 2011, the National Adaptation Strategy and Plan of Action for Climate Change in Nigeria (NASPA-CCN) was approved. In the following year, the adoption of Nigeria's Climate Change Policy and Strategy signalled the Federal Government's renewed commitment to combating climate change and resulted in an agreed Nigeria Climate Change Policy Response and Strategy (NCCRS) in the same year. At the 2015 Paris meetings of COP, Nigeria pledged to reduce the country's greenhouse gas emissions by 20 percent (unconditional) and 45 percent (conditional) by 2030.

Whilst Nigeria's commitments on paper are laudable, past failures (such as the program proposed to eradicate gas flaring and the biofuels program launched in 2007) and more recent practice (such as the limited provisions in the PIA for sanctioning continued gas flaring) suggest that commitments to implementation will remain a challenge. In fact, some analysts predict that Nigeria's per capita carbon emissions could well double.

The NNPC signed a major new deal with IOCs Shell, Exxon, Total, and Eni in 2021 to develop an offshore oil bloc that includes the deep water Bonga field. Despite uncertain oil demand forecasts over the long term, Nigeria has serious ambitions to further expand its oil industry. More than one hundred oil and gas projects are set to be launched over the next five years, including 25 upstream oil and gas projects, 28 petrochemical projects, and 24 refinery projects.

The larger global environment is not conducive to energy transition either. In response to the Covid-19 crisis, the United States and Canada have boosted support for fossil fuel extraction by increasing subsidies to the sector. Most producing countries' budgets are highly dependent on the sector, so there is an incentive to accelerate extraction, especially as the future value of oil assets becomes increasingly uncertain. Such a "get it while you can" attitude will likely produce the antithesis of managed phase-out.<sup>144</sup> This is likely to be further exacerbated by the war in Ukraine and a shift away from reliance on Russian gas supplies. This suggests that any post-oil transition is more likely to be chaotic than orderly.

The post-oil pathway in Nigeria will be especially difficult. First, the physical assets are substantial. Nigeria is the fourteenth largest producer of petroleum, with oil reserves estimated at about 37 billion barrels. The nation has the sixth largest deposits of gas, with natural gas

*Representatives from the Ministry of Environment pose for a photo in waters contaminated by oil spills and floods destroying farm lands in Ikarama Community, Bayelsa.*



reserves estimated at a minimum of 100 trillion cubic feet. Second, the domestic power sector has always been weak. A total of 120 million people depend on fuel wood to meet their energy needs and only 40 percent of Nigerians have access to the electricity grid. Roughly 78 percent of the generating capacity is fossil powered (fuel oil, gas, and coal). Third, and crucially, even if Nigeria's economy seems to have reached a tipping-point away from oil, core institutions and policies continue to remain structured around assumptions that oil is central. Even with higher non-oil tax revenue, oil and gas will continue to be produced and there is no evidence that the rent-seeking politics associated with powerful elites dependent upon access to oil revenues is likely to change.

Most Nigerian governmental institutions bear the hallmarks of turn-of-the-century oil-fuelled distributive and developmental thinking. Federal, state and local governments continue to relate through a federal structure that essentially prioritises the distribution of revenues from a central pot. Fourth, currency movements and the competitiveness of many economic sectors remain most heavily influenced by the continued powerful role of oil and the distortions and external shocks it produces. And most importantly, capital formation and wealth accumulation across both private and public sectors assumes the offstage presence of a huge and commercially attractive resource endowment which

covers up underperformance, forgives a range of policy and implementation sins, and allows 'non-earned' income (rent) streams to displace more methodical means of development.

Yet some analysts have suggested that the seeds of a post-oil transition in Nigeria are already being sown, as a result of the declining percentage of oil revenues to Nigeria's overall income.

Transitioning to Nigeria's post-oil future will be difficult and demanding, particularly given the way in which oil and gas revenues shape Nigeria's political economy and political settlement.<sup>145</sup> Nigeria's elite formation remains heavily driven by centrally allocated oil revenues. Pressures on debt service will make it very hard for the government to do anything but expand output. The debt service for Nigeria in 2023 is expected to absorb somewhere between 80 and 100% of oil revenue.<sup>146</sup> It is no surprise that in terms of economic diversification – one of the key measures of breaking from oil dependency – Nigeria's overall performance has declined since 2014.<sup>147</sup>

If Nigeria is to transition, it may be able to take advantage of a raft of relatively cheap and accessible renewable energy sources that are emerging. However any transition will require astutely tailored international support sensitive to the impact on Nigeria's political economy (winners and losers), and in line with the scale and scope expressed at COP26.

*Storage tanks surrounded by jerrycans used for storing crude extracted from oil pipelines.*





## Oil: assessing the benefits-and counting the costs

Oil production has generated vast wealth for IOCs and the Federal Government over the past 60 years. Official figures indicate that royalties, dividends and taxation of oil output have amounted to over US \$1 trillion since independence.<sup>148</sup>

Estimates suggest that the income Bayelsa has generated for the Federal Treasury as a result of oil production could be as much as US \$150 billion since 2006.<sup>149</sup>

Yet little of this bounty has found its way back to the people of Bayelsa. The state may be a source of immense wealth for the Federal Government and IOCs, but its population remains extremely poor.

**Bayelsa has historically had a low Human Development Index (HDI) score of 0.642 and, at a mere US \$1,770, a low GDP per capita.**<sup>150</sup>

Over 70% of the population rely on subsistence farming and fishing,<sup>151</sup> and unemployment exceeded 32.7% in 2020.<sup>152</sup> Few inhabitants of Bayelsa have access to good health care or other public services. The average life expectancy is just 50 years.<sup>153</sup>

And as in other states in the Niger Delta, oil production and the associated competition for resources has contributed to a deterioration in the security situation and a continuing threat from militant activity.

Nigeria's oil bonanza has brought little benefit to Bayelsa and it has come at a terrible cost to the state and its people. Assessing the scale and scope of that cost will be the focus of Chapter Two.

*Decaying vegetation caused by a crude oil spill.*





## 2

# The scale and impact of the pollution crisis

**That Bayelsa has suffered a pollution catastrophe is beyond question. However, its scale and scope remains inadequately researched.**

The Commission has sought to assemble a comprehensive picture of the contours and nature of the crisis engulfing Bayelsa. As well as undertaking an extensive review of the existing literature, the Commission has conducted original scientific field research to capture direct evidence of the effects of oil pollution across the state. All of the LGAs in the state were reviewed and then key areas of LGAs were selected for visits and deep-dive case studies in order to take testimonies from local communities and to assess the nature and scale of pollution. The Commission interviewed over 500 people, and collected blood samples from 1,600 people to assess the levels of toxicity in their bloodstreams. A key motivation of this endeavour was to ensure that the voices of the communities that have suffered most – voices that have all too often been ignored by decision-makers – are heard. The Commission has developed detailed case studies of select individual

pollution incidents to help unravel and illustrate the interplay of causes that are at the root of the problem. Using this rigorous, multi-faceted approach, the Commission has built a detailed account of the devastation Bayelsa has suffered and the impact on the state's environment and its people.

**The Commission has investigated and reports on the following instances of pollution:**

- **Oil spills**
- **Gas flaring**
- **Effluent waste disposal**
- **Divestment**
- **The operations and destruction of artisanal refineries**

## The scale of the oil spills problem

It is difficult to convey or put precise numbers on the magnitude of the disaster that has unfolded over the last 60 years. Findings from different studies vary dramatically, but all of them attest to the extraordinary intensity and sheer variety in the forms of pollution from which Bayelsa has suffered over the last half century. Oil spills, gas flaring, effluent waste disposal, the dumping of drilling

waste and mud, and destruction of artisanal refining sites have all had severe impacts on the state. In addition, the proliferation of community conflicts over the distribution of 'benefits' associated with oil and gas production activity have all exacerbated and continue to contribute to the entrenched and unacceptably high pollution profile of Bayelsa.

### Causes of pollution

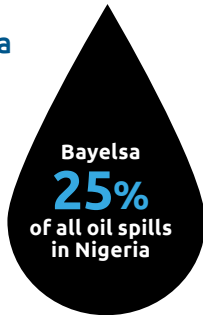
- **Oil spills** - An oil spill is oil, discharged accidentally or intentionally, that floats on the surface of water bodies as a discrete mass and is carried by the wind, currents and tides. Oil spills can be partially controlled by chemical dispersion, combustion, mechanical containment and adsorption. They have destructive effects on coastal ecosystems.<sup>154</sup>
- **Gas flaring** - Crude oil reservoirs in the Niger Delta often contain as much natural gas as crude. From the commencement of oil production during colonial rule, IOCs developed pipeline infrastructure to enable the export of crude oil while they burn the unwanted associated gas through a pipe (also called a flare). Flared associated gas could be used for local energy generation in an area where people do not have access to electricity. However, IOCs and other oil producers do not make adequate investments in associated gas gathering (AGG) infrastructure, which is necessary for converting associated gas for productive use. Instead, IOCs mostly continue to flare associated gas despite the adverse impacts on the natural environment and the health of local inhabitants.<sup>155</sup>
- **Effluent waste disposal** - Effluent is any liquid waste, other than surface water and domestic sewage that is discharged from premises being used for a business, trade or industrial process. Trade effluent may be waste water contaminated with materials such as:
  - fats, oils and greases
  - chemicals
  - detergents
  - heavy metal rinses
  - solids
  - food wastes.<sup>156</sup>
- **Divestment** - The process of IOCs selling off business interests in Nigeria, often to local companies.
- **The operations and destruction of artisanal refineries** - Artisanal oil refining is the small-scale crude oil processing or subsistent distillation of petroleum that is often outside the boundaries of the state law.<sup>157</sup>

## Oil spills

NOSDRA recorded oil spill incidents in Nigeria and Bayelsa from 2006 to 2020<sup>158</sup>

**Nigeria**  
**13,251**  
oil spills

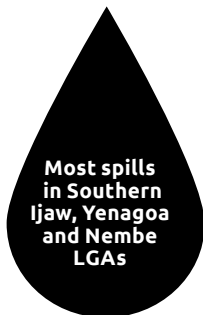
**Bayelsa**  
**3,508**  
oil spills



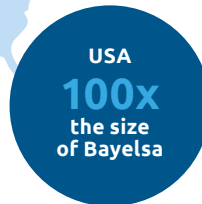
**Bayelsa**  
**109,940**  
barrels spilled  
from 2006 to 2020<sup>159</sup>



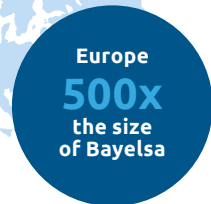
**Bayelsa**  
**234**  
oil spills  
per year<sup>160</sup>



**USA**  
**137**  
oil spills  
in 2018<sup>161</sup>

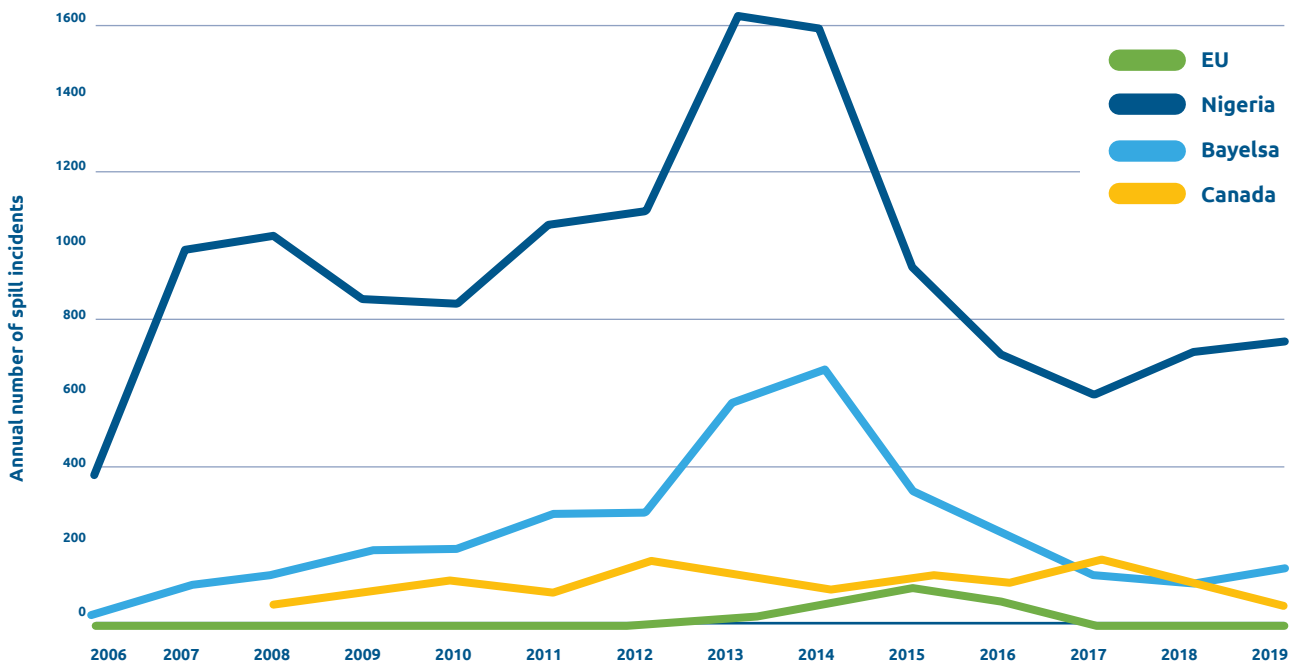


**EUROPE**  
**25**  
oil spills  
per year<sup>162</sup>



Nigeria's pipelines over **x565**  
more likely to leak than those in Europe<sup>163</sup>

Annual pipeline spill incident numbers<sup>164</sup>

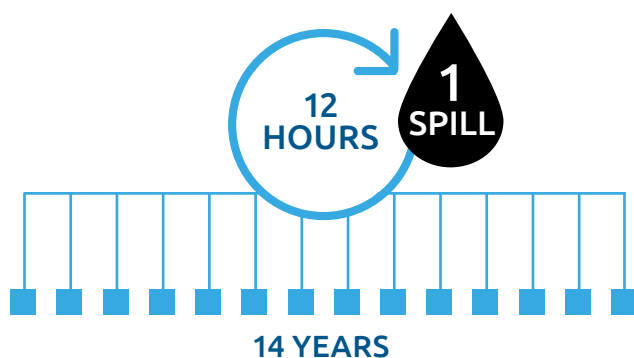




The figures are stark. But there is considerable evidence that NOSDRA's statistics may, if anything, understate the number of spills. Material differences have been discovered between the number of spills recorded by NOSDRA and those recognised by the IOCs in their published data.

**More strikingly, large discrepancies exist between NOSDRA's spill data and data released by NNPC itself. For the period 2005-2018, NNPC's statistical report identified over 35,670 incidents across Nigeria as a whole, indicating an incident level roughly three times higher than that suggested by NOSDRA.<sup>165</sup> If this is correct and the spill distribution were to be extrapolated from the NOSDRA data, this would suggest that Bayelsa has suffered a spill every twelve hours over the course of 14 years.<sup>166</sup>**

## BAYELSA EXPERIENCED A SPILL EVERY 12 HOURS FOR 14 YEARS



Even bigger question marks remain over NOSDRA's assessment of the volumes spilled. Since 2006, the agency states that just over 697,000 barrels have been spilled across Nigeria in its entirety, with 522,000 of these in the Niger Delta.<sup>167</sup> Although experts have identified some reporting inconsistencies, the NOSDRA online database indicates that only 109,200 barrels were spilled in Bayelsa between the inception of the agency in 2006 and October 2019. These figures are at odds with those released by NNPC. The national oil company, which is responsible for the regulation and monitoring of overall oil output, states that 33.7 million barrels of 'petroleum products' (including liquefied petroleum gas (LPG) and other outputs) were lost between 2005 and 2018, with almost 5 million barrels of crude being unaccounted for between 2013 and 2018

alone.<sup>168</sup> The former DPR, of which NNPC was a part, had previously published research estimating that a further 2.4 million barrels were spilled in the Niger Delta between 1976 and 1996.<sup>169</sup> The United Nations Development Programme cited similar figures, finding in excess of 3 million barrels of spillage between 1976 and 2001.<sup>170</sup> According to a recent report, the DPR had also developed estimates of recent spill volumes that in 2018 were as much as three times higher than NOSDRA's.<sup>171</sup>

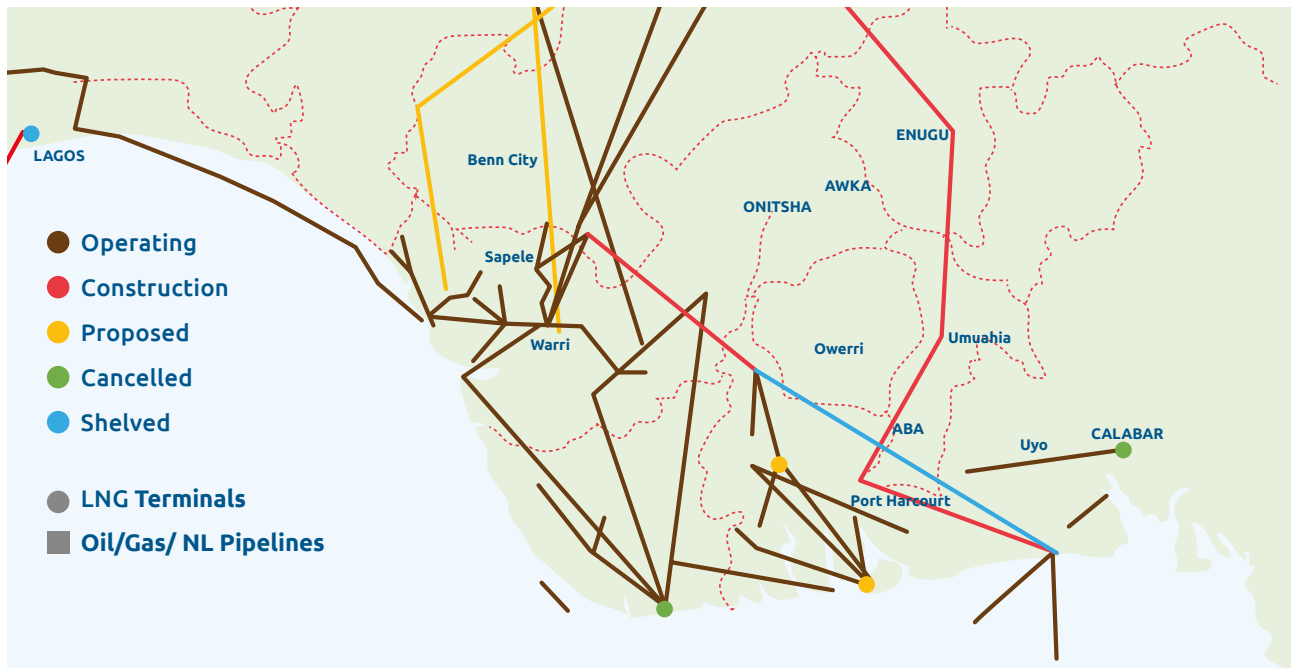
Part of the reason for these significant divergences may be found in the dysfunctional NOSDRA process. Evidence from multiple independent sources, as well as significant testimony from numerous witnesses at all levels, suggest that the JIV process, which provides the basis for NOSDRA's assessment of the number and impact of spills, is fundamentally compromised by the outsized role that IOCs play in the process.

Data released by NOSDRA confirms that all too often, JIV reports are often highly incomplete, fundamentally undermining the accuracy of the agency's figures. Of a sample of over 6,000 JIV reports filed between January 2010 and August 2015, 82 percent included no estimate of the spill area, 71 percent had no description of impact, and 33 percent did not include an estimate of the quantity spilled.<sup>172</sup>

Even where reports are completed, distortions in the way the JIV process is run render the figures produced deeply unreliable. The Commission's own findings confirm those of an extensive body of independent research that suggests that the administration of the JIV process is subject to capture by the companies it is meant to regulate (the JIV process is further expanded on in Chapter Three).<sup>173</sup>

This problem is exacerbated by the obsolescent methods used by JITs to assess the scale of spills and the damage they cause. JITs often rely on highly flawed and outdated techniques, no longer used globally, such as estimating spill areas "by sight". Particularly in cases concerning bodies of flowing water, this can lead to a significant understatement of leak volumes. In one example (outlined in Chapter Three) the combination of these issues led local residents to claim that the volume spilled had been underestimated by a factor of as much as 60.<sup>174</sup>

Independent research suggests that the amount of oil spilled in Nigeria is, to a significant magnitude, greater than that suggested by NOSDRA. Research published by Amnesty International and the World Wildlife Fund (WWF) in 2009, using the Nigerian Government's own data, estimated that 9 million barrels had been spilled over the

Map showing pipeline concentration in Bayelsa and Rivers<sup>180</sup>

previous 50 years across Nigeria.<sup>175</sup> The Woodrow Wilson Centre offered a higher estimate suggesting a level closer to 16 million barrels of oil.<sup>176</sup> All of these figures will have risen since these reports were completed.<sup>177</sup>

Figures printed on a page fail to convey the enormity of these findings. These numbers describe an almost unprecedented level of oil pollution. The collated data suggests that every single year for the past 50 years, Nigeria suffered the equivalent of a major oil spill roughly on the scale of the Exxon Valdez disaster, an episode that devastated over a thousand kilometres of the Alaskan coastline and became one of the defining pollution incidents in the history of the oil industry.<sup>178</sup>

### Southern Ijaw LGA Town Hall Meeting by BSOEC

*In 2004, October 13, a spill occurred in my place. We call it Asitowat spillage, from high-pressure Agip pipeline, we wrote to Agip and we were not compensated. The community went to court, at the end, they came and paid a pittance to Gbarain and abandoned our community. There was no clean-up for nine months, and aquatic life was destroyed. Not even relief was provided and no compensation paid. There is another spillage right now in Azagbene not one kilometre to Gbaratoru and Gbanraun, which is the boundary between Ekeremor and Southern Ijaw LGA. So far, 14 children have died because of this spill. This is how we have been treated. There are no hospitals, the children just fall down and died. We are drinking the same polluted water.*

Resident, Ukparatubu Community

Alaska  
Exxon  
Valdez spill

11

MILLION  
GALLONS  
SPILLED

Bayelsa

110  
-165

MILLION  
GALLONS  
SPILLED

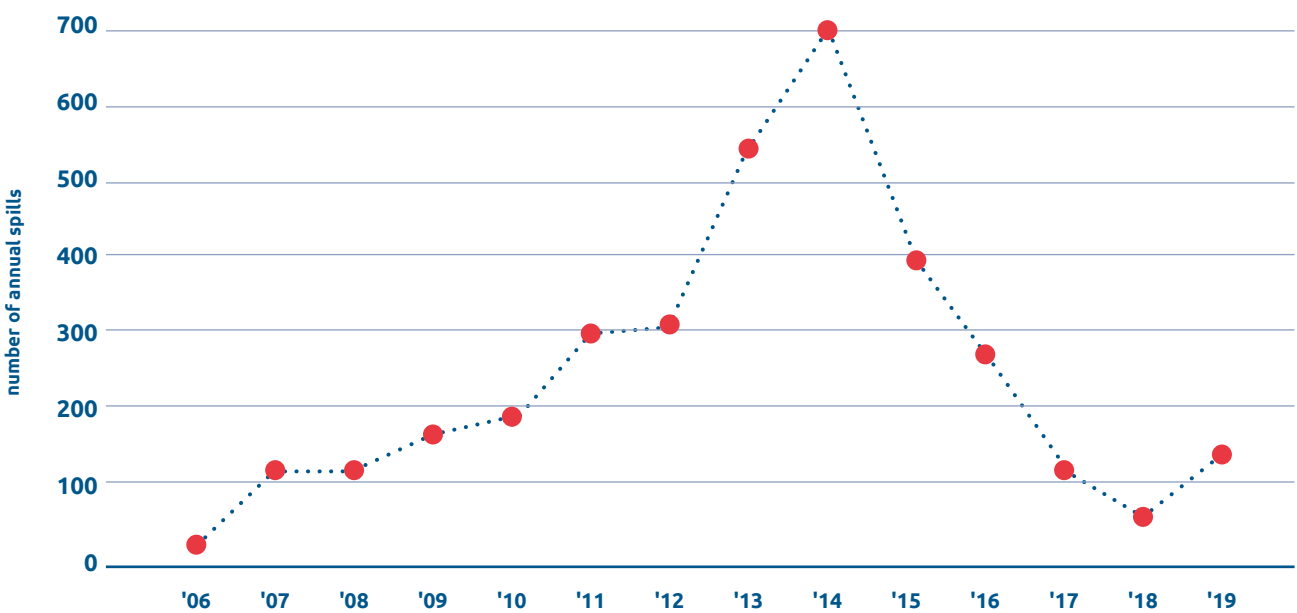
This overwhelming tide of oil contamination has, as a result, turned the Niger Delta into one of the most polluted places on Earth.<sup>179</sup>

## Patterns of oil spills in Bayelsa

Bayelsa State has borne a significant proportion of the Niger Delta's oil and gas-related pollution. As outlined above, 26 percent of spill incidents and more than 15.6 percent of spill volumes cited by NOSDRA have occurred in Bayelsa between January 2006 and December 2020. Applying these as ratios to the widely recognised independent assessments of how much oil has been

spilled in Nigeria suggests that Bayelsa has conservatively suffered 2-3.5 million barrels of oil spilled over the last 60 years.<sup>181</sup> If the NNPC figures are correct, the numbers could be higher still. According to official figures, the number of spills in Bayelsa have fluctuated significantly in the last 15 years:

Annual spills in Bayelsa according to NOSDRA, 2006-2019<sup>182</sup>



While every single LGA in Bayelsa has suffered oil contamination, the problem has been especially concentrated in just a few parts of the state. According to official estimates, the Southern Ijaw, Brass and Nembe LGAs have together accounted for 60 percent of all spills the state has experienced.<sup>183</sup>

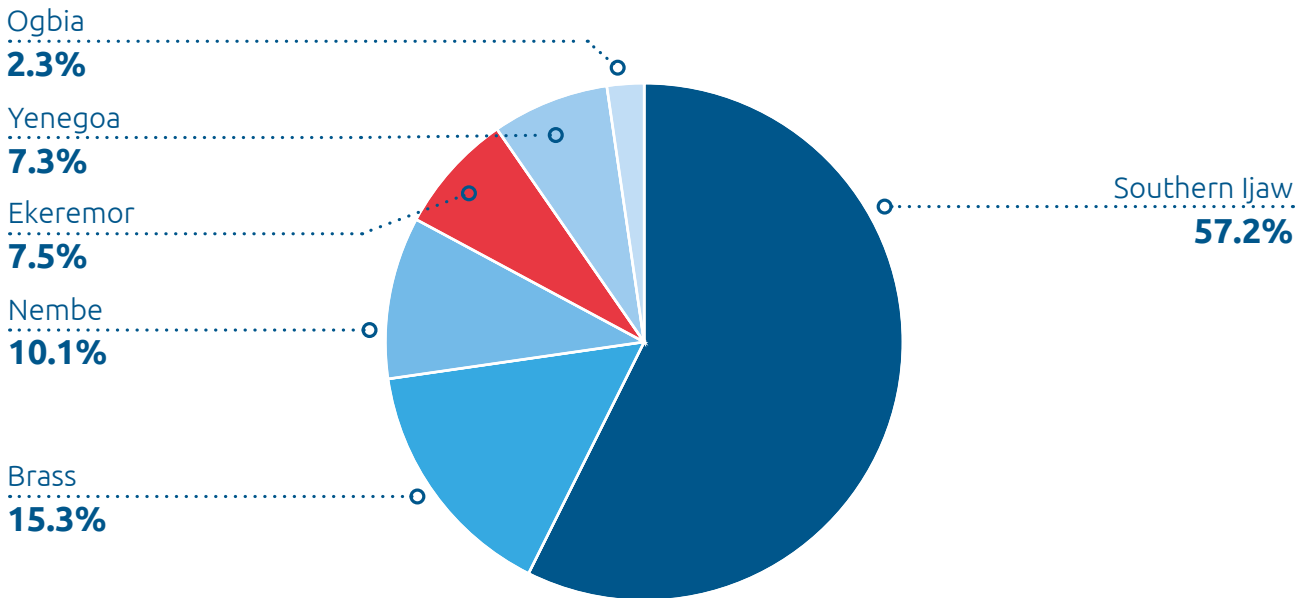






Photo by Ed Kashi

### Share of oil spills by LGA, 2006-2019, Bayelsa<sup>184</sup>



Even after taking into account that the figures are likely to be underestimates, the official statistics paint a sombre picture. And behind each number lies a story. The Commission has heard from hundreds of people living in affected communities and conducted over a dozen detailed deep dives to gather information in affected communities. There has been particular focus on Southern Ijaw, Yenagoa and Nembe LGAs - due to their exposure to oil spills - with on-the-ground teams undertaking in-depth research to understand what occurred and what impact pollution has had in individual cases. Elements of their testimony are outlined below:

“ June 2019 spill was an eyesore, as it killed marine life, with fishes dying from the spill.

**Community leader, Nembe<sup>185</sup>**

Testimonies paint a consistent picture. Villagers in communities across the state tell of pipelines suffering numerous leaks, of IOCs all too often denying the scale of the leaks, or, controlling the JIV process in an effort to minimise their liability for compensation.

“ In 2012 there was also a gas explosion that affected every life of Koluoma, the explosion was so massive. As we speak, nothing has been done to ameliorate the plight of the people.

**Community leader, Southern Ijaw<sup>186</sup>**



## Pollution in Bayelsa: More than oil spills

Pollution in Bayelsa is not limited to oil spills alone. Other activities including effluent waste disposal in the Brass Canal, dumping of drilling mud, artisanal refining, and gas flaring have also added to the toxic mix of contamination.

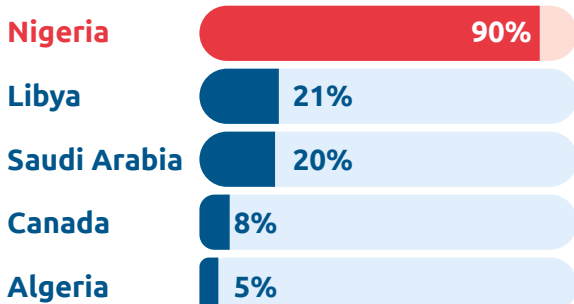
### Gas flaring

As well as being an ongoing source of pollution in Bayelsa and elsewhere in Nigeria, gas flaring is a major contributor to regional and global climate change. Although many other jurisdictions around the world have outlawed the practice, Nigeria remains one of the main locations of gas flaring by the international oil industry.

Routine gas flaring disposes of associated gas through open burning during oil production in locations where oil companies decide not to build the infrastructure to process, use, market, or re-inject into the reservoir. In Bayelsa, and the Niger Delta more broadly, large flares burning from towers and land surface areas have been prevalent since the inception of the Nigerian oil industry in the 1950s. Flaring has been, and remains, the main means of disposing of waste gas produced by oil extraction in the country.

**Flaring is an enormous waste of a valuable natural resource that should either be used for productive purposes, such as generating power, or conserved.**<sup>187</sup>

Although gas flaring is a necessary part of the petroleum producing process, statistics from various countries show that no country flares as much gas as a percentage of their total gas as Nigeria.<sup>188</sup> According to World Bank data (2021), Nigeria is in the world's top ten gas flarers in terms of volume and flaring intensity.<sup>189</sup> Libya for instance flares about 21% of its natural gas, while Saudi Arabia, Canada and Algeria flare 20%, 8% and 5% respectively, conversely Nigeria flares up to 90% of its associated gases.<sup>190</sup>



\*Abbreviation for a thousand standard cubic feet

According to the World Bank's Global Gas Flaring Reduction Partnership (GGFR<sup>191</sup>), in 2021, Nigeria was the seventh largest emitter of gas by flare volumes. 6.6 billion cubic metres (bcm) were flared representing 17.67 million tons of CO<sub>2</sub> emissions at an estimated cost of US \$760.58 million.<sup>192</sup>

The top 10 largest flaring countries in 2021 – Russia, Iraq, Iran, the United States, Venezuela, Algeria, Nigeria, Mexico, Libya, and China – accounted for 75 percent of all gas flared while the top seven (a group that included Nigeria).

According to GGFR data, the 20 Nigerian fields with the largest flaring volumes averaged over 150 million cubic metres (mcm) annually per field while the number of fields discharging gas between 2012 and 2021 increased from 168 to 180. While the volume of gas flared dropped by 30 percent from 9.6 bcm in 2012 to 6.6 bcm in 2021, gas flaring intensity – i.e. the volume of flared gas (cubic metres) per barrel of output produced – increased from 10.73 in 2012 to 11.75 in 2021. This implies an almost 10 percent increase in flaring intensity between 2012 and 2021. One study cites flaring at 139 of 177 oil field sites in Nigeria highlighting that the majority of sites flare gas.<sup>193</sup>

**Nigeria's total gas consumption in 2019 was 15 bcm which means the amount estimated to have been flared would have met nearly half of Nigeria's needs.**

Statistics on flaring vary. While state level data is available from NOSDRA, there are some inconsistencies with the World Bank's Global Gas Flaring Reduction Partnership (GGFR) data and with the state government's own data. A study citing Bayelsa State Government figures finds 17 onshore sites flaring an average of 13.7 mcm of gas per day.<sup>194</sup> GGFR data finds 14 major on and offshore flaring sites that account for 39.5 Mscf\* in 2021 (roughly one sixth of the country's flare volume) while NOSDRA estimates 20.8 Mscf flare volume from a total of 23 onshore and five offshore flare sites.<sup>195</sup> Despite the varying statistics, on a per capita basis, Bayelsa's flaring rates are the highest in the region.



**At LGA level, Bayelsa flaring figures highlight that the LGAs most surrounded by water and thus not accessible by road, only by boat, are the most affected by gas flaring. These are Nembe, Ekeremor and Southern Ijaw; all of which have a high number of flow stations and oil operations.**

These LGAs will need more resources to tackle flaring and the impact of it.

While federal fines for flaring have been on the legislative books in Nigeria for decades, these penalties have been insufficient to deter the practice. The oil industry cites the Nigerian government's inadequate regulation in this area as a key factor in flaring's persistence, but market factors also play a prominent role: building infrastructure to process gas for the local market is not profitable enough for the IOCs.

The prevalence of gas flaring in Bayelsa means that local communities are unfairly exposed and bear the environmental and health impacts of this dangerously polluting act. Flaring locations are indiscriminate and flares have even been operated close to schools. Estimates suggest that 2.2 million people across the Niger Delta live within four kilometres of a flaring site.<sup>196</sup> 330,000 of those people live in Bayelsa.

Gas flaring produces harmful volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and inorganic contaminants. Other byproducts of flaring include nitrogen, carbon and sulphur oxides (NO<sub>2</sub>, CO<sub>2</sub>, CO, SO<sub>2</sub>), particulate matter, hydrocarbons and ash, photochemical oxidants, and hydrogen sulphide (H<sub>2</sub>S).<sup>197</sup>

**Several health studies have documented the connection between gas flaring and a range of chronic diseases including bronchial, rheumatic and eye conditions along with**

**hypertension.<sup>198</sup> Constant inhalation of sulphur oxide (SO<sub>2</sub>) causes nose and throat irritation and shortness of breath.<sup>199</sup> Prolonged exposure to flared gas has also been associated with cancer and neurological, reproductive and developmental effects. On Commission visits, local residents reported lung and skin damage and deformities in children as impacts too.**

Despite all the evidenced health impacts, oil companies have brazenly published photos of Niger Deltans drying cassava or fish from the heat of a flare with the justification that flaring offers a functional benefit to local livelihoods, when in fact livelihoods are being destroyed and lives shortened.

The flares harm and disperse local wildlife and are associated with numerous ecological problems including acid rain. The 'black soot' problem evident in Rivers State is a looming issue for Bayelsans.<sup>200</sup> When petroleum products are burned carbon is released into the atmosphere, causing soot particles to drop on and stick to houses, clothes and other materials.<sup>201</sup> Gas flaring causes contaminant build-up, deteriorating water quality,<sup>202</sup> poor agricultural yields and the economic and ecological deterioration of important Deltan food staples, such as cassava, yam, cocoyam, and local fisheries.<sup>203</sup> A 2013 study of the pH of rainwater near flare sites indicated that in most cases, the pH levels were below the acceptable WHO minimum, indicating high acidity.<sup>204</sup> Given the broader context of 'energy poverty' in the Niger Delta, where excessive flaring takes place while local residents lack affordable local cooking fuel, the ongoing burning of waste gas is particularly frustrating and hazardous for the affected population.

*Shell gas flaring at the Gbarain/Ubie gas processing plant located in Gbarantoru community, Yenagoa LGA*



### The impact of gas flaring

IOCs operating in Bayelsa continue to flare gas at an extensive rate with flare sites often situated near residential homes, farmlands, and water sources. In Ogboinbiri and Tebidaba, in Southern Ijaw LGA, Eni (Agip) operates 24-hour gas flaring cycles.<sup>205</sup> The Ogboinbiri site is located just 200 metres across the river from the community and Tebidaba's flare site is separated from the residential area only by a wire mesh fence. In Nembe Creek I, II and III, Oporoma and Gbarain (in Nembe, Southern Ijaw and Yenagoa LGAs, respectively), SPDC continually flares gas except when operational issues arise. In Nembe Creek, the sites are situated around 100 metres from human habitation across a narrow canal. The impact of gas flaring is such that in Nembe Creek, residents describe the flaring effect on their communities as 'carry over' during those periods when thick, dark, and misty fumes pollute the local atmosphere for hours to the extent that they force residents to stay indoors to avoid the toxic discharges.

The Gbarain area in Yenagoa LGA is a major gas flaring site. A 2019 study of gas flaring in the communities surrounding the Gbarain Ubie gas processing plant found that, with the exception of carbon monoxide, the concentration of gaseous pollutants in air samples in the region exceeded the standards of Nigeria's Federal Ministry of the Environment.<sup>206</sup> A recent study of Total Suspended Particulate Matter (TSPM) across Yenagoa LGA recorded TSPM concentrations that significantly exceeded WHO and Nigerian federal standards at four sampling sites, with the highest levels of toxicity found at Gbarain Ubie.<sup>207</sup> At their highest reading, TSPM concentrations – a cause of respiratory and cardiovascular disorders – surpassed the Nigerian federal standard by a factor of almost 10 during the wet season and 15 during the dry season.<sup>208</sup> In addition, sulphur dioxide concentrations at most study locations exceeded the federal standard during dry periods.<sup>209</sup> In all the study area's locations, VOC concentrations in both wet and dry seasons were in breach of the Federal Ministry of Environment's standards.<sup>210</sup> The Commission's field work in Bayelsa state captured testimony on the devastating impact of flaring on health in the region:

*Local communities must live with the pollution of gas flaring on their doorstep.*



## Testimonies from communities affected by gas flaring

### BSOEC Hearing

“ I was once the youth leader of this community, but now I am the Chief Security Officer of the community. Really, this gas flaring is suffering us. Our children are affected health-wise and our crops are not doing well anymore. Even with the rain water, we cannot drink it anymore. So we are begging the world, we are begging the Federal Government to come to our aid. Our houses are cracking because of the shaking; we cannot sleep at night. All our windows are shaking, our roofs are shaking.

**Male, 41, Gbarain**

### BSOEC Hearing

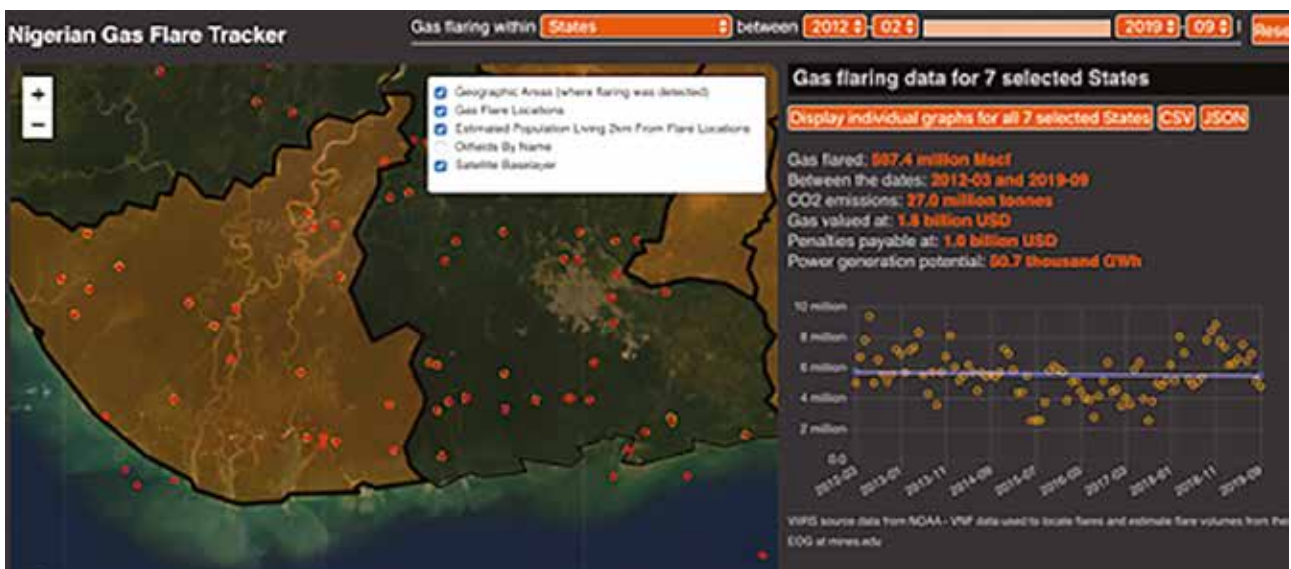
“ Let the world hear this. The Gbarain people are suffering; Shell is suffering the Gbarain people. Our leaders are not doing anything; we are suffering. So we are begging those in authority, we are dying here.

**King B Dakolo, Gbarain Ekpetiama**

“ What we are experiencing about this gas flare, the gas flare is killing us silently. Since they started this gas flaring; we no longer live a comfortable life in this community; even my house. I cannot sleep well because of the vibration of this gas flaring. Houses are cracking and even the roofs have been damaged. Even the rain water, we can no longer drink because, when it rains the water would be covered by soot, so dark. So, no one is drinking rain water anymore in this environment. When it rains and you go to the river, the top layer is always black. It is affecting our fishing too. Even our crops; plantain cannot do well again. We are suffering, in fact. The heat is causing so much health issues. We attribute most of the diseases experienced in this community to the gas flaring and; we are not happy about it.

**Male resident, Polaku community**

## NOSDRA Gas Flare Data 2012-2019 Bayelsa State<sup>211</sup>





## Effluent waste disposal: Brass Canal

The Commission heard repeated testimony about the release of polluted water and drilling fluid into waterways. To give one measure of the extent of the problem, the case of the Brass Canal, on Bayelsa's Atlantic coast, typifies the pollution issues resulting from the unregulated dumping of toxic hydrocarbon waste into the Brass river and onward into the Atlantic. The canal in fact was specifically designed for this purpose. Built by Eni (Agip) in 1973, the Brass Canal is a 3.2 km long waterway designed to discharge produce water, oily sludge and other effluents from Nigeria Agip Oil Company's (NOAC) Brass terminal. Operated by Eni (Agip) for over 40 years, the terminal is situated on the coast and houses a tank farm for storing crude oil, a skimming unit, office spaces and accommodation. The canal separates the local Brass community from the oil terminal. Pollution of the canal itself and in the canal bank soil and sediment has resulted from the build up of hydrocarbon substances over the last 40 years. The Commission received written and photographic evidence and heard numerous testimonies from Twon-Brass communities and their legal representatives about repeated (often frustrated) attempts to secure justice and fair compensation for decades of environmental damage and systematic destruction of livelihoods and living standards as a result of systematic river pollution.

**Immediate action should be taken to address continuing pollution by NAOC-Eni at the Brass Terminal by implementing in full the recommendations of the Inter-Ministerial Ad Hoc Committee Joint Visitation in March 2018 to the Brass Oil Terminal, and evidence submitted to the BSOEC (2019-2020).**

### Dumping of drilling waste

In September 2020 The Bayelsa State Ministry of Environment noted SPDC dumping untreated drilling waste at the Etelebou-Gbarain dumpsite along Tombia Road in Yenagoa LGA. There is evidence suggesting that this is not the only location affected by this phenomenon, nor is SPDC the only IOC responsible for such indiscriminate disposal of drilling waste. Drilling waste was found to have been deposited illegally at Agbere, in Nembe LGA by a contractor working for Eni (Agip). Although the waste is noted to have been cleared, residents still experience and suffer the negative effects of chemical substances remaining in their ponds, lakes, creeks and other water tributaries.<sup>212</sup>

*Excavators dredge water to make it deeper and flow better; the mud is then used to pad the river banks.*



## Pollution from the destruction of illegal artisanal refineries

The Commission uncovered community testimonies about artisanal refining. This is where illegally syphoned crude is refined into consumer fuels for the local market by unemployed youth and traders working in connivance with state security personnel.<sup>213</sup> Artisanal refineries contribute to the overall contamination of production sites and the surrounding areas.

The artisanal refineries phenomenon is a product of governance, regulatory and response failures that resulted in the impoverishment of local people and limited access to energy in the Niger Delta and Nigeria generally. Many in Bayelsa and other parts of the Niger Delta are not connected to Nigeria's national electricity grid. Even for those connected, public electricity is notoriously unreliable, and government offices, businesses and affluent families invest in noisy and expensive electricity generators dependent on diesel and petrol. Within the cities and rural communities, low-income families use kerosene for cooking. The absence of an extensive railway network in the country also means that most transportation is by buses, car taxis and motorbikes that run on petrol and diesel. In Bayelsa, many residents travel between towns by motorboats that are expensive to fuel. Meanwhile, long-term corruption in NNPC's refineries resulted in their collapse and the chronic shortage of consumer fuels. For about two decades, Nigeria has imported most of its consumer fuels due to low domestic refining capacity, and despite millions of dollars expended

by the federal government to reactivate NNPC's moribund refineries. However, the fuel importation regime is often unstable, with moments of acute shortage of consumer petroleum fuels, such as during the last quarter of 2022 and in the build-up to general elections in February 2023, crippling whole regions of the country.

National fuel shortages were commonplace nationwide as Nigeria transitioned from military to civilian rule in 1999. With worsening poverty, some youths started scooping crude oil from spill sites, refining it into consumer fuels in the bushes. As the demand for illegally refined fuel increased amidst nationwide fuel shortages, more youths and traders began syphoning crude oil from pipelines for refining in bush camps where they use metal containers as pots to distil crude oil by cooking the product over boiling points to produce petrol, diesel and kerosene. Artisanal refineries supply consumer fuels to communities that would otherwise not have affordable access. Operators of artisanal refineries that spoke to the Commission claim that they supply over 90 percent of the kerosene available for domestic use in the Niger Delta, without which low-income families would be unable to cook their food. Artisanal refiners also contribute substantially to diesel supply, essential to business operations in the region's cities and elsewhere. A respondent narrated to the Commission how Nigerian Agip Oil Company (NAOC) staff in Bayelsa sometimes buy fuel from artisanal refiners to operate company vehicles.

*Naval officers set fire to an artisanal oil refinery camp.*





## Environmental impacts of artisanal refineries

Leaks occur when people illegally drill into pipelines to syphon crude oil and during the transportation of crude, sometimes on wooden boats (called Cottonou boats) and barges, to refining locations. At the refining sites, crude oil is stored in tanks, drums or open pits lined with plastic or tarpaulin sheets to prevent the product seeping into the ground. However, leakages occur, and the land around such reservoirs is often visibly polluted. Workers in the sites use buckets to scoop crude oil into the refining tanks. Crude oil is also used as cooking fuel to heat the tanks during the distillation process.

Furthermore, artisanal refiners do not have a safe method for managing waste products. There is damage to the local vegetation from cutting trees and fires. The air is polluted with hydrocarbon soot and could impact communities kilometres away.

Members of communities in Bayelsa State generally acknowledge the adverse environmental impacts of artisanal refineries, including the contribution to crude oil pollution. While there were incidences of sabotage of oil pipelines and other installations with the emergence of artisanal refineries, local communities fiercely contested the attribution of most spills to sabotage. All communities visited by the Commission insist that oil companies' attribution of a more significant number of oil spills to sabotage is an attempt to avoid liability, including the payment of compensation to victims of pollution.

*A naval officer punctures a barrel, releasing petroleum into wetlands.*





### Heavy-handed and environmentally damaging state security responses to artisanal refineries<sup>214</sup>

The Nigerian government continues to address illegal oil refining principally through Joint Military Task Force (JTF) raids on refining camps, which has not proved an effective long-term strategy. The Niger Delta has remained militarised since the 1990s when the military regimes established Joint Task Forces (JTFs) of soldiers from the army, navy, air force, police and the Nigerian Security and Civil Defence Corps (NSCDC) to pacify community protests and conflicts in Ogoniland and other parts of the Niger Delta. Successive governments have renewed mandates of the JTF to respond to different situations, including artisanal refineries. The security operatives deployed to the Niger Delta lack adequate training and do not seem to have a coherent strategy to deal with artisanal refineries.

The soldiers routinely destroy such facilities in ways that exacerbate environmental pollution, such as setting refining sites, crude oil reservoirs and refined products ablaze. Soldiers operating in Bayelsa State and other parts of the Niger Delta routinely burn Cotonou boats and other vessels laden with crude oil or refined petroleum products right on the creeks. Oil spills also result from such military actions, with fires creating more significant soot pollution than artisanal refining operations.

The JTF's activities have temporarily interrupted some refining operations, using brutal tactics that involve human rights abuses. Military responses 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". Community members and operators of artisanal refineries that the Commission spoke with insist that the military's dramatic actions are all a ruse to give the impression of performance during moments of heightened political pressure and to punish operators that do not pay bribes. Beyond attacking the artisanal refining camps and vessels, the military has had little impact on the organised trade in

crude oil theft for national, regional and international markets. In 2012, the JTF claimed it carried out 7,585 creek patrols. These claimed to have destroyed 4,349 illegal oil refining camps, captured 133 barges, 1,215 Cotonou boats, 187 tanker trucks, five storage tanks, and 18 seagoing vessels suspected of carrying stolen crude or illegally refined products. Given the ease with which illegal camps can be rebuilt, most camp owners and workers interviewed did not see the JTF's activities as a significant long-term threat to their activities.

The reality is that illegal oil refining is too ingrained within the local economy for violent, ad-hoc military raids to contain it. As recently as 2022 1,800 illegal oil refining sites and sea robbery camps were destroyed and 699 suspects were arrested for complicity in crude oil theft, and pipeline vandalism. Yet at the same time the scale of oil theft grew considerably. In the first half of 2022 an estimated US \$7 billion of crude oil was stolen. The Nigerian National Petroleum Corporation (NNPC) admits losses of 470,000 barrels per day but industry experts estimate that the figure could be as high as 600,000 bpd. The loss of livelihoods, lack of opportunities for young people, and limited access to energy services, including the well-known shortage of refined consumer fuels, particularly in riverine communities, all contribute to incentivising the proliferation of artisanal refineries. There is a need for an integrated approach that combines a reformed and informed law and order approach with initiatives that address the underlying causes and drivers of artisanal refineries. Well-planned clampdowns that respect human rights, local norms and the environment could be part of a larger, cross-cutting strategy for combating illegal oil refining. However, without alternative livelihoods, improved service delivery and legal product distribution networks, illegal refiners will find other ways to thrive as camp operators can quickly rebuild their operations in new locations.

## Divestment

There are issues surrounding liability and legacy with respect to oil and gas infrastructure, production and exploration and associated related pollution, in the context of divestment, i.e. where IOCs sell off their assets to “indigenous companies” and shift operations to deep offshore areas.

For more than a decade IOCs have been selling off their onshore assets (which tend to be located in places where communities live), to Nigerian companies. In turn they have stepped up their investments offshore in more lucrative and less exposed (to community challenges) deep water extraction sites. Asset sales have tended to take place in secrecy, with limited public oversight with respect to questions of liability for (past and future)

pollution damage associated with sold assets, which has been determined contractually between buyer and seller, rather than by regulatory authorities. Changed ownership from international to national companies, has made it more difficult for communities and their representatives in Bayelsa to get their voices heard by Nigerian companies, either through the courts or through protests.

### Case study: Pollution and divestment in Nembe

A particularly significant case is that of Nembe, where Shell divested its 30 percent asset share (of OML 29 and the Nembe Creek Trunk Line), for which it had been the operator of a JV with NNPC to Nigerian company Aiteo in 2014/15. This took place four years before the oil mining lease (OML 29) was due to expire in June 2019 (the lease has since been renewed). The case raises questions of responsibility for clean-up and remediation and how liability is shared and/or conferred, when IOCs have “divested” or “decommissioned” yet pollution impacts are ongoing.

Nembe LGA is the site of OML 29, containing 11 oil and gas fields which are Bayelsa’s largest and most productive onshore oil fields. The Nembe Creek Trunkline carries oil from OML 29 to an export terminal in Bonny. Nembe also contains oil fields operated by Eni (Agip). For over 30 years violent conflicts over oil-related goods have pitted different Nembe communities against each other. Relationships with IOCs have been central to these conflicts as has the award of clean-up contracts for oil spills management.

The circumstances in which divestment by Shell of onshore assets took place are non-transparent. DPR records in 2014, which is made up of 2013 data, was

already showing Aiteo as the owner of assets. The contract negotiations took place with the Ministry of Petroleum Resources, from which communities from Nembe were absent. There was little to no public discussion about the transfer of liabilities for pollution or compensation for cases pending (related to some of the spills listed below).

- Between 1985 and 2000 more than 50 cases of oil spills have been recorded and more than 500,000 barrels of crude oil have spilled into the swamps, creeks, rivers, and ocean<sup>215</sup>
- 17 spills since 2009<sup>216</sup>
- 2019: 1 March - Large spill which resulted in an explosion and 50 people were declared missing. NCTL (operated by Aiteo) shut down
- 2019: June-July – oil spill at Obama (Agip) flow station
- 2021: Santa Barbara wellhead blowout

Anecdotal evidence suggests that since Aiteo took over from Shell, the number of spills has increased as have the volumes lost through systemic leakages and theft, with increased associated environmental impacts.

## Asset divestment, legacy Issues, challenges

Since 2010, Shell has been implementing a divestment strategy, divesting from its onshore and shallow water assets, in order to concentrate offshore, for commercial reasons.<sup>217</sup> Between 2010 – 2015 RDS has earned US \$4.8 billion from the sale of its assets.<sup>218</sup> Yet divestment does not mean withdrawal, but a shift to deep offshore areas.

Ostensibly divestment is also a strategic decision as a result of threats to the industry. Such threats include the illegal production and sale of oil, greater environmental rights awareness among community groups, and likely increased legal action against IOCs in local and foreign courts for environmental infractions. This heightens fear of incurring heavy costs in remediation of polluted sites and huge financial compensation to communities.<sup>219</sup>

According to the NGO ERA, the secrecy around the sale of OML29 to Aiteo was deliberately orchestrated to keep communities, who would have wanted to acquire part stakes in the assets themselves, or insist that liabilities of environmental remediation outstanding, out of the picture.

Special purpose vehicles were set up to allow the communities to participate in asset acquisition. Yet all assets in the end were bought and sold in Lagos. The regulators (DPR, NNPC, NOSDRA, Ministry of Environment) appear to have played very little, if any, role in the transactional – contract negotiation stage, with very little discussion about outstanding environmental pollution matters. If these issues had been raised, the scope would have existed for the seller to indemnify the purchaser with respect to issues that may have arisen as a result of damage that was already in place, even where there was no litigation pending.

## Nembe Santa Barbara Well 1 Blowout

Oil spills are not only caused by active operations nor are they quickly contained. On 5 November 2021, a blowout of crude oil from the inactive Santa Barbara Well 1 in Nembe Local Government Area (LGA) led to widespread contamination of surrounding land and waterways. The well is owned by Nigerian energy firm Aiteo, which initially blamed the blowout on sabotage prior to a JIV visit and report. The spill was captured in video footage as a high-pressure brown stream of crude oil that was liberally polluting creeks near the site. An initial investigative visit was apparently unable to approach the wellhead due to hydrocarbon fumes that saturated the atmosphere in the area. In the event, Aiteo struggled for over a month to contain the spill and ultimately had to seek the assistance of the US-headquartered specialists, Halliburton Boots and Coots, to seal the well.<sup>220</sup>

The Nembe incident raises questions about the circumstances surrounding Aiteo's asset acquisition in the period 2013-2015 and the more recently acquired OML 29 between 2015 and 2019, from former long-term owners SPDC (Shell) who divested their assets to concentrate on offshore development. The secrecy surrounding the acquisition and absence of prior community consultation has been challenged by those currently in litigation against Aiteo (and previously Shell) in the Bayelsa courts. The Nembe Santa Barbara blowout, and the divestment that preceded it, should serve as a test case for **how not to conduct asset divestment in the future**. Full environmental impact assessments and transparent community consultation should be a standard requirement before any asset divestment.

The Santa Barbara Well also suggests that new legislation should include firm provisions on who bears liability for pre-divestment oil spills. It is arguable that this should not be left to contract, but rather be captured in legislation that clarifies the obligations of all the parties involved when oil companies elect to divest from their assets. There should also be community participation in asset sales and divestment, with transparency over the status of Global Memorandum Of Understandings (GMOUs) signed with the divesting company. Provisions for community participation in asset interest acquisition should be included alongside environmental impact assessments as an integral feature of asset sales protocol. Regulatory bodies such as the Ministry of Environment and NOSDRA should be involved in the contract stage alongside the Ministry of Petroleum Resources.



### Nembe responses to asset divestment

For local communities, divestment of oil and gas assets to indigenous oil firms by Shell looks like an attempt by the company to avoid its ecological liabilities.

In 2015 Nembe communities placed a Caveat Emptor or 'buyer beware' to ward off would-be buyers of the danger of such business that includes not just assets but also environmental and social liabilities, notably what will happen to the unfulfilled obligations under the GMOUs. Nembe Chiefs Council wrote a letter to the Country Director of Shell at its corporate headquarter office in Port Harcourt regarding divestment of OML 29, requesting the following:

1. 10 percent equity participation in the divestment of OML 29
2. Complete the Nembe Gas Turbine for the years of deprivation
3. Fulfil commitment to SETRACO on the Ogbia- Nembe road under construction
4. Pay and discharge all outstanding GMOU obligations
5. Pay all ongoing scholarships (secondary and tertiary)
6. Diesel supply continues until the completion of Nembe Gas Turbine project. The community should recommend contractors
7. Turbine engines already in the country should not be disposed or reallocated but handed over to the community
8. Pay all outstanding obligations on previous pollution and spillages
9. Clean up and restore the environment, adopting international standards and procedures
10. Formally, introduce the incoming operator (company) to the community. All outstanding liabilities to be handled by new operators should be formally documented and agreed by the community and the parties concerned
11. There should be general goodwill payment, i.e ex-gratia.

Determining who bears liability for spills post divestment may depend on the type of divestment that occurs. In effect if Shell divests its assets to another company, then it may still be liable for a cause of action which arose pre-divestment, but may not be liable for a post-divestment cause of action. But this is complicated by the fact that a spill may occur post-divestment but actually be the result of pre-divestment negligence in the laying of a pipeline, or in failure to adopt certain procedures which may have prevented the spill from occurring. In such cases the divester may be called upon to bear responsibility.

**Specific recommendations related to the Aiteo asset acquisition from 2013-2015 and the recently acquired OML 29 between 2015 and 2019 should be developed after consultation with those currently in litigation, and, in view of the Santa Barbara Well 1 blow out month-long spill (November - December 2021), measures taken to identify clearly the precise oil spills profile in these cases and what the liabilities are. Nembe could have been a case study for how to conduct asset divestment responsibly with environmental impact assessment requirements as standard before any asset divestment.**

There is a lack of clarity in Nigerian law with respect to divestee liability. This has potentially serious negative consequences on the ability of communities to defend their rights to compensation, clean-up and remediation. First, they are less likely to be able to hold the divestee liable in the Nigerian courts for pollution impacts that are the result of negligence prior to sale, or take the new company to court internationally, given its registration as a Nigerian company. The legal frameworks particularly to liability for historical spills need to be assessed.<sup>221</sup>

## The Commission's impact studies

### A toxic legacy: The impact of pollution in Bayelsa State

The Commission has sought not only to identify the environmental, economic and health consequences of pollution, but also to identify irrefutable evidence of their underlying chemical causes. To do this, the Commission has sought, for the first time, to identify the toxic footprint that oil contamination has left on Bayelsa.

The Commission undertook two scientific studies to assess different facets of the pollution crisis.

The first study, the Environmental Impact Study, focused on the environmental impact. Working with Professor Allan Jamieson, an acknowledged leader in the field of forensic analysis, the Commission reviewed analysis of samples taken from 17 sites to test hydrocarbon-related toxin contamination levels in soil, water, air, selected animal species, as well as human blood and tissue.

The second study, the Human Health Impact Study was undertaken by the Commission to assess the impacts of pollution on human health. 1,600 blood samples were taken from volunteers from four LGAs in Bayelsa, with 400 samples from each community.

All sampling and testing for both studies was undertaken according to strict international standards. A detailed description of the methodology is laid out below.

### Scientific study methodologies

#### Environmental Impact Study

The Commission engaged leading forensic scientist Professor Jamieson and Dr Sarah Gomes to critically peer review an environmental impact study commissioned by the Bayelsa State Government in 2019. This study was conducted to identify the effects of hydrocarbon pollution on critical elements of the environment in Bayelsa. Samples were taken from multiple locations across 17 localities in seven LGAs in Bayelsa. The sampling locations were selected from sites based on their ecological features, geographical proximity to a spill site, and their locations within a two kilometre radius of a major oil facility. Soil, groundwater, surface water, sediments and samples of plants and aquatic organisms that often enter the human food chain were collected at multiple sites in each location to assess for contamination. Air samples were also taken. The United States Environmental Protection Agency (USEPA) method was used for the field sample collection.

The results of the testing were then reviewed in depth by Professor Jamieson, who visited Bayelsa accompanied by Dr Sarah Gomes to meet with the research teams, visit some of the laboratories where samples were tested, and to review the data and reference material included in the original report.

*Farmland is frequently ruined by oil contamination, destroying local livelihoods.*



## The analysis of the samples focused on five groups of contaminants:

### 1 Polyaromatic Hydrocarbons (PAHs).

PAHs are a group of over 100 organic compounds that occur naturally in crude oil. Their distillates are produced when hydrocarbons are burned. While further work needs to be done on the health effects of PAH exposure, there is general acceptance that they pose a health risk, particularly in relation to cancer. As a consequence, jurisdictions such as the US have set recommended limits for workplace exposure.

### 2 Total Petroleum Hydrocarbons (TPHs).

These are a family of several hundred chemical compounds that derive from crude oil. The compounds have different effects and exhibit different properties. Some are soluble, while others float on water or may evaporate, affecting air quality or groundwater. Others are not soluble and may contaminate land or sink to the bottom of water courses to pollute sediment. Many of these compounds are associated with potential adverse health effects.

### 3 Heavy metals.

Heavy metals covers a large group of metals known or thought to be associated with environmental damage, including manganese, iron, copper, zinc, lead, nickel, cobalt, cadmium and chromium. The toxicity of these elements is well documented through a range of studies including analysis conducted by the WHO and national health agencies. Heavy metals are associated with increased risks of cancer and other chronic diseases. A number of these can also cause serious acute symptoms and are dangerous even at very low concentrations. For instance, chromium can cause serious pulmonary damage even at concentrations of just a few parts per million, while lead can cause organ, neurological and cognitive damage, especially in children, culminating in death at excessive levels of exposure.

### 4 Inorganic compounds and particulates.

These include gaseous compounds such as nitrogen dioxide, sulphur dioxide, carbon monoxide and ozone, as well as particulate matter. These pollutants are associated with respiratory diseases and, in high concentrations, can cause serious health effects. Gases like sulphur dioxide are also key contributors to acid rain.

### 5 Volatile Organic Compounds (VOCs).

This is a broad family of compounds generated primarily through industrial processes, such as the burning of hydrocarbons. Like heavy metals, many VOCs are highly toxic. For instance, two of the more common VOCs, benzene and benzopyrene, are high risk carcinogens strongly associated with the development of leukaemia. Moreover, even brief exposure to the former in high concentrations can lead to death within minutes, while lower doses can cause a range of symptoms, including tremors, elevated heart rate, vomiting and unconsciousness.



### Human Health Impact Study

A second study was carried out to identify evidence of the health impacts of hydrocarbon pollution on individuals in Bayelsa. It was conducted among adults and children in four selected LGAs: Yenagoa, Kolokuma-Opokuma, Ogbia and Sagbama. For the purposes of the study, Yenagoa and Ogbia served as exposed LGAs, while Kolokuma-Opokuma and Sagbama served as the control.

Nine-person multidisciplinary study teams, including data collectors and laboratory scientists worked in each of the four LGAs. A cold chain was maintained throughout and analysis was undertaken in two processing laboratories, one in Nigeria and the other in Asia.

The study assessed and compared the blood levels of selected heavy metals and full blood count parameters in oil impacted and non-oil impacted communities in Bayelsa. It compared the morbidity pattern and incidence of cancer and other diseases in selected oil impacted and non-oil impacted communities in the state. It also used a cross-sectional comparative study design with a household survey and data abstraction from medical records leading to both primary and secondary data analyses.

The results are stark. The environmental impact study found high concentrations of dangerous toxins, far in excess of internationally recognised safe limits, across practically every site.

PAH levels exceeded safe values in virtually every sample taken, in some cases by considerable amounts. As indicated in the graphs that follow, **every single ground water sample exceeded the recommended maximum safe level by at least 100 times, with one of the samples taken from Egbeiri exceeding the WHO limit by over 1 million times.**

High levels of PAHs were also found in the surface water and sediment samples, as well as those of surface and deeper soils, and in most cases were significantly above safe limits. The study also found evidence that these concentrations had found their way into the food chain in a number of locations. In Egbeiri, as well as Ikarama and Kalaba, the analysis found that a number of species in the food chain, including catfish and crabs, all showed high concentrations of contamination.

**A similar pattern of contamination was seen for TPHs. Virtually all samples breached safe levels. In the case of surface water, every reading taken was at least 300 times the maximum target value, with the samples taken in Kiminini exceeding the recommended maximum by over 700,000 times.**<sup>222</sup>

**CONTAMINATION  
X300  
MAXIMUM  
TARGET VALUE  
SAFE LEVELS**

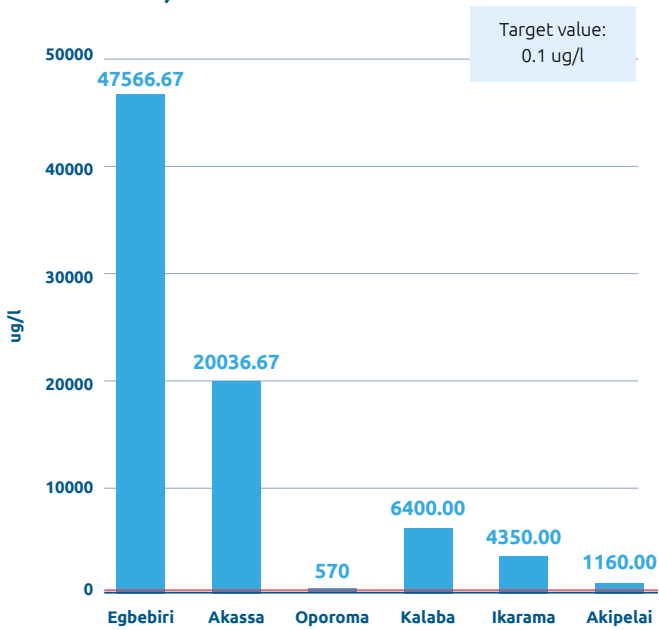


**CONTAMINATION  
X700,000  
MAXIMUM  
TARGET VALUE  
IN KIMININI**

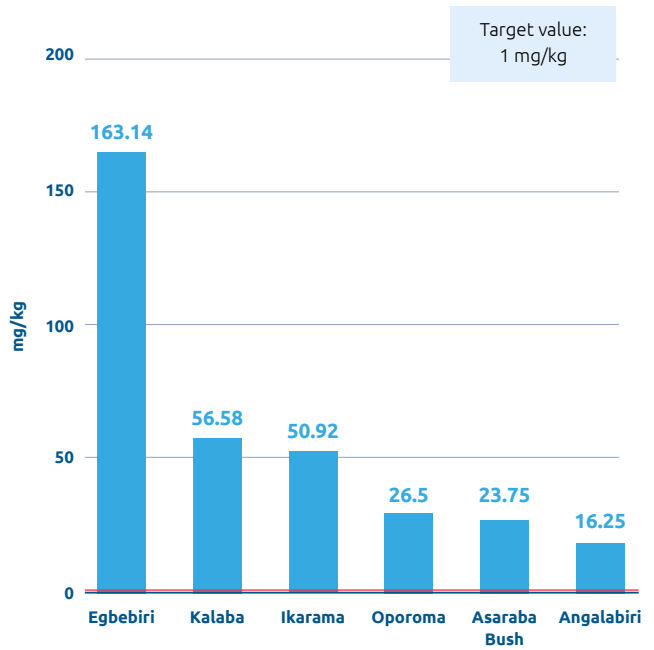


As indicated in the graphs below, every single ground water sample exceeded the recommended maximum safe level by at least 100 times, with one of the samples taken from Egbebiri exceeding the WHO limit by over 1 million times.

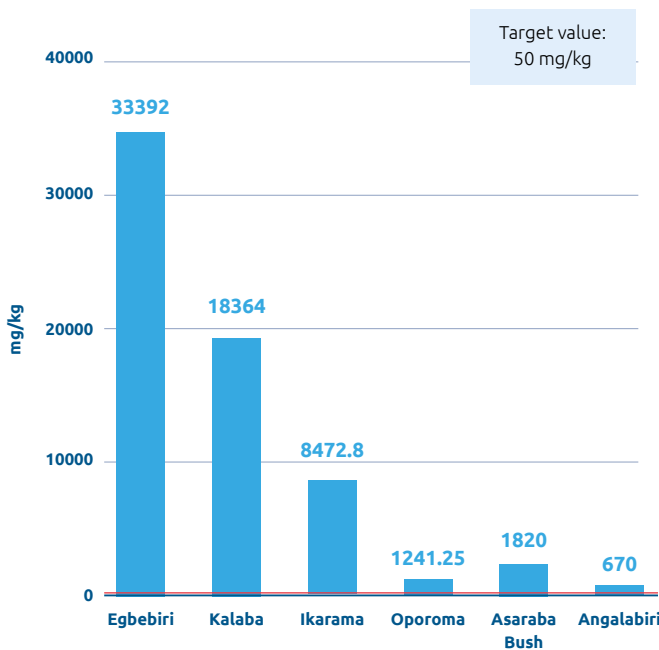
**Polyaromatic hydrocarbons (PAH) in ground water and sediment and total petroleum hydrocarbons (TPH) in sediment and surface soil. The red line indicates the target value (WHO threshold).**<sup>223</sup>



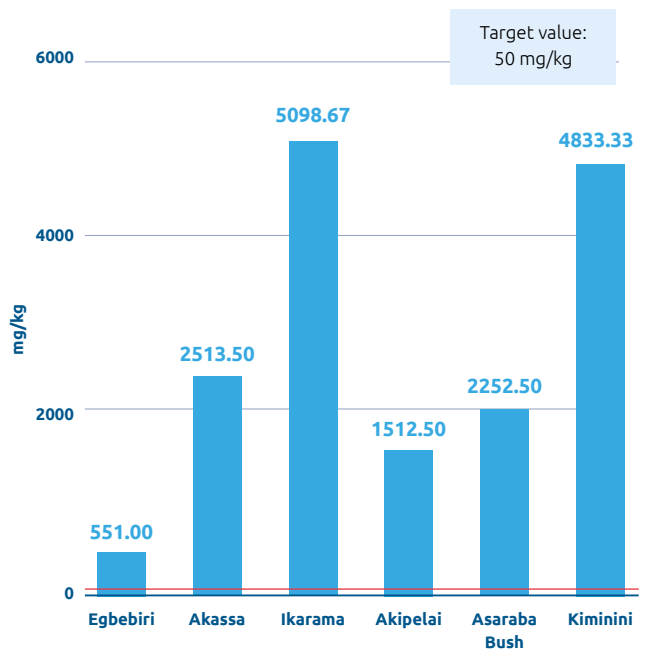
AVERAGE POLYAROMATIC HYDROCARBONS (PAH) IN GROUND WATER IN OBSERVED SAMPLES AT SELECTED SITES



AVERAGE POLYAROMATIC HYDROCARBONS (PAH) IN SEDIMENT IN OBSERVED SAMPLES AT SELECTED SITES

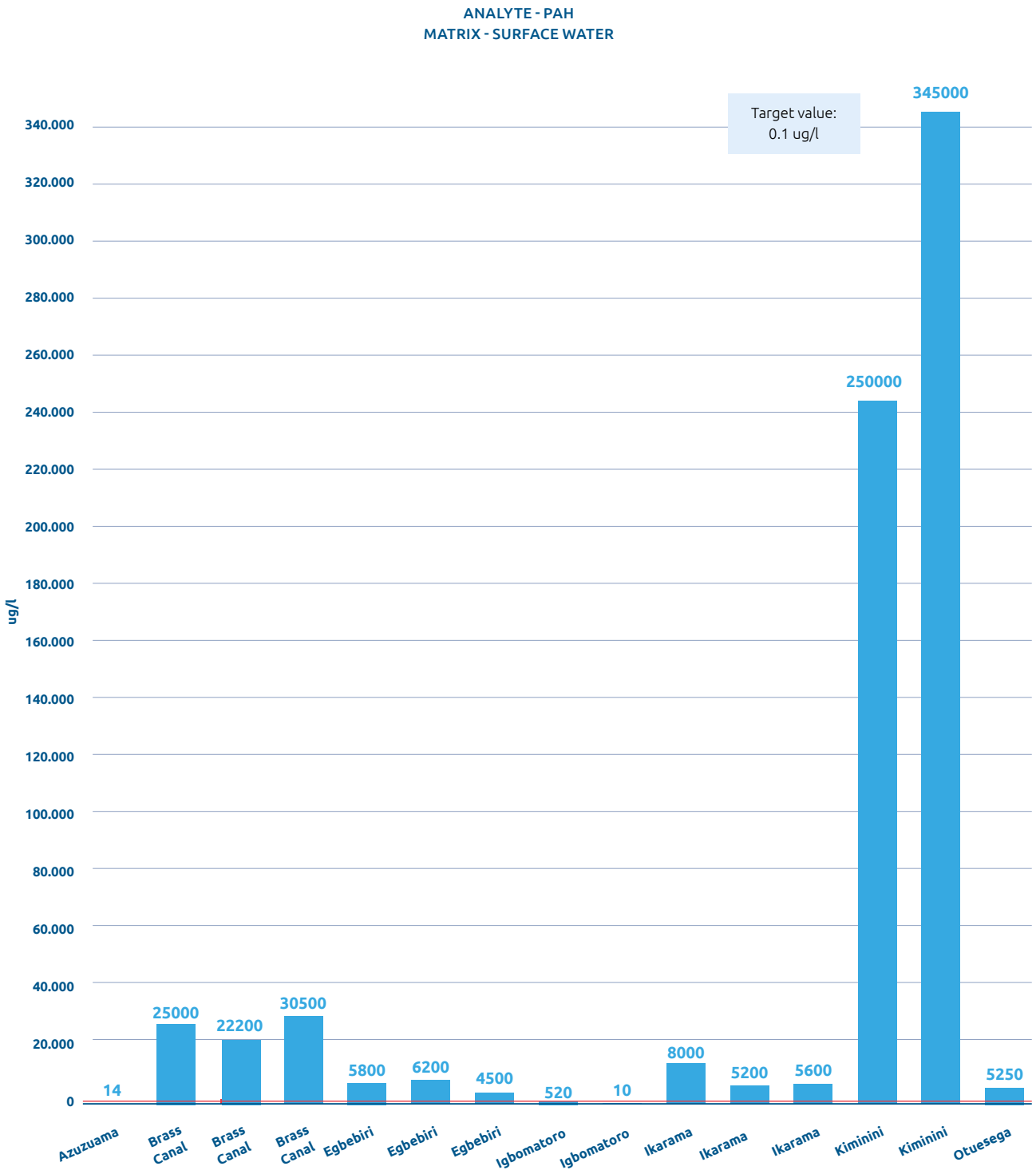


AVERAGE TOTAL PETROLEUM HYDROCARBONS (TPH) IN SEDIMENT IN OBSERVED SAMPLES AT SELECTED SITES



AVERAGE TOTAL PETROLEUM HYDROCARBONS (TPH) IN SURFACE SOILS IN OBSERVED SAMPLES AT SELECTED SITES

A similar pattern of contamination was seen for TPHs. Virtually all samples breached safe levels. In the case of surface water, every reading taken was at least 300 times the maximum target value, with the samples taken in Kiminini exceeding the recommended maximum by over 700,000 times.<sup>224</sup>





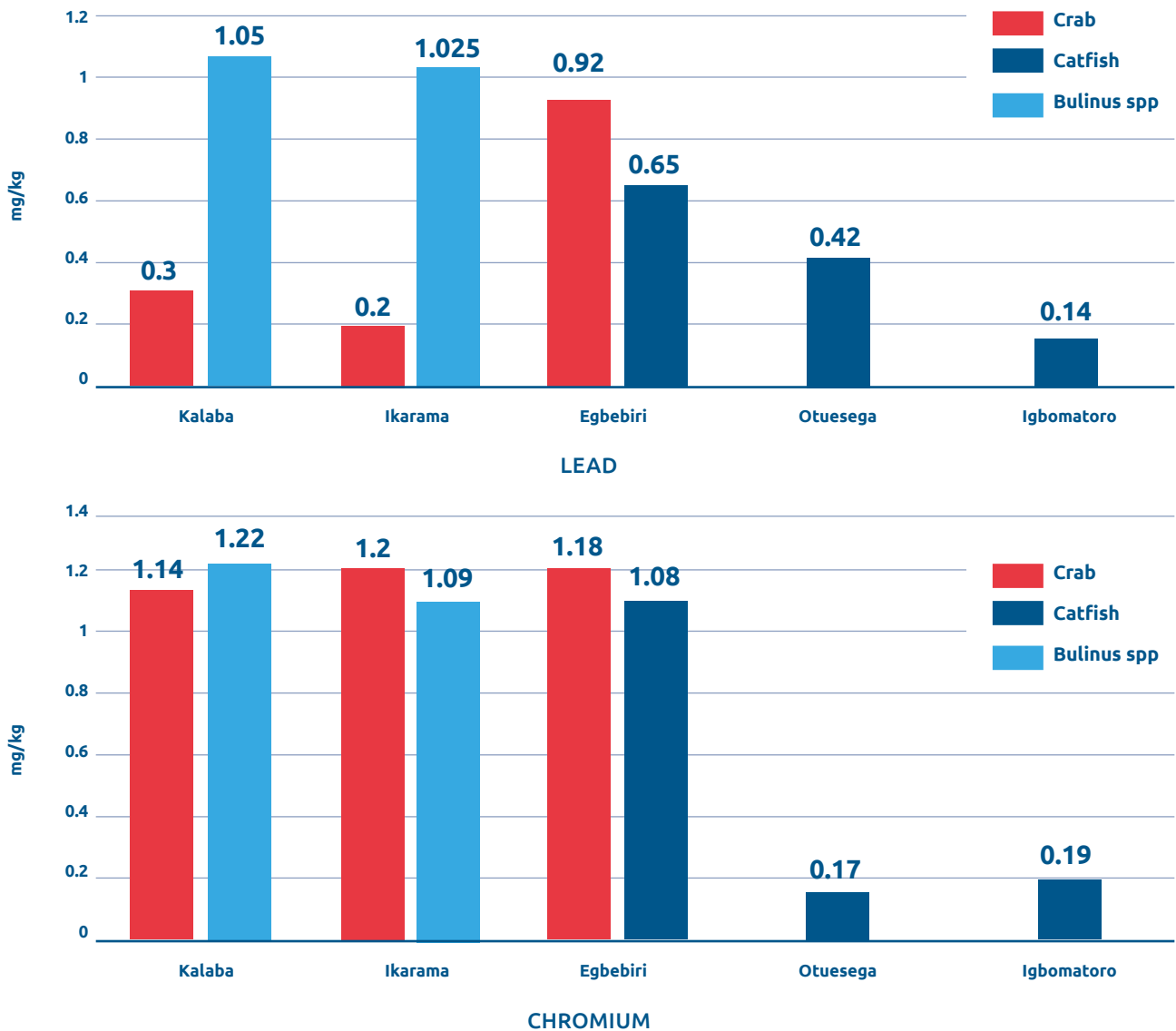
With the exception of copper, the study found all other heavy metals at concentrations much higher than stipulated regulatory values at almost all locations. Lead was found above regulatory limits at all locations, as was chromium; in many cases, the concentrations were dramatically higher than safe limits. For example, readings for chromium in ground water showed unsafe concentrations at every site, with every location on the Brass Canal exceeding the WHO target values by a factor of at least 40, and some breaching the values by over 1,000-fold.<sup>225</sup> These results echo those reported in a 2013 International Union for Conservation of Nature (IUCN)

study in Nembe, which found high levels of chromium in surface water, and high levels of both the metal and cadmium in sampled sediment and soil.<sup>226</sup>

Similarly, cadmium – which the WHO classifies as one of its priority poisonous metals – was found in the sample areas at levels which significantly exceeded regulatory limits, as was nickel, in the soil, groundwater and in the air.

Reflecting this, high concentrations of heavy metals were found in the food chain across testing sites, including chromium, cadmium, zinc, nickel and lead.

### Average lead and chromium in animals in observed samples at selected sites<sup>227</sup>

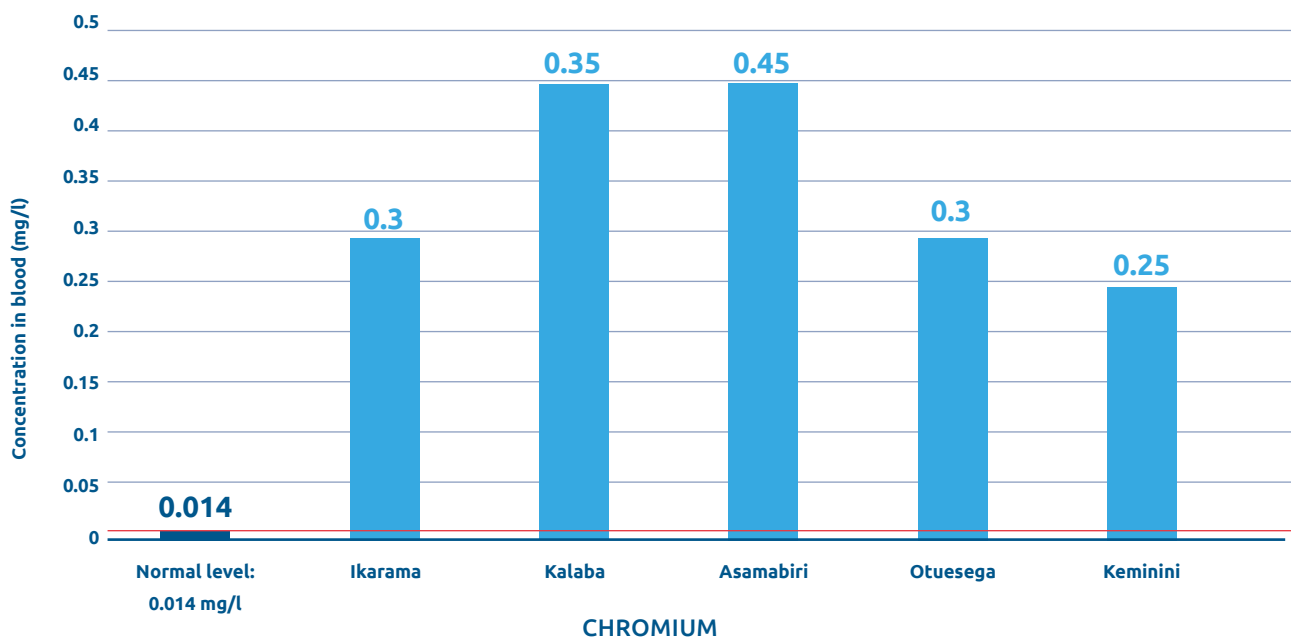
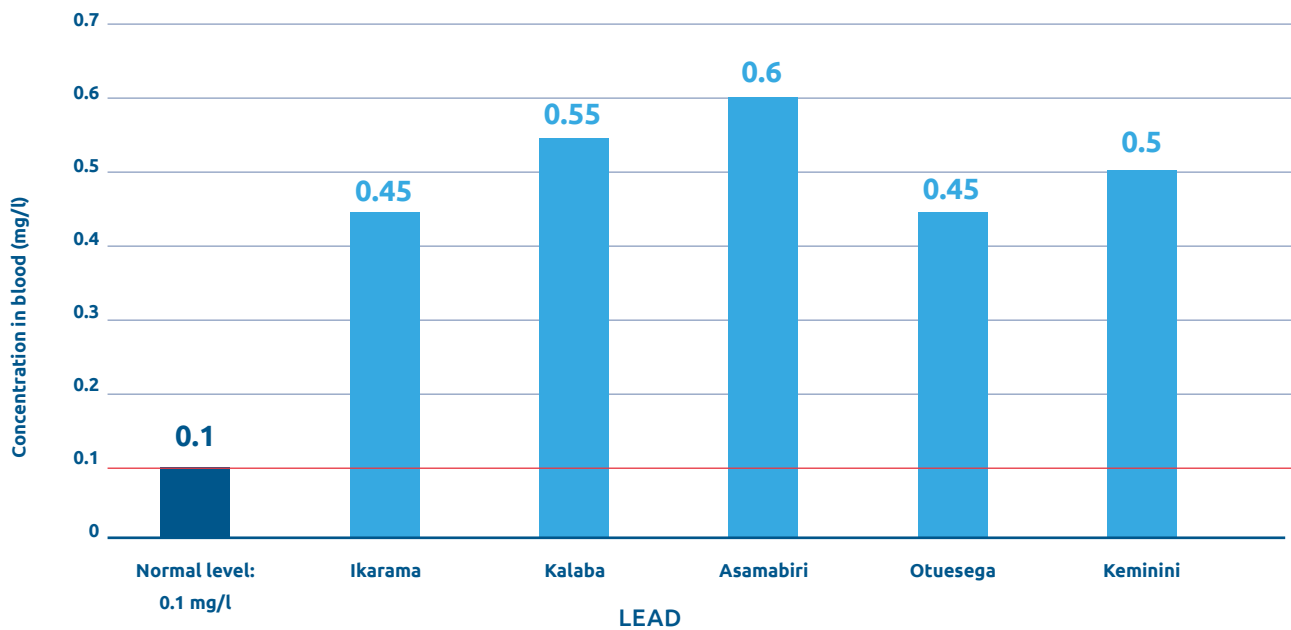


Unsafe levels of some heavy metals were even found in the air. For instance, at Ikarama, nickel levels of 1.4 mg per cubic metre of air were recorded. Based on the readings taken across the test sites, Professor Jamieson estimates that **Bayelsans inhale between 10 and 28 mg of nickel a day. According to the WHO, nickel inhalation induces respiratory tract irritation, chemical pneumonia and**

**emphysema, as well as being carcinogenic. Given the health risks, the organisation states that 'no safe level for nickel compounds [by inhalation] can be recommended'.**<sup>228</sup>

Critically, but perhaps unsurprisingly given these results, levels of nickel and zinc exceeding safe limits were also found in the bloodstreams of test subjects in locations where blood samples were taken.<sup>229</sup>

### Levels of lead and chromium in human tissue at selected sites<sup>230</sup>



While levels of inorganic compounds in the air were broadly within stipulated limits, VOC levels were problematic, exceeding safe limits with densities in the air sampled of between 350 and 750 parts per million (ppm).

These findings on air quality in Bayelsa corroborate and reinforce research undertaken in other parts of the Niger Delta. A 2019 study of gas flaring in communities around SPDC facilities in Gbarain Ubie in Southern Bayelsa showed that levels of all gaseous pollutants, with the exception of carbon monoxide, exceeded the limits set by Nigeria's Ministry of the Environment.<sup>231</sup> Even more alarmingly, levels of total suspended particulate matter exceeded government limits by between 10 and 15 times. These findings were corroborated by other studies showing particulate matter concentrations at four sites across the Niger Delta that significantly exceeded both Nigerian Government and WHO limits. Sulphur dioxide limits were also exceeded in some cases.<sup>232</sup>

These results were mirrored in part by the findings of the human health study.<sup>233</sup> This study confirmed that people living in areas with higher levels of oil pollution had

increased levels of zinc in their bloodstreams, although the levels of other metals did not appear elevated.

**The study's qualitative data also confirmed that those living in pollution-affected areas reported a higher prevalence of allergic reactions as well as acute and chronic illnesses.** It also found that children living in affected areas were more likely to be underweight. These findings are consistent with those of a previous independent study that analysed four years of medical records taken from communities exposed to gas flaring.<sup>234</sup>

**Taking all the scientific findings together, the evidence from the Commission's testing is clear. Toxins from hydrocarbon pollution are present at often dangerous levels in the soil, water and air across Bayelsa. They have been absorbed into the human food chain. And they have ultimately found their way into the bloodstreams and tissue of people living in affected communities.**

*Dead fish in contaminated water near an Agip flow station. Fishing is an important income source and a local staple food.*





## Counting the costs – the consequences of pollution

Decades of oil pollution have bequeathed Bayelsa a toxic legacy, with testing showing an environment saturated with harmful pollutants. This legacy has imposed huge costs on the state and its people.

### The environmental cost

The pollution crisis has had a devastating effect on almost every facet of Bayelsa's environment. Internationally, decades of research has charted the highly adverse impact oil pollution has on wildlife and the natural environment. This section seeks to provide a snapshot of some of the evidence the Commission has seen and give a sense of the scale of the environmental disaster that has unfolded.

Chapter One introduced the Niger Delta's unique landscape of swamp, mangrove forest, farmland and waterways. **The Niger Delta, which boasts the largest mangrove forest in Africa and the third largest globally, is Africa's largest wetland.** 80 percent of the Niger Delta's 12,000 km<sup>2</sup> of mangrove vegetation is distributed across just three states – Bayelsa, Delta and Rivers.<sup>235</sup> As much as 36 percent of Bayelsa's total landmass – over 3,500 km<sup>2</sup> – is covered by mangrove forests. It is an area of immense environmental value, acting as a key biodiversity hotspot and providing a critical habitat for the animal and plant life upon which so many of the state's residents depend.

**But the Niger Delta's ecosystem is also intensely fragile. Since oil production began, up to 40% of the Niger Delta's mangrove forests have been lost.<sup>236</sup> This translates into the loss of 2,500 km<sup>2</sup> of forest area in Bayelsa alone.<sup>237</sup> A 2016 study found that the Niger Delta accounts for 27% of all mangroves around the world that are potentially threatened by oil spills.<sup>238</sup>**

While other factors such as over-harvesting of timber have exacerbated the damage to the region's mangroves, oil pollution and activities associated with the oil industry, such as waterway dredging and the removal of

barrier islands, are among the primary causes of forest destruction. Development of oilfield infrastructure in the mangrove areas of the Niger Delta is often preceded by dredging and/or vegetation clearance to create navigable accesses. During dredging, the soil, sediment and vegetation along the right of way of the proposed site are removed and typically disposed of over bank, and in most cases upon fringing mangroves, and then abandoned. Abandoned dredged material has altered topography and hydrology and led to acidification and water contamination, all of which has resulted in vegetation damage and loss of marine life. After several years of natural weathering, former mangrove areas have become altered into either bare heaps, grassland or freshwater forest. The altered topography has, among other factors, also prevented the natural re-establishment of lost mangrove forests.<sup>239</sup>

The extent of local deforestation has driven broader negative shifts in many of the state's wetland ecosystems, with the loss of canopy cover and sediments that the mangroves anchored, leading to a loss of habitat for a broad range of animal and plant life.<sup>240</sup> Tropical forests are complex ecosystems and when destroyed or polluted recover only slowly at best.<sup>241</sup> Mangroves are not only crucial in providing protection against marine erosion and salt intrusion but are indispensable to the reproduction of many fish and crustacea which are central to the livelihood of Delta communities.<sup>242</sup>

This dynamic has been reinforced by some of the other effects of oil pollution, both direct – through the poisoning of populations and the introduction of dangerous toxins into the food chain – and indirect, for instance through the inhibiting of photosynthesis and the reduction of oxygen levels in waterways.<sup>243</sup>

During its evidence-gathering sessions in Bayelsa, the Commission heard individual accounts of environmental destruction as a result of oil production.

*“As a young girl, we used boats to go to the forest to pick periwinkles and to kill crabs, prawns, crayfish and oysters. But when I got to secondary school, all we saw was oil in the forest. As the water flows, it takes the crude oil everywhere. No more periwinkles to pick again. No more crabs in the river.”*

**Community leader, Twon Brass**

*“We can no longer teach [our children] how to pick periwinkle. Even crabs cannot be found again. All our children see is crude oil flowing into the creeks and farms and rivers. The bitter leaves and pepper that we plant are not growing again.”*

**Female, Twon Brass** <sup>244</sup>

Once known for its thriving fisheries, Brass's landscape has been decimated by oil pollution. A fisherman spoke of the change he has seen over 40 years.

*Oil production has led to the destruction of the natural environment through dredging, vegetation clearance and pollution.*

*“There are crude oil points, and when the pipeline is bad, the whole place is uprooted and made barren. When we were young, we saw white and colourful birds...but now you cannot count one.”*

**Fisherman and community leader, Akassa** <sup>245</sup>

*“The land no longer supports farming as crops do not grow anymore. Some of fish have disappeared from the rivers of the community. When it rains, we used to catch water, but this is no longer the case, as when you collect rainwater, it is filled with chemical sand and black objects.”*

**Traditional ruler, Okoroma Clan, Nembe LGA** <sup>246</sup>

Similar stories were heard during the Commission's visit to the Aghoro community concerning spills over the last twenty years that led to the permanent destruction of mangrove creeks.







### Oil spill in Ekeremor LGA, Bayelsa, 2018

In Ekeremor LGA, a community leader reported concerns to SPDC in May 2018. She raised the alarm over the oil spill from the Trans Ramos pipeline and also about the alleged intimidation of community leaders of Aghoro 1 who were involved in the investigation of an oil spill that occurred in the area. The spill caused destruction to aquatic life and hardship for the communities who had no fresh water to drink for several weeks.

A reconnaissance visit by members of the BSOEC Secretariat to Ekeremor in 2018, prior to the establishment of the BSOEC, saw a site devastated by the oil spill, with the local communities concerned that they had not been supplied with fresh water, and that their children were reporting strange illnesses. Only when the incumbent Deputy Governor of Bayelsa State visited the spill site with national media and some much-needed relief materials for members of the community such as drinking water and food, concerted efforts to address the spill began.

The community leader said “they have contaminated our communities and we have no drinking water. All the fish and mangroves have died and they want to force us to sign a JIV report. We will not accept this.”

A visit by the BSOEC to the community in November 2019 reported that the spill was still continuing, 18 months later.

The clean-up and remediation were completed on 21 February 2020.<sup>247</sup>

In Yenagoa LGA, the Commission heard that in the past, the river was dredged without community consent for one year, which led to the community suffering from frequent flooding and constant river bank erosion with land and, eventually, houses lost over a number of years. Similarly, rain water used by local people was said to be contaminated from nearby gas flares that burn daily.

In a site visit to Southern Ijaw, the Commission witnessed the environmental degradation first-hand. During a visit to Oyeregbene, the Commission was told that oil had repeatedly spilled from an 18 inch Eni (Agip) pipeline, leading to devastation of adjacent mangrove swamps that were stripped of mangroves, foliage and vegetation.



### A poor clean-up attempt by Eni (Agip)

The Commission personally witnessed the damage caused by oil spills during several visits to the Eggebiri and Okordia communities in Bayelsa. A team led by the Commission's Chair, former Archbishop of York, Lord John Sentamu, in 2018, examined the environmental destruction caused by equipment failure at a local well operated by Agip (Eni), that led to an estimated 200 barrels of crude oil being spilled. The Commission was appalled by what they found. The spilled oil had affected an area covering 5,420 metres and destroyed local vegetation and wildlife.

A further trip in 2019 to the same site, resulted in the Commission finding 20-30 members of an Eni clean-up crew. The leaders of the clean-up crew were speaking amongst themselves and asking who the visitors were. Bishop Lord Sentamu who spoke Arabic translated to the Commission that they said the workers were having to clean-up as a result of an "interfering priest that had visited the site". Bishop Lord Sentamu informed the crew that he was that "interfering priest".

Unfortunately the Commission saw that the clean-up crew's efforts – which the Commission believed were expedited due to their visits – were not going to leave the affected communities any better off. The crew was scooping up the oil from the pond and pouring it into a hole that they had dug on land and burning the oil in the hole. This was an illegal activity that would have resulted in the oil seeping into the ground and groundwater. A neighbouring community complained that their yams had shrunken and/or were growing disfigured.

The resulting impact of environmental pollution is often a dramatic fall in critical animal populations. A 2003 study on the impact of pollution on turtle numbers across the Niger Delta found that the turtle population was almost six times lower in polluted areas.<sup>248</sup>

Similarly, research on the impact of two major spills in neighbouring Rivers State found a 91 percent decline in the number of species after pollution incidents.<sup>249</sup> Key populations that anchored the ecosystem and provided an important source of food for both marine life and humans were completely wiped out.<sup>250</sup>

**In 2015 during a visit to Ekeremor, after the Commission navigated through the creeks in Bayelsa for five hours, Bishop Lord Sentamu remarked at the end of the day that he had not seen a single bird on the Commission's journey that day. What should be a lush environment for flora and fauna, was entirely barren.**

It is not just waterways that have been contaminated, farmland has been destroyed too.<sup>251</sup> As will become evident in the next section, oil sector activity has introduced toxins into the human food chain and significantly reduced the yield of affected farmland, thereby contributing to a loss of earnings and food insecurity.<sup>252</sup>

**Pollution's effects on the Niger Delta and Bayelsa are not just extensive, but also long lasting. A 2011 United Nations Environment Programme (UNEP) report on the impact of oil pollution in Ogoni in neighbouring Rivers State, found that 18 years after oil production in that region had ceased, the impacts on the environment would take as much as 30 years to be ameliorated.**<sup>253</sup>

The absence of a similar full assessment of the extent of environmental pollution in Bayelsa was lamented by many of those the Commission met with, and is one of the main reasons why the Bayelsa State Government took the decision to set up the Commission. Whilst the Commission has been able to make significant strides in shedding light on Bayelsa's environmental problems, the need for a full environmental assessment of Bayelsa remains.



## The economic and social cost

The degradation of Bayelsa's environment has implications that go significantly beyond the destruction of the local natural biosphere. **In a state where 75 percent of the population rely on subsistence agriculture or fishing to make a living, pollution and its impacts have huge ramifications for local peoples' livelihoods.**

Research across the globe demonstrates that oil pollution dramatically reduces the incomes of affected communities, and the Niger Delta is no exception. The evidence is stark. A study of 13 fishing communities affected by oil pollution in the Niger Delta found that 88 percent of respondents saw their businesses fall into loss following oil spills. Catches and income dried up completely in the immediate aftermath of spills and only recovered slowly after remaining depressed for years after the events. The significant loss of livelihood following spill incidents led 43 percent of respondents to change their means of subsistence and another 25 percent to consider abandoning their current business.<sup>254</sup> As well as reducing incomes and employment in the area, spills had also driven price rises that local people could ill afford, as goods that were previously sourced locally had to be brought in from outside.

Much of the available data on economic effects comes from neighbouring Rivers State due to high-profile court cases related to instances of pollution. In Bodo, a host community known for suing Shell for oil spills, a comparative study found that incomes from shellfish collection in the polluted areas of the Creek were only roughly 40 percent of those generated in comparable non-polluted communities.<sup>255</sup> The spills in these areas wiped out the periwinkle population. A post-spill study of the area did not find a single living specimen, resulting in local women who had previously generated incomes of 500 Naira (US \$1.22) a day from harvesting them being forced to find other employment in a neighbouring state.<sup>256</sup>

In Bayelsa, studies conducted over the last few decades have highlighted the devastating impacts of oil pollution and gas flaring on livelihoods. A survey of 150 respondents on the impact of gas flaring in Ogbia LGA published in 2009 found that over 40 percent of the respondents believed that gas flaring undermined their socio-economic wellbeing. In addition, farm households claimed that flaring by oil companies in Ogbia reduced their agricultural output and income from farming activities.<sup>257</sup> Another study on the impact of oil pollution in the Epebu community, also in Ogbia LGA, concluded that oil spillage had greatly affected the livelihoods of the community's people by destroying forests and trees, causing untold damage to economic

activities and agricultural production along with destruction of fish stocks in ponds and other waters.<sup>258</sup> Specifically, prolonged gas flaring, oil spillage, and other forms of pollution have decimated local wild palm trees. In addition, the extension services of the Nigerian Institute of Palm Oil Research (NIFOR) in Bayelsa have been affected by the degradation of the environment by the oil companies. As a result, the tapping of palm trees has virtually ceased and poor harvests have also been experienced by farmers across the state to the extent that they have had wider negative impacts on food production.<sup>259</sup>

The effects of spills are not just confined to fishing. A 2012 study in Rivers State found that polluted crop farms had an average output 22 percent lower than those that had not been exposed to pollution.<sup>260</sup> This tallies with evidence from the Bodo spills, where a 2011 report found that average yields for staples such as yams and cassava fell dramatically after a pollution incident and remained depressed for a number of years afterwards.<sup>261</sup>

These findings are supported by research into the production rates of 262 farms across neighbouring Delta State, lying to the west of Bayelsa, which confirmed that as spill intensities rise, yields fall. Typically, a 10 percent rise in pollution depressed yields by a corresponding 5 percent.<sup>262</sup>

These deleterious effects are not limited to oil spills only, as a wide range of polluting activities have generated negative impacts across the length and breadth of the Niger Delta. A study from Imo State found that crops grown within 200m of a flare station suffered a 100 percent loss in yield, while those grown 600m away from the station saw their yield plunge by 45 percent.<sup>263</sup> Even farmland a kilometre away from the flare experienced a 10 percent fall in its output.<sup>264</sup> Other research has also found significantly elevated incidences of toxins in crops farmed on tainted land with, for example, increased levels of lead and cadmium by as much as 90 percent and 94 percent respectively in local pumpkins. The same study found that crops farmed on contaminated land have a far lower nutritional content, with the protein content of cassava, for example, being reduced by 40 percent in samples taken.<sup>265</sup>

**In 1995, author and campaigner Ken Sarowiwa was charged with incitement to murder and was executed by Nigeria's Military Government. Shell, in 2009, agreed to pay US \$15.5m (£9.6m) out of Court in a settlement of a legal action – reached on the eve of the trial in a Federal Court in New York – which accused Shell of collaborating in the execution of Ken Sarowiwa and nine Tribal Leaders (the Ongoni Nine).<sup>266</sup>**



## Community testimonies

These studies echo the testimonies the Commission has heard from across Bayelsa about the ruinous effects of oil pollution on the ability of families and communities to support themselves. A small sample of these stories is outlined in the box below.

### BSOEC Hearing, Ogbia

“The community has suffered from air pollution and infants have been the worst impacted; there are several cases of rashes on children due to gas flaring and spills. Also, the waterways used to be livelihood structures that supported livelihoods like fishing.

**Community leader, Otuokpoti**

### BSOEC Hearing, Brass

“We have a lot of problems from this oil and gas pollution. If you go to the waterside, you can see how we are suffering; we cannot catch fish again, the fish is polluted, you can't make money from the river because of the pollution.

**Traditional ruler, Twon Brass**

### BSOEC Hearing

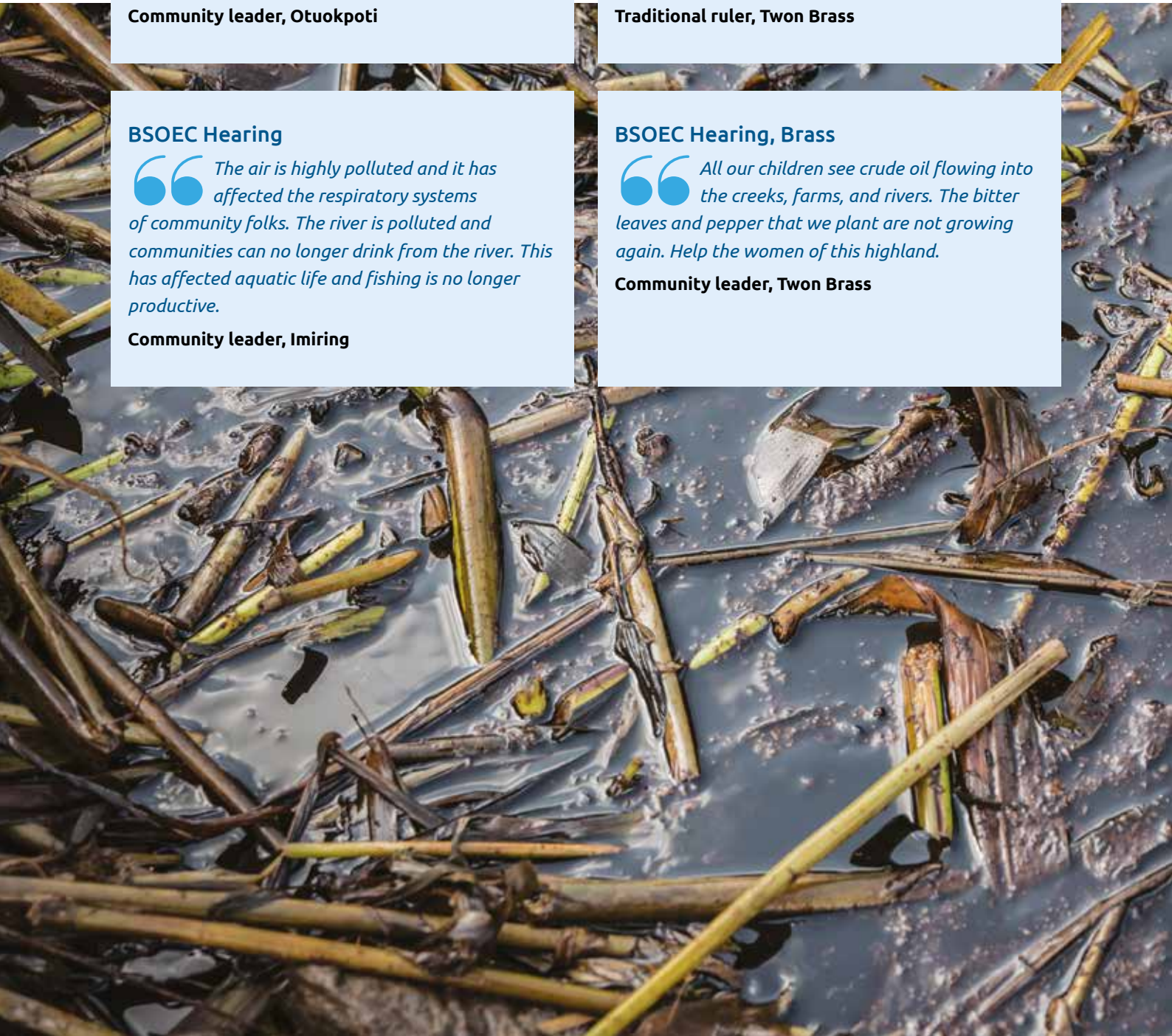
“The air is highly polluted and it has affected the respiratory systems of community folks. The river is polluted and communities can no longer drink from the river. This has affected aquatic life and fishing is no longer productive.

**Community leader, Imiring**

### BSOEC Hearing, Brass

“All our children see crude oil flowing into the creeks, farms, and rivers. The bitter leaves and pepper that we plant are not growing again. Help the women of this highland.

**Community leader, Twon Brass**





Bayelsa's population has historically depended on agriculture and fisheries. More than 60 years of oil and gas industry activity and associated pollution, combined with the diversion of water sources to make hydrocarbons extraction possible, has severely disrupted agrarian productive systems.<sup>267</sup>

The scale of oil contamination has had a significant impact on the economics of Bayelsa and the livelihoods of some of the state's poorest people. At site visits and evidence gathering sessions, the Commission heard testimony and received written submissions describing how individuals and communities had lost their farming and fishing livelihoods and had been reduced to destitution as the result of oil related pollution.

Across Bayelsa, people interviewed by the Commission complained of the lack of employment opportunities with oil companies, despite having the requisite skills, and refuted IOC claims that opportunities are available to local people. The Commission heard how in Ogbia LGA, "host communities cannot boast of [being] even drivers employed by Shell", and in Brass LGA, local people reported how "they [the oil companies] have employed people from outside this island, but not the host community".

Despite oil companies offering to upskill and train those in host communities, the Commission heard frustrations and anger expressed about perceived economic injustices resulting from projects not completed and promises left unfulfilled.

**“** *Farmlands are affected...the natural canals are now blocked...my people are suffering as a result of what Shell is doing.*

**Community leader, Ofoni, Sagbama LGA** <sup>268</sup>

**“** *We are supposed to have skills centres in our communities... There is an abundant presence of oil and gas in the Niger Delta, but is the wealth felt by the communities?*

**Resident, Kolokuma LGA**

**“** *I have ponds and fish traps that have all been damaged by the crude oil. I depended on them as part of my means of livelihood. The fishponds that are now covered with crude oil are also what I normally looked forward to harvesting, with hope. Now, my hope is dashed. Who will help me?*

**Fisherman, Ogbia LGA**

**“** *Fishing, which is our major occupation, has been adversely affected as we cannot go to the river again to fish as we ought to.*

**Resident, Aghoro, Ekeremor LGA**

Moreover, the loss of livelihoods is all too often accompanied by an increase in the price of basic staples, as more food stuffs have to be brought in from outside the community. This double whammy of falling incomes and rising prices as a result of spills has driven sharp rises in local food insecurity and malnutrition. A large-scale study conducted across Bayelsa found that only 3 percent of those living in communities that had suffered an oil spill were food secure as against 67 percent in non-spill affected communities. The research also found that 47 percent of children in oil polluted communities in one part of the state are underweight, more than double the rate for south-west Nigeria as a whole.<sup>269</sup>

This confirms what countless witnesses have told the Commission: oil pollution has deepened poverty in communities that are already struggling to get by and the primary victims have been children.

Pollution has contributed to the rise of artisanal refining, as more people, deprived of their livelihoods, are forced to partake in the oil theft industry themselves, potentially participating in pipeline sabotage and perpetuating the cycle of pollution and loss of traditional livelihoods.

Unfortunately, the economic impact does not stop there. The tensions caused by loss of livelihoods have caused the social fabric, already strained in many of these communities, to further break down, often violently. The Commission has heard repeated evidence that pollution has forced many people to travel far outside their local area to find employment or new fishing grounds, often bringing them into conflict with other established communities. In the case of those affected by the Bonga

oil spill in 2011, this oil-enforced migration had tragic consequences, as fishermen in search of unpolluted waters crossed into Cameroonian waters, sparking a conflict that cost a number of lives.<sup>270</sup>

These same dynamics have fuelled depopulation, with villagers from polluted communities often forced to migrate to urban centres in search of alternative livelihoods.<sup>271</sup> Against this backdrop, research shows that traditional practices that are important for the maintenance of community cohesion, like communal fishing, have gone into steep decline in polluted communities.

Transaction costs remain inordinately high due to poor infrastructure and the cost of transporting goods by speed boat, while oil companies provide the only viable local market for any kind of productive activity and trading in the riverine/swampland communities. At the same time, competition for scarce and selectively distributed resources by IOCs that trickle in from compensation and remediation payments has increased, fuelling additional conflict within local communities themselves. As will be outlined in subsequent chapters, deep flaws in the operation of GMOUs and the way IOCs engage with affected communities have exacerbated both inter- and intra-communal polarisation and violence.<sup>272</sup>

The Commission heard testimonies and received evidence about deep divisions in communities allegedly created by IOC's through selectively favouring particular groups against others as a means of undermining claims for clean-up or compensation.<sup>273</sup>

### Testimony at Oporoma Community Hall

“JIVs do not integrate community inputs. Use of legal redress is frustrating and expensive for communities and oil companies rely on military repression of communities. They also use divide and rule to enable them to continue clamping. They are also supposed to come back for clean-up and remediation. They send some money to make us fight ourselves and end up doing nothing on the site.”

**Oporoma Council of Chiefs, Southern Ijaw LGA**

### Extract from Witness Statement for Bodo Community vs SPDC

“...In my view, much of the misinformation circulating in the community which led to unrest could have been prevented by a transparent and rigorous approach to the appointment of contractors and community sensitisation. But that was not how SPDC... operated.”

**David Little, Independent Researcher**



“Shell admitted that it was equipment failure. I am surprised to know that up till now Shell has not relieved the suffering of the people. Shell is not following best practices. Close to Agbura and Otuokpotidi there was a spill that occurred during the flood. When it occurred like that, it took the oil to the Atlantic Ocean. Shell did divide and rule. We petitioned Shell at the FGN. We wrote to the AGF and the Minister of Environment. Since 2016 they have done nothing.”

**Male Resident, Ayama, Ogbia LGA** <sup>274</sup>

The decline of traditional livelihoods, the expansion of a transient workforce, and instability within and between communities through the unravelling of social ties impede the development of local economic systems while driving growth in the exploitation of people who are already vulnerable. Women and young girls have been made particularly vulnerable to sexual abuse in many communities where oil workers have had access.<sup>275</sup>

Particularly disturbing, the Commission gathered documentation and testimony concerning the ongoing allegation of sexual abuse of minors by oil company staff at multinational oil company facilities, in particular with

reference to the Gbarain Ubie gas plant. These social issues require ongoing attention and investigation.<sup>276</sup>

Julie Okah-Donli, the former Director General of the National Agency for the Prohibition of Trafficking in Persons (NAPTIP), confirmed high levels of sexual exploitation of girls in Bayelsa State at the hands of oil and gas workers.<sup>277</sup> Although there were numerous reports of exploitation to NAPTIP and many cases were taken to court, most never saw the light of day as poor and vulnerable families would accept settlement offers from defendants to drop the cases.

*Members of the communities that the BSOEC visited were willing to share their stories and the impact of living with oil pollution.*





### Testimonies given to the Commission in Bayelsa, corroborate research conducted in neighbouring Delta states.

“Itinerant oil field workers find the teenage girls in their immediate host communities a ready pool with which to gratify their sexual urge. In each exploration site, these migrant oil workers leave behind an amazing corpus of venereal diseases and morally polluted girls and school drop-outs. Likewise, the displacement of certain villages in the Niger Delta has seriously affected their social and cultural lives.”<sup>278</sup>

His Royal Majesty, King Bubaraye Dakolo, Agada IV, the Ibenanaowei of Eketiama Kingdom testified before the Commission, on 29 March 2019. In this testimony he recounted how rape, underage sex with girls as young as 12, and unwanted pregnancies, were commonplace. He repeated calls made in 2017 (to no avail) to UNICEF and the NAPTIP to investigate and even offered to pay for their visits to Bayelsa.

*“And right in front of that facility, there is some kind of ghetto. I don’t know how it came about, but those kinds of ghettos follow every oil activity in the Niger Delta. No sooner than they had come there, they invited people from everywhere to come there, and what you see there are drugs being sold and traded, and girls – under-age ones – being sold and traded along, and women of all types being sold and traded, and youths of all types being lured into criminality. You can imagine if you’re exposed to products that are not familiar to you. We do not have any factory that produces amphetamines of any type, no factory*

*for tramadol, no factory for cocaine, and so on and so forth. Perhaps the only thing that will grow and has been growing around here in the last couple of years since oil came, has been the one they call igbo. Igbo is marijuana. That one grows so well, so once the oil workers bring them and they smoke them and they leave the seeds around, they grow on their own. And of course, if you work as a servant to one of these oil workers, no sooner than you can imagine, you are now also lured into drugs and then you become a drug addict. So, many youths become drug addicts, and, of course, if we are talking about 60 years, some of those youths are now 60-year-old men, 50-year-old men, 30-year-old men and 25-year-old men.”*<sup>279</sup>

This content was used in a press of interview in 2017 and now the subject of a book-length publication in 2021.<sup>280</sup>

*“Yes, most oil workers in my kingdom and other areas around here have this sexual perversion in which children are the preferred sexual objects. But, as disgusting as this may sound, they do not seem to have any remorse about what they are doing. When they get into a community, they lure very young girls between the ages of 12 and 14 years to bed. They make them some kind of sex slaves, luring them with money. Too many men and too few girls. They do this to girls in primary schools and Junior Secondary (JS1). They thereby destroy the social environment they find themselves in. This is so bad and grave a crime that one can’t properly quantify it in terms of Naira and Kobo.”*

## Sexual abuse

### Extracts from King Dakolo's book *The Riddle of the Oil Thief*:

*"Within weeks of being around, they completely disorganised the social equilibrium the community had enjoyed for so long. Their workers could not restrain their libido and started committing all kinds of sexual atrocities, using their superior financial advantage. Before anyone could spell bingo. Even the headmaster who was thought to be rich could not match the least of them financially. After barely four months of their stay, calamity was wreaked upon the community. It was discovered that a lot of underage girls had been impregnated by oil workers who sneaked into the community at night ....*

*"They had their speedboats handy to facilitate those clandestine trips designed to gratify their viagra-induced libido. With their speedboats, nearby communities suffered equal or worse ravaging. With national regulators who are accomplices in the underdevelopment of the oil-bearing and facilities hosting communities, the oil companies do not bother to be ethical or obey rules in place for the protection of vulnerable natives. But what*

*was the IOC's intention in sending four thousand devourers, armed with biologically potent warheads, without their wives or female colleagues, and without arrangements for weekly time-off, to a vulnerable and oil-bearing facility hosting little community? Theirs was just the oil for the money and nothing for the people. As a matter of fact, the IOCs, the regulators, and the security agencies all see the people of the oil-bearing or facilities hosting communities as obstacles to their anti-people business of oil and gas in the Niger Delta of Nigeria. For them, people have too many prying eyes, watching their every move, and that is not good. The people could as well get destroyed by the ruthless, so long as there is no evidence left as fodder to ignite public uproar. Like heinous war-crimes, the people can be destroyed provided their story remains untold. The oil-bearing and facilities hosting people could be destroyed as long as the secret does not leak out to the world and as long as it remains a 'perfect' crime!"*





## The cost to human health

The human suffering inflicted by the pollution catastrophe that has befallen Bayelsa is measured not just in terms of incomes reduced or communities fractured. It is also measured in lives cut short.

**“ The community has continued to suffer the health impacts.**

**Community leader, Obuna** <sup>281</sup>

The intensity and sustained nature of the pollution communities are exposed to has fuelled a silent health crisis. The scale of the crisis demands ongoing research and careful monitoring, something which industry has sought to avoid all over the world to prevent class action proceedings. But independent research suggests that the toll across the Niger Delta could run to hundreds of thousands of deaths, with countless more lives ruined by chronic disease. The price paid in human suffering for the failure to tackle oil pollution and its health effects has been simply extraordinary.<sup>282</sup>

### BSOEC Hearing, Yenagoa

**“ I work at Otuasega hospital. I have worked there for about 10 years. I have seen a lot of people who have issues which reflect the third and second presentations. Respiratory illnesses and skin lesions are slightly different from other places. Asthmatic attacks: sudden asthma as well as respiratory issues. I can also say that the level of spontaneous abortions has increased as well as infertility. Semen analysis shows the sperm count has drastically reduced over time.**

**Health practitioner, Ogbia**

The connection between key types of hydrocarbon contamination and both chronic and acute conditions is well established as previously illustrated. Evidence shows dangerous levels of toxins in the land, groundwater and crops across Bayelsa and their accumulation in the human food chain and ultimately in the local population itself. Across each of Bayelsa's eight LGAs, there is repeated testimony of medical conditions resulting from exposure to oil spills, ranging from skin rashes and respiratory illnesses to pneumonia.

One member from the coastal community of Ekeremor LGA described sickness that engulfed her family as a result of an oil spill that occurred in May 2018:

**“ The spill spoiled the water. We could not bathe or drink the water. The spill killed the fish in the river. This caused a lot of sicknesses in the community and it killed a lot of people. Many children died because of the spill. We cannot do otherwise than starve. We waited for relief materials and only a few people received them.** <sup>283</sup>

**Community member, Ekeremor**

This testimony confirmed earlier accounts collected of surface, ground water and soil contamination with hydrocarbons, heavy metals and other toxic chemicals.<sup>284</sup>

**“ There were reports of gastroenteritis; we experienced more children being rushed to the Health Centre recently, even elders are affected. If you go into the communities you will see measles cases too... and this could come from pollution in the air.** <sup>285</sup>

Similarly, in the Apoi community in Southern Ijaw, a large spill of crude oil in 2017 from an Agip facility had devastating impacts on the local community:

One elderly fisherwoman was said to have fallen into the oil spill-affected swamp and experienced a “pepper sensation” and “peeling skin” for weeks afterwards. Another resident stated that

**“ we cannot even drink the water in the swamp or engage in the special rainy season fishing in the swamps anymore.** <sup>286</sup>

The consequences for the health of the population of the sustained exposure to a cocktail of pollutants have been sobering.



Today, life expectancy in Bayelsa is a mere 50 years at birth,<sup>287</sup> three years less than Nigeria as a whole and among the lowest of any state in the Niger Delta. At a time when mortality and morbidity rates have fallen in the rest of the country, **Bayelsa has seen theirs remain stubbornly high, with an infant mortality rate of 31 per 1,000 live births.**<sup>288</sup>

### Infant mortality rate per 1,000 live births<sup>289</sup>

Bayelsa	Europe	UK	US
31	3	4	6

While oil pollution is not the only factor, it is among the key driving forces, contributing directly to elevated levels of chronic disease as well as to raised levels of malnutrition that push up mortality rates, in particular among children, in communities without the resources to cope.

**Perhaps most shockingly, recent research suggests that exposure to oil spills before conception killed around 16,000 infants within the first month of their life in 2012 alone. There is no reason to believe that 2012 was special. If these results were reflective of other years, this suggests that pollution has led directly to more than 100,000 additional neonatal deaths in the last 15 years alone. And Bayelsa, at the epicentre of the pollution crisis, will have borne much of the suffering.**<sup>290</sup>

Compounding the tragedy, Bayelsa's healthcare system lacks anything like the capacity to tackle the silent healthcare crisis endemic pollution has created. Only 5 percent of households have health insurance. As a result, many families are thrust deeper into poverty by oil-related health problems. According to a 2018 study in the state

capital, Yenagoa, additional healthcare expenditure resulted in almost 10 percent of households being pushed below the poverty line while another 9 percent who were previously poor were pushed even deeper into extreme poverty.<sup>291</sup> Moreover, even when families can find the money for healthcare, it is often of low quality. Only 6 percent of clinics in the state have a doctor and only 18 percent have any form of trained medical staff. While there are 168 clinics across the state on paper, many are barely functioning, closed or even derelict.<sup>292</sup>

A recent study of Total Suspended Particulate Matter (TSPM) across Yenagoa LGA recorded TSPM concentrations that significantly exceeded WHO and Nigerian federal standards at four sampling sites, with the highest levels of toxicity found at Gbarain Ubie.<sup>293</sup> A 2019 study of gas flaring in the communities surrounding the Gbarain Ubie gas processing plant found that, with the exception of carbon monoxide, the concentration of gaseous pollutants in air samples in the region exceeded the standards of Nigeria's Federal Ministry of the Environment.<sup>294</sup> At their highest reading, TSPM concentrations – a cause of respiratory and cardiovascular disorders – surpassed the Nigerian federal standard by almost 10 times during the wet season and 15 times during the dry season.<sup>295</sup> In addition, sulphur dioxide concentrations at most study locations exceeded the federal standard during dry periods.<sup>296</sup> In all the locations in the study area, VOC concentrations in both wet and dry seasons have been in breach of the Federal Ministry of Environment's standards.<sup>297</sup>

## A multifaceted crisis

The unprecedented tide of pollution that has engulfed Bayelsa has spawned separate, mutually reinforcing crises affecting the local environment, economy, populations and public health. They have combined to inflict tremendous hardship and suffering on the people of the state.

Such a tide of pollution would never be tolerated in the home countries of the large international oil companies. Yet it has been allowed to carry on unchecked in the Niger Delta. So why has Bayelsa suffered such extraordinary levels of pollution? Chapter Three will examine the causes.

## 3

# The causes of pollution

Over the past 30 years, the Niger Delta has gained a reputation as one of the most polluted places on the planet. As Chapter Two shows, this notoriety is unfortunately well-deserved. The pollution the Niger Delta – and Bayelsa in particular – has suffered as a result of oil production is unprecedented in its scale and scope. It has devastated the state’s natural environment and wildlife, endangered the health of millions of people, deprived many of their livelihoods, and has fuelled the region’s already endemic insecurity.

How has the Niger Delta come to sit at the epicentre of such a pollution crisis? A comprehensive answer will require us to understand not only the immediate origins of contamination, but also its deep structural roots. In this chapter, we will seek to unpick this interplay of causes.



## Understanding the evidence: beyond the official statistics

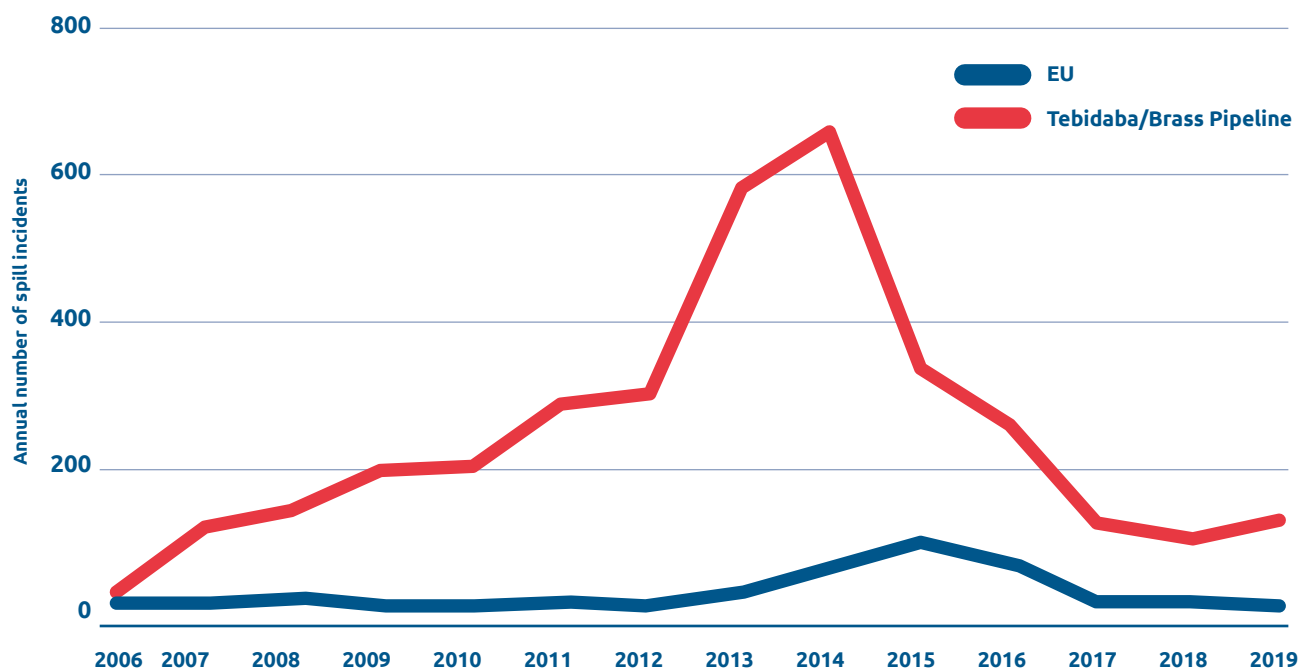
The immediate causes of the pollution crisis are clear. The Niger Delta has suffered exceptional contamination of its water, land and air because of the excessive rate of leaks from oil facilities and infrastructure, which is further compounded by high levels of gas flaring.

As Chapter Two's analysis shows, spill rates in the Niger Delta are vastly higher than those seen in other oil producing countries.

Evidence suggests that spills are often clustered, with a

few high intensity leak sites – 'hotspots' – accounting for a disproportionate number of spills. Spills have distinctive geographical patterns and in these high-density sites known as hotspots the environmental consequences of multiple 'hotspots' are especially serious. For example, between 2014 and 2018, Eni (Agip) reported 262 spills along the 92 km stretch of the Tebidaba-Brass pipeline, leading Amnesty International to dub it 'Africa's leakiest pipeline'.<sup>298</sup>

### Comparator of spills on the Tebidaba - Brass Pipeline in comparison to the number of spills in Europe



Between 2014 and 2018, Eni (Agip) reported 262 spills along the 92km stretch of the Tebidaba-Brass pipeline, leading Amnesty International to dub it 'Africa's leakiest pipeline'.<sup>299</sup>

The picture is clear. Oil infrastructure, and pipelines in particular, across the Niger Delta and in Bayelsa leak much more and with greater regularity than those in other countries. The question is: why?

Official government statistics issued by NOSDRA identify a primary cause: sabotage. According to data generated by the JIV process, 88 percent of leaks that occurred across the Niger Delta between 2006 and 2019, including over 3,000 in Bayelsa, were due to third party interference. Only 5 percent of spills, according to the data, are due to equipment or other operational failures.<sup>300</sup>

The narrative of sabotage and third-party intrusions is enthusiastically endorsed by the oil companies and supported by many within Nigeria's oil and gas institutions, who argue that the exceptionally high level of pollution incidents is simply an unfortunate and unavoidable by-product of the operational environment. In an insecure, volatile and conflict-affected region, it is impossible to protect and secure vital oil installations and infrastructures. There is an historical narrative which justifies the belief that there is sabotage and theft, but not to the extent that is portrayed by the IOCs.



Levels of sabotage are heavily linked with the overall security situation and wax and wane with surges of militant activity and the electoral cycle. Sabotage can take a number of forms, some of which are more polluting than others. Pipelines may be attacked by militant or criminal groups to disrupt the operations of the companies or to extort money from them. Oil theft – locally known as bunkering – which often involves breaching pipelines to install taps, may also have severe ecological consequences.

A notable period of instability was between the years 2005 and 2009, when Bayelsa was the epicentre of an insurgency and a highly militarised zone. However, a Presidential Amnesty Programme launched in 2009<sup>301</sup> effectively demobilised armed factions operating under the broad umbrella of MEND (Movement for the Emancipation of the Niger Delta) which had disparate aims (political and pecuniary). Sporadic militant / armed group activity continues in parts of the state, and beyond.<sup>302</sup>

Against this backdrop, it is clear that intentional human obstruction and damage does play a role in the story of oil pollution in the Niger Delta. However, after decades of environmental pollution which has destroyed the livelihoods of so many in Bayelsa, some are prompted to seek out a means of survival, which includes oil bunkering.<sup>303</sup> The problem of sabotage is the result of IOC operations over time and at scale in Bayelsa, which have led to the socio-environmental degradation that makes bunkering and or 'security operations' among the few lucrative alternatives for young people. The oil industry first made guns available for 'security', a problem documented at length in research over the past two decades, and has benefited from the impoverishment in the Niger Delta that makes toxic dumping economically viable for them. Regional development via infrastructure and economic opportunities would make IOCs liable for much larger damages in dollar terms. Underdeveloping the region makes financial sense to transnational capital here. While some spills are the result of sabotage and oil infrastructure attacks (especially in the period 2005-2009 when MEND launched a number of offshore attacks most famously on the Bonga FSPO), these spills are invariably the result of IOC operational failures.

There is a significant (but unknown) quantity of onshore spills during which oil enters into the creeks and disperses into the Atlantic Ocean. During the wet season the impact is worsened as volumes of water in the river and creeks transport oil rapidly into coastal waters. The nature of the JIV process and the difficulty in determining quantities of oil which ultimately appear in the coastal water means

that it is extremely difficult to determine the size and consequence of these onshore-offshore dynamics. There are strong reasons to believe that the official statistics significantly and systematically over-state the number of leaks caused by sabotage while downplaying those attributable to other causes. Grasping the scale of this statistical distortion and assessing the flawed nature of the sabotage narrative requires an examination of the ways in which the data itself is collected, which itself turns on the central role played by the JIV process.

As outlined in this report, there are serious concerns about the veracity and accuracy of the JIV framework through which the causes of spills are officially designated and their impact and scale assessed. Oil companies have a very strong incentive to attribute a spill to sabotage. The terms of the 1956 and 1990 Pipelines Acts, as Chapter One noted, means that oil companies do not have to pay compensation if spills are a result of third-party interference.

The JIV process has an important role to play but testimonies heard by the Commission overwhelmingly paint a picture of IOCs playing a prominent role throughout the process. This includes organising access and transport to the spill site, determining what NOSDRA staff see, deciding which community members will sit on the JIT, and determining the funding of investigative and remedial action. Often, oil producers' staff take the lead in writing the JIV report. In some cases, these reports are not even shared with key community representatives before submission.<sup>304</sup>

Through its hearings and written testimony, the Commission learnt about the dysfunction and distortion of the JIV process and the impact it has had.

In Yenagoa LGA, the local leaders highlighted incidents of tampering with the results of JIVs, the absence of independent regulators, collusion on the part of contractors in sabotage, and disagreements over the date of spills. They also highlighted persistent discrepancies regarding the extent to which oil spills may have spread, the amount of oil spilled, and the unavailability of copies of the JIV itself. One representative testified that:

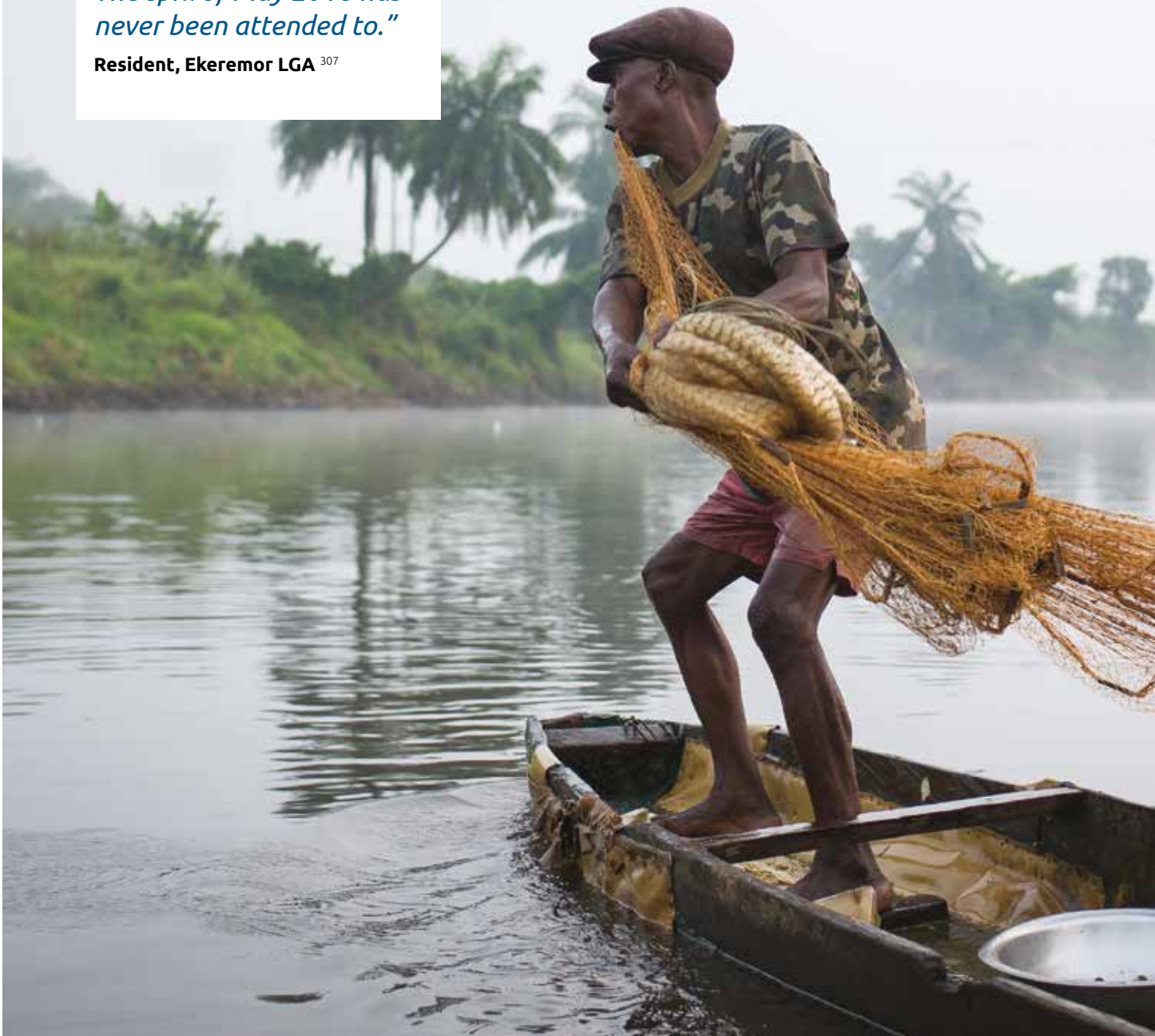
**“ JIVs do not integrate community inputs.**

**Community leader, Southern Ijaw** <sup>305</sup>

Independent studies commissioned by the BSOEC found similar patterns throughout Bayelsa. For example, in Kalaba and Ikarama (Yenagoa LGA), incidents that were claimed to have been caused by acts of sabotage were actually due to equipment failure.<sup>306</sup> Even in cases where regulators manage to question JIV verdicts supporting the oil operating company, this often results in an “inconclusive” JIV or “mystery spill” categorisation. In the Aghoro community in Ekeremor LGA, host to SPDC, it was reported that a fresh oil spill had occurred in May 2018. The spill affected a number of communities and their local ecosystems. However, there was a lengthy period before a JIV assessment was completed and no action taken as a consequence. The result is that there has been no clean-up and no compensation paid. The devastated area has seen people affected by sickness and biological life depleted.

“ Our people are fishermen who have not been attended to. The spill of May 2018 has never been attended to.”

Resident, Ekeremor LGA <sup>307</sup>



Given the confluence of oil producer incentives and their capture of the regulatory process, it is perhaps not surprising that JIVs report findings of sabotage so frequently.

International comparisons, analysis of independent data sources and critical examination of the NOSDRA statistics all reinforce the need to question the accuracy of official data.

It is difficult to accept NOSDRA's findings regarding leaks in the context of data from other oil producing countries. NOSDRA states that, on average, 88 percent of the leaks that occurred in the Niger Delta between 2006 and 2019 – including over 3,000 in Bayelsa – were due to sabotage.<sup>308</sup> Similarly, NOSDRA data shows that in a six-year period between 2014 and 2019, 1,449 oil spill incidents were caused by sabotage.<sup>309</sup> To put these figures in international context, this represents over three times the number of attacks on Iraqi pipelines, oil installations and personnel experienced in Iraq over six years of intense conflict between 2003 and 2009,<sup>310</sup> even though the country has a pipeline network of 10,437 km compared to Nigeria's 12,714 km.<sup>311</sup>

Moreover, NOSDRA findings of sabotage do not appear to be consistent with patterns of militant activity and regional insecurity. The official statistics claim to show that losses due to sabotage rose around the time when an amnesty was granted to militants in 2009; the figures for alleged sabotage incidents remained elevated and rose even further in 2014, despite the fact that overall levels of militant violence and the insecurity that normally accompanied attacks on pipelines had fallen sharply.<sup>312</sup>

The concerns that these findings raise over the quality of the official statistics are further buttressed by the results of detailed work carried out by Amnesty International on

JIV reports published by the IOCs themselves. On the basis of photographic evidence compared with JIV submissions alone, Amnesty International was able to identify serious inconsistencies and inaccuracies in over 10 percent of all attributions of sabotage in a large sample of JIV reports that were analysed.<sup>313</sup>

The profile of spills recorded by NOSDRA also stands at odds with the agency's emphasis on sabotage. According to the official statistics for the period 2006-2019, 10 percent of the leaks reported as the largest spills accounted for over 90 percent of the total volumes lost.<sup>314</sup> It is debatable as to whether leaks of this magnitude would normally be caused by third-party interference: leaks due to sabotage tend to be relatively small, involving drilling a hole in a pipeline so that a tap can be fitted.

Independent studies raise further questions, painting a very different picture of the causes of spills in the Niger Delta. A granular study of 300 spill incidents that involved site visits and detailed survey data concluded that over 80 percent of these spills were due to equipment or other forms of operational failure.<sup>315</sup> A similar conclusion was reached by a DPR analysis which attributed almost 90 percent of spills to equipment failure.<sup>316</sup> Even Shell Nigeria's own reporting paints a similar picture. Regarding oil pipelines in Rivers State, which adjoins Bayelsa State, an internal Shell email sent in 2009 revealed that the firm was 'corporately exposed as the pipelines in Ogoniland have not been maintained properly or integrity assessed for over 15 years'.<sup>317</sup>

Taken together, these analyses suggest not only that we need to look to a wider set of causes other than sabotage, but also that we need to understand why such problems have occurred and why they have had such a profound effect.

*Fears around security mean that gun boats are not uncommon sights in Bayelsa. The BOESC was guided on a gun boat to visit oil hosting communities.*

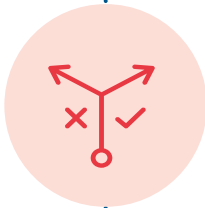




## The immediate causes of the pollution crisis: the four failures

### Failures of strategy.

Operators have made strategic choices that increase pollution and contamination.

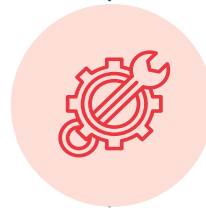


**Failures of prevention, risk mitigation and risk management.** Operators have failed to take necessary steps to minimise the risk of oil spills.



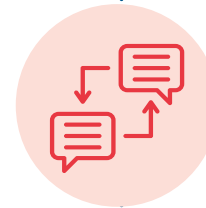
### Failures of response.

Operators have failed to respond rapidly and effectively to spills.

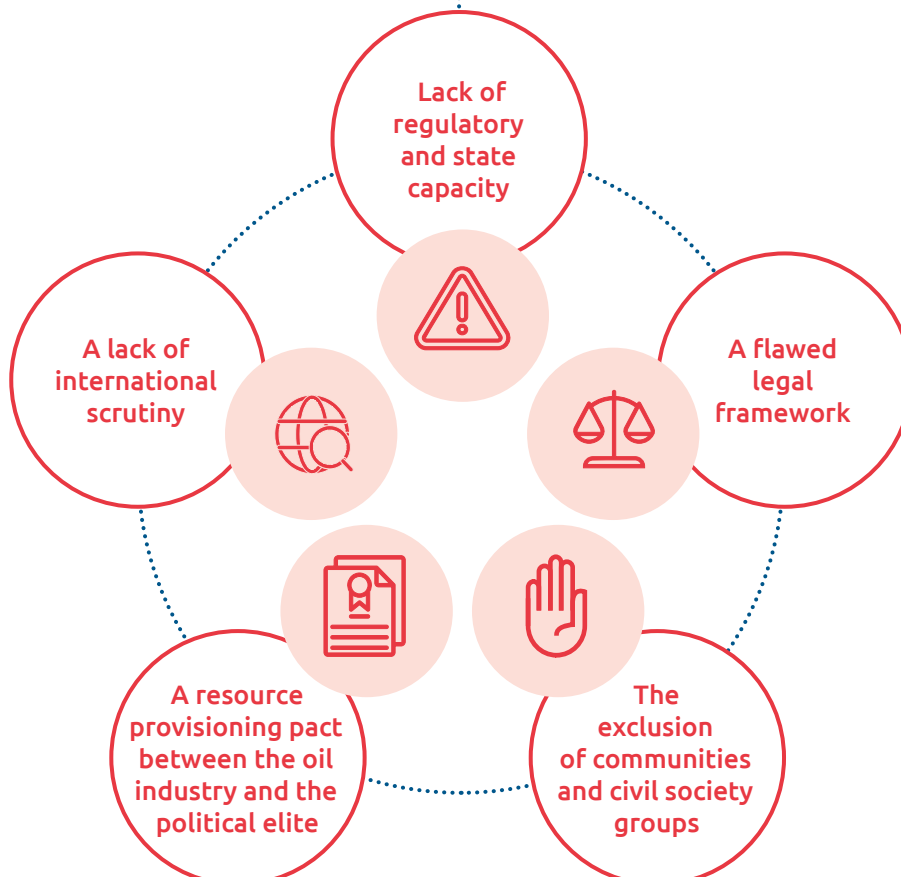


### Failures of remediation.

Operators often fail to remediate the damage they have caused.



The underlying deeper, structural drivers are:



## Understanding the immediate causes of the pollution crisis: Four failures

The causes of pollution incidents are complex, overlapping and often mutually reinforcing. Unpicking them and separating cause from effect can be challenging. In doing so, we need to differentiate between the immediate or proximate causes of pollution and their deeper, structural drivers. For instance, corrosion may cause a pipeline to rupture. But to fully understand the spill, we will need to unpack why the corrosion went undetected and untreated. Why did the pipeline operators not take preventative action earlier? Why did regulators not pick up and assess the problem earlier?

In this section, we will identify the critical immediate causes of Bayelsa's pollution before delving into the deeper forces that underlie the issue in the next section.

Though the causes of Bayelsa's environmental crisis are complex and varied, the Commission's analysis suggests that blame for the ongoing oil pollution catastrophe engulfing the communities of the Niger Delta must rest in the first instance at the door of the oil companies. Failures by the IOCs, other producers and oil servicing companies at every link in the chain have fuelled the pollution crisis which Bayelsa faces today.

There is a diversity of immediate causes of pollution. But our analysis suggests that they can mostly be traced back to four fundamental systemic failures:

1. **Failures of strategy.** The IOCs, through their subsidiaries and JVs, have made strategic choices that increase pollution and contamination.
2. **Failures of prevention, risk mitigation and risk management.** IOCs have failed to take necessary steps, which they would take as a matter of course in more developed jurisdictions, to minimise the risk of oil spills.
3. **Failures of response.** The operators have failed to respond rapidly and effectively when spills have occurred.
4. **Failures of remediation.** All too often, IOCs have failed to remediate the damage they have caused.

We examine each of these failures in turn below.

### 1. Failures of strategy

Some of Bayelsa's pollution happens by design; a consequence of conscious business decisions made by oil field operators and producers. One obvious example is gas flaring. While overall levels of flaring have fallen, oil companies continue to burn large volumes of associated natural gas across Bayelsa, despite the fact that this practice is banned in many other national jurisdictions. Not only is intense flaring harmful, but 80 percent of gas flared could actually be cost-effectively harnessed for energy production or reinjection. Failed efforts to significantly reduce gas flaring are largely a result of the lack of necessary investment by IOCs.<sup>318</sup>

Similarly, in many instances, firms have chosen to minimise upfront costs in designing and building pipelines and facilities without due consideration of the environmental, health and social risks these entail. Commission investigations found that in many cases pipelines have been laid through vulnerable areas without appropriate environmental impact assessments (EIAs).<sup>319</sup> In particular, facilities have been built without adequate buffer zones to protect the local population or have been designed in ways that fail to fully account for the risks posed by third-party interference.

Moreover, IOCs have chosen to minimise investment in decommissioning and clean-up of wells at the end of their operational life, leading to a heightened risk of seepage and long-term environmental damage. The fate of Oloibiri offers a stark warning of the risks of such a strategy.

## Impact of poor decommissioning: The case of Oloibiri

### Origins of Oloibiri

Nigeria's first export of oil to the world took place on 17 February 1958, departing from Port Harcourt. The oil on board was discovered in 1956 in today's Bayelsa State in what came to be known as the Oloibiri oil field.

In its first year of operations, Oil Well 1 (Oloibiri) produced 5,000 barrels of crude oil each day. A year later, the first crude oil pipeline connecting Oloibiri to Kugbo Bay, seven miles distant, came online. Barges shuttled the oil to two storage tanks in Port Harcourt, from where it was then shipped to the Shell haven refinery at the mouth of the River Thames in the UK. Within a few weeks of its arrival, Nigerian gasoline was fuelling automobiles, the new symbols of post-war British prosperity, in and around London. The Nigerian oil industry had been born.

**Partial extracts from Sweet and Sour,  
Michael Watts<sup>320</sup>**

SPDC initially paid paltry, periodical rents to the land owners of the Oloibiri oil field, these being families in Otuabagi, Otuogidi, and Opume communities, though these rents were stopped when production ceased. After experiencing minor spills throughout its productive life, the oilfield was abandoned in the late 1980s; nevertheless, crude oil still leaks from the drilling locations into the bushes and waterways.

Oloibiri oilfield yielded over 20 million barrels of crude oil in its lifetime, before operations ceased. Some two decades after the wellheads were capped, and without any serious effort at decommissioning, severe poverty and environmental devastation remain Oloibiri's fate. Shell carefully negotiated its exit, offering miserly compensation to a limited number of families, thereby sowing the seeds of internal community dissent while abrogating any responsibility to adhere to international decommissioning standards.

Today, Oloibiri is actually part of an oil mining licence (OML29), which is the subject of controversy and legal action because of the circumstances surrounding Shell's divestment and its sale to a Nigerian oil conglomerate, Aiteo, in 2016. Since then, a catastrophic history of leaks and major oil spills has been associated with OML29, including, most recently the Santa Barbara wellhead blowout of late 2021, which lasted a whole month before Aiteo was able to bring it under control with outside assistance. Not surprisingly, much of the environmental damage perpetrated by Shell has not been addressed, nor have the social investment commitments undertaken by Shell under GMOU agreements, come to fruition. Legacy questions are enormous and pressing: how are the obligations for massive environmental and social destruction to be met, once the operating company leaves? And how will decommissioning be 'built-in', as per international standards, into operating models?

*Abandoned infrastructure at Oloibiri. When it rains, the water will cause the crude oil to spread from here.*







*“ I have explored for oil in Venezuela and... Kuwait, but I have never seen an oil-rich town as impoverished as Oloibiri.*

**A British engineer** <sup>322</sup>

Today, a rusting sign sits next to the “Christmas tree” – the capped wellhead – at Oloibiri, Well Number 1. It reads: “Drilled June 1956. Depth: 12,000 feet (3,700 metres)”. The abandoned wellhead is a monument to an exploit-and-abandon culture. **Today Oloibiri is a rural slum, home to barely 1,000 people with no running water, no electricity, no roads, and no functioning primary school. The local creeks have been so heavily dredged, canalised, and polluted that traditional rural livelihoods have been eviscerated.**

*“ It smacks of wickedness, hard-heartedness... our happiness... later turned into sorrow*

**Male resident, Oloibiri** <sup>321</sup>

As the town has sunk into abject poverty, the community has fractured and split, with younger generations having few opportunities for personal advancement and almost inevitably venting their frustrations. The town has been rocked by youth violence, and the Aso Rock armed ‘cult group’ has dethroned the traditional ruler amid allegations of corruption and half-finished community development projects.

A gaudy plaque dating from a Presidential visit in 2001 sits next to that of Oil Well 1. It was supposed to be a foundation stone for the Oloibiri Oil and Gas Research Institute along with a museum and library. But nothing has been built since. Regularly defaced, the plaque is policed by local residents looking for a commission from erstwhile visitors who want to record where it all began.

## 2. Failures of prevention, risk mitigation and risk management

The most effective way to minimise oil pollution is to prevent spillages and other discharges occurring in the first place.

Prevention, risk mitigation and risk management play a central role in any complex industry susceptible to high impact operational failures. The effective implementation of rigorous processes, systems, controls and response mechanisms, all underpinned by appropriate skills, capacity, performance management and governance, is essential to preventing catastrophic failures, especially in an environment as operationally challenging as the Niger Delta.

In most developed markets, oil companies maintain extensive programmes to monitor and minimise leak risks and ensure their facilities are operating to international standards. These standards are based on a mix of US 'Integrity Management' regulations and best practice integrity and monitoring benchmarks, such as Alaska's 'Best Available Technology' standard.<sup>323</sup> These regulations set out detailed requirements for pipeline integrity and monitoring, the technologies that operators are expected to use, and the operational governance, processes, capacities and underlying skill sets that oil companies are required to maintain to ensure the overall regime is effective.

Much of the operators' prevention activity in these markets is focused on the maintenance of pipeline integrity. It is widely understood across the oil industry that corrosion is the primary threat to the integrity of iron and steel pipelines, although other, location-specific risks can also play an important role. A substantial body of best practice has developed around the mitigation and monitoring of corrosion risk. Companies use a combination of periodic inspections to identify pipeline abnormalities and regular pipeline cleaning to remove corrosive build up, as well as providing protective coatings and cathodic protection to significantly reduce leak risk.

This approach to integrity management is normally complemented by a thorough programme of pipeline monitoring, featuring a blend of remote monitoring technology, aerial and ground patrols, controller surveillance and around the clock monitoring by trained controllers working from a control room to allow companies to detect any failures almost immediately. As part of this mix of measures, it is standard practice for companies to deploy remote shutdown technology to

enable the rapid shutdown of pipelines in hard-to-access locations should a leak occur.

Best practice integrity and monitoring programmes also feature a high degree of tailoring to reflect the particular challenges and risks that different facilities and stretches of pipeline may face. For instance, pipelines situated in 'High Consequence Areas' (HCAs), where leaks would have a particularly damaging impact, are usually subject to additional checks and measures, as are facilities in regions with an elevated risk of third-party interference. For instance, operators in the US have an obligation to inspect any pipeline that could affect an HCA at a minimum of once every five years.<sup>324</sup>

The relative effectiveness of these programmes is underpinned by proactive and often intrusive regulatory regimes. For instance, in the US, companies are required to develop and submit plans for the inspection and maintenance of their facilities that are reviewed by regulators annually. These plans include procedures for dealing with a wide range of specific operational, maintenance and emergency scenarios and to effectively contain spillages should they occur. Frequent regulatory inspections are undertaken, with the location, age, risk posed, and operator history all determining the frequency of supervision.<sup>325</sup> It is difficult to make definitive statements about the nature of the oil operators' prevention and risk management plans as they are rarely made public.

The Commission saw little evidence to suggest that the IOCs are operating to the same standards in Bayelsa as they do in advanced industrialised countries. A judgement in The Hague, Netherlands, in January 2021 that found in favour of local farmers who brought a case against Shell supports the contention that oil producers need to implement more effective prevention and risk management to avoid oil spills such as those that have caused Bayelsa's pollution crisis.<sup>326</sup> In December 2022, Shell agreed to pay €15 million compensation to the affected communities.

IOCs claim to be adopting the best international practice standards. For instance, Eni (Agip) stated in its letter to the Commission that:

*“Maintenance of asset integrity is a core element of our operations. Asset integrity management commences from the very beginning of project conception and is embedded into project design and covers the entire life cycle of our projects. To ensure the protection of the lines, we apply appropriate technology including installation of cathodic protection devices and protective coatings and wraps around the pipes. We also conduct periodic pipeline coating defect surveys for the purpose of ascertaining the status of the protection on these lines and taking corrective measures. Corrosion inhibitors, among other measures, are also used to address the phenomenon of internal corrosion.”*

However, in a review of Shell's practices around pipeline integrity conducted for Friends of the Earth in 2010, Professor Richard Steiner, formerly of the University of Alaska, concluded that, *“Shell Nigeria continues to operate well below internationally recognised standards to prevent and control oil spills”*. Professor Steiner's report also identified failures to implement *“good oilfield practices”* with regard to pipeline integrity and highlighted delays in running an asset integrity review and the adequacy of the company's pipeline integrity management system as major sources of concern.<sup>327</sup>

The Commission's observations about practices seen in Bayelsa and across the Niger Delta concur with Steiner's conclusions. The evidence suggests that IOCs fail to meet even basic standards for remediation, clean-up, waste removal and the commissioning of EIAs.

Furthermore, Shell itself admitted in its submissions for the Bodo Community 2008-2009 oil spill court case that it has failed to deploy remote monitoring and control technology that would be seen as standard in other jurisdictions, as it was worried about theft.<sup>328</sup> The failure to fit the remote monitoring and shutdown systems appears to be common practice across IOC operations in the Niger Delta. The January 2021 judgement in the Hague ruled that Shell was not only liable for the actions of its subsidiary SPDC, but was also responsible for pipeline integrity and associated leakages whatever their provenance.<sup>329</sup>

In addition, findings from other studies, such as one conducted by Amnesty International in 2013, reinforce the evidence that oil producers have not put adequate or appropriate prevention and risk management regimes in place.<sup>330</sup>

Research has shown that pipeline infrastructure in the Niger Delta is operating at the end of its operational life, increasing the risk of spillage. One study of the pipeline network conducted in 2004<sup>331</sup> across the Niger Delta, reviewed by a group of mechanical engineers, found that 41% of pipelines were over thirty years old (and 70% were over twenty years old). The same study found that the 'reliability' of pipelines of that age was only 25%. Another report published in 2012 found that the average lifetime for a pipeline in Nigeria was 33 years.<sup>332</sup>

Given the threat posed by unchecked corrosion over time, leak risk is directly linked to pipeline age, and programmes of pipeline replacement and upgrading form a key part of any pipeline integrity regime.<sup>333</sup>

Research by Amnesty corroborates the conclusions of a leaked internal Shell presentation from 2002 that "the remaining life of most of the Shell Oil Trunk lines is more or less non-existent or short, while some sections contain major risk and hazard".<sup>334</sup>

Considering the age of many of the assets, it is not surprising that analysis undertaken by the NNPC of 47 pipeline failures in Bayelsa found that 40 percent of them were due to corrosion or mechanical failures.<sup>335</sup> The evidence suggests that despite the risk posed by leaks, operators have simply not made the investments they should have in renewing their pipeline network. In addition, the Commission noted in its investigations in Bayelsa that numerous pipelines ran above the ground and were lightly attached to fences roughly one metre in height, thereby making them easily accessible for sabotage, vandalism and illegal bunkering.

This is of particular concern, given that much of the Niger Delta would, in other jurisdictions, be classified as a HCA. This factor does not appear to have been taken into account by the oil companies operating in Bayelsa.



“ In 2017, [when] one of the 17 spills occurred in the middle of the river, Agip came and saw it was due to equipment failure; the spill happened at the wellhead joint, [and] when it was time to sign the JIV, the company said there was no oil found. This was because it was a tidal area and the waves had moved the oil into swamps.

**Traditional ruler, Nembe LGA** <sup>336</sup>

“ There was a spill in 2016, a complaint was made to Agip; when Agip came, the spill was due to equipment failure, resulting from aged pipelines, Agip maintained it was sabotage.

**Community leader, Okoroma Tereke** <sup>337</sup>

Researchers from Environmental Rights Action and elsewhere have gathered further evidence of frail and insecure pipelines.

**For instance, in Brass, researchers heard:**

“ We have come to understand that Agip (Eni) is unable to secure their facility. And, since the company cannot effectively secure their facility to prevent oil spills, we are appealing to Agip, and even the Federal Government, to come and remove their crude oil-bearing pipe from our land so that we can live peacefully.

**This was a view echoed by a Nembe LGA community member that spoke to the BSOEC.**

“ Agip once told our community that from when this pipeline was laid [in 1971], that after thirty years of laying the pipe the pipes would be replaced with new ones. Unfortunately, up till this moment Agip is yet to redeem that promise and, if the spill is found to be as a result of corrosion, that amounts to a deliberate act by Agip, because they have not complied with their own set standards of replacing the pipes after thirty years. <sup>338</sup>

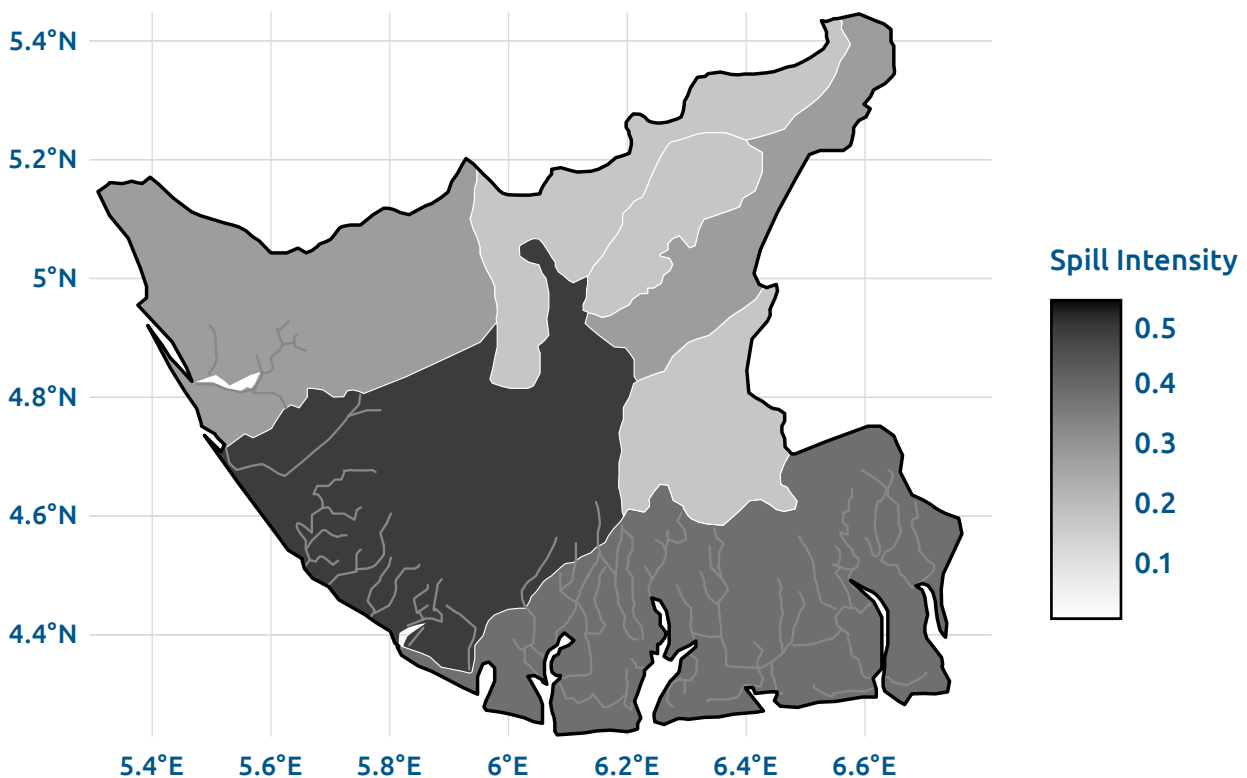


Two IOC subsidiaries/JVs, Shell's SPDC and Eni's (Agip), together account for 75% of all recorded spills among IOCs since 2006, despite their being responsible for less than a quarter of the IOCs' total oil output in Nigeria.<sup>339</sup>

Many of Bayelsa's oil spills are clustered in a limited number of locations. This is particularly true in instances of oil theft. According to a recent study, 40 percent of all oil theft in the entire state takes place along a 126 km stretch of pipeline in Southern Ijaw.<sup>340</sup>

The IOCs' failure to run adequate programmes of prevention and risk reduction also bears directly on the vulnerability and exposure of their assets to sabotage. Despite the costs it imposes upon them, it is not clear that oil producers have always taken appropriate steps to protect their assets and minimise the risk of oil theft.

### Map of oil spill intensity by Bayelsa Local Government Areas<sup>341</sup>



Yet even where third-party interference is concentrated in hotspots, it is not clear that oil producers have acted in a timely manner to address the risk. In the case of the Tebidaba-Brass pipeline, which suffered 260 breaches attributed to sabotage in just four years, NOSDRA had to make 162 separate requests to Eni (Agip) to enhance surveillance and security on the pipeline. Once action was

finally taken through increased aerial and ground patrols, the reported sabotage rate fell by 97 percent.<sup>342</sup> In this example, the IOC's failure to act quickly allowed sabotage to continue along with the enhanced risk of additional pollution.

Major spills in Bayelsa state 2006-2018 <sup>343</sup>					
S/N	YEAR	FACILITY	LOCATION	VOLUME (bbl.)	CAUSE
1	2010	8" Nembe south flow line	Kiminimi, Southern Ijaw	1,100 bbl.	Sabotage
2	2010	8" Nembe south flow line	Sabatoru, Southern Ijaw	1,020 bbl.	Induced external corrosion
3	2010	18" Tebidaba / Brass pipeline	Mbasikiri, Nembe	800 bbl.	Sabotage
4	2010	14" Ogbeinbiri / Tebidaba pipeline	Olugbobiri, Southern Ijaw	600 bbl.	Hacksaw/ Dynamite
5	2010	10" Clough Creek / Tebidaba pipeline	Azuzuama, Southern Ijaw	300 bbl.	Induced corrosion
6	2011	24" Ogbeinbiri / Ogada pipeline	Aguobiri, Southern Ijaw	230 bbl.	Oil Theft
7	2011	24" Ogbeinbiri / Ogada pipeline	Aguobiri, Southern Ijaw	535 bbl.	Oil Theft
8	2011	24" Ogbeinbiri / Ogada pipeline	Angiamagbene, Southern Ijaw	900 bbl.	Oil Theft
9	2011	14" Ogbeinbiri / Tebidaba pipeline	Okputuwari, Southern Ijaw	1,500 bbl.	Sabotage
10	2011	24" Ogbeinbiri / Tebidaba pipeline	Aguobiri, Southern Ijaw	1,300 bbl.	Oil Theft
11	2012	8" Nembe / Obama flow line	Sabatoru, Silga	1,500 bbl.	Sabotage
12	2012	18" Tebidaba / Brass pipeline	Igbomotoru, Southern Ijaw	200 bbl.	Oil Theft
13	2012	8" Nembe / Obama flow line	Sabatoru, Nembe	1,500 bbl.	Sabotage
14	2012	18" Obama / Brass pipeline	Ologuama, Nembe	400 bbl.	Sabotage
15	2012	18" Tebidaba / Brass pipeline	Baberegbene, Southern Ijaw	1,900 bbl.	Oil Theft
16	2012	20" Future HSE	Brass	380 bbl.	Oil Theft
17	2014	18" Tebidaba / Brass pipeline	Orokiri, Nembe	350 bbl.	Oil Theft
18	2016	18" Tebidaba / Brass pipeline	Benikrukr, Southern Ijaw	250 bbl.	Oil Theft
19	2016	18" Tebidaba / Brass pipeline	Golubokiri, Nembe	9,587 bbl.	Sabotage
20	2016	18" Tebidaba / Brass pipeline	Igbematoru, Southern Ijaw	352 bbl.	Oil Theft



The conclusion that levels of third-party interference are driven, at least in part, by the failure of the oil companies to invest in their infrastructure is underlined by the different levels of sabotage that different IOCs claim to suffer from. Evidence suggests that companies that have invested in best practice protection for their pipelines appear to suffer lower levels of third-party interference.<sup>344</sup>

Some of the oil operators' slowness to act may reflect the incentives they currently face. The volumes of oil on which they have to pay taxes and royalties to the Nigerian government are only measured when they are loaded onto tankers for shipping. Oil lost through pipeline breaches is not taxed.

Some of the experts the Commission talked to have also raised questions about the potential involvement of oil

company staff in sabotage operations. According to them, pressurisation levels must be reduced to allow pipelines to be tapped without the risk of an explosion. This would require collusion between those undertaking 'bunkering' thefts and staff operating the pipeline flow stations. If true, this would reinforce the view that the oil companies are not taking sufficient and timely action to minimise risks to pipelines.

**Taken together, this evidence all points to the oil companies' systematic failure to invest in standard remote monitoring and shutdown technology, to run effective programmes of spill prevention and risk mitigation, and to operate to international standards – standards they adhere to as a matter of course in their home jurisdictions.**

*Abandoned jerrycans used to carry stolen oil.*



### 3. Failures of response

Chapter Two introduced the issue of regulatory capture by the IOCs. This problem of regulatory capture has its roots in the lack of capacity and resources that NOSDRA faces. Unlike the DPR, NOSDRA has few streams of revenue and is systematically underfunded. As a consequence, NOSDRA lacks even the basic capacity and capabilities needed to discharge its regulatory duties in an independent manner. It is often forced to rely on the IOCs to help undertake some basic tasks. For instance, in many cases, NOSDRA is unable to access the spill sites through its own independent resources and is forced to rely on the oil companies to provide helicopter and ground transportation to the sites.<sup>345</sup>

The Commission heard evidence that it is often the oil companies that organise the JITs and critically, the companies choose which community representatives sit on them. The Commission has heard testimony in numerous communities across Bayelsa alleging that oil producers have rigged community representation on JITs, forced community members who were not given access to spill sites to sign reports, and even subjected residents to threats and pressure to get them to sign reports that minimise the exposure of the oil companies. Where community members manage to give NOSDRA's staff alternative views that are opposed to those of the oil companies', they claim those views are routinely ignored. A sample of the evidence the Commission has received is set out below. The oil companies deny these claims.<sup>346</sup>

## Testimony from residents of affected communities about JIVs

A properly conducted JIV process must include communities affected by the oil spill in question. Communities claim that often the voices of those most affected are ignored. The BSOEC has heard testimony in numerous locations about how local people are marginalised through the JIV process. A selection is below:

“ We are not involved in the remediation process and the JIV. They can sometimes call people to join them. There is no community involvement. Instead, friends of the company are involved. Many sign the JIV with a community person.

**Elder from Oyeregbene, Southern Ijaw LGA** <sup>347</sup>

“ Communities are forced to sign the JIV form under pressure and intimidation, and the oil companies determine how much is given to the communities for their drinks.

**Senior community member, Baberagbene, Southern Ijaw LGA** <sup>348</sup>

“ We are not involved in the processes. The Ministry of the Environment and [IOCs] sometimes pay people to do manual work at the spill site, but not as community reps in the process to ascertain cause, quantity and level of damage.

**Community leader, Southern Ijaw** <sup>349</sup>

“ The JIV process was manipulated by Shell with no community representation. The scope of spill and impacted area was calculated without consideration for the spill dispersal and spread of the spill to include the total affected area of the people. The community CDC chairman was manipulated and influenced to sign the JIV form against the position of the entire community.

**Traditional ruler, Aghoro II** <sup>350</sup>

“ The JIV report is always tampered or altered on the way to Port Harcourt, because when we document a spill to be equipment failure with all parties on the ground, you would be amused by the changes I discovered when a spill happened in 2009; I have a document to this respect. The date of spill is always a source of disagreement due to late response by the companies, so they always find a way to keep record in their favour. The community is actively involved in the JIV process now more than before.

**Kabala representative, Yenagoa LGA** <sup>351</sup>

“ A spill occurred from the Nembe-Obama pipeline in 2011 and the major cause of the spill was blamed on sabotage. In 2017, one of the 17 spills occurred in the middle of the river. Agip brought divers and said it was equipment failure. When it was time to sign the JIV form, the company said there was no oil found. This was because it was a tidal area and the waves had moved the oil into the swamps. Agip should be compelled to appear and listen to the communities. What they do in the community cannot happen in other countries. Agip always refers to all spills as sabotage. When regulators come, the company lodges them in Brass. The spill happened at the wellhead-joint, yet the company will say it is sabotage.

**Traditional ruler, Nembe LGA** <sup>352</sup>



## Extract from SPDC letter to Commission, 2 Oct 2019



Most Reverend and Right Honourable Dr. John Sentamu  
Chair, Bayelsa State Oil and Environmental Commission  
Limited  
Adam House, 7-10 Adam Street  
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OUR REF: SPDC-MDR-2019-0034L

2<sup>nd</sup> October, 2019

Dear Archbishop Dr. John Sentamu,

**RE: BAYELSA STATE OIL AND ENVIRONMENTAL COMMISSION**

Our attention has been drawn to a letter from the Bayelsa State Oil and Environmental Commission Limited. We are providing this response as the matter contained in the letter relates to operations by The Shell Petroleum Development Company of Nigeria Limited (SPDC) Joint Venture in Bayelsa State of Nigeria.

The SPDC Joint Venture (SPDC JV) comprising the Federal Government of Nigeria through the Nigerian National Petroleum Corporation 55%; SPDC 30%; Total E&P Nigeria Limited 10%; and Nigeria Agip Oil Company Limited 5%, operates in Bayelsa State, amongst other entities. SPDC is the operator of the SPDC JV and carries out all its operations on behalf of the same.

We wish to say that your request relates to information and documents on the operations of the SPDC JV, which are the subject of confidentiality restrictions, which cannot be disclosed without the consent of the parties. In view of the above, we provide this response out of courtesy.

A key priority for us is the goal of no spills from our operations. No spill is acceptable to us, and we work hard to prevent them. Regrettably, oil spills due to crude oil theft and sabotage of facilities, as well as illegal refining, cause the most environmental damage from oil and gas operations in the Niger Delta. In 2018 for instance, third party interference caused close to 90% of the number of spills of more than 100 kilograms from the SPDC Joint Venture pipelines. Irrespective of the cause, SPDC cleans up and remediates areas affected by spills originating from its facilities.

SPDC operations are governed by relevant Nigerian laws, which align with international best practices, and are transparent. All SPDC spill incidents including the JIV reports from year 2011 to date for instance are published on our spill website at: [www.shell.com.ng/sustainability/environment/oil-spills](http://www.shell.com.ng/sustainability/environment/oil-spills). This site is accessible to external stakeholders.



## Extract from Eni (AGIP) / NAOC to Commission, 18 Oct 2019



LF/MD/108/ABJ/2019

The Chairman,  
The Bayelsa State Oil and Environmental Commission  
Adam House  
7-10 Adam Street  
London  
WC2N 6AA  
United Kingdom

Dear Sir,

We refer to your letter dated 2<sup>nd</sup> July, 2019. Our response to your Commission's enquiry is premised on our strong commitment to sustainability principles and respect for transparency, without prejudice to our rights and remedies, which are fully reserved.

We are deeply concerned about the objectivity of the Commission's enquiry since it seems the Commission has apparently reached a conclusion beforehand regarding the liability of multinational oil companies on the alleged environmental and human damage.<sup>1</sup>

We are, however, confident that in light of the high international standing of the members of the Commission, cognizance will be taken of the complexity of oil spill issues and all related factors, including the prevalence in Nigeria of oil spills due to third party interference which is a country-specific problem that is rare in other parts of the world where oil companies operate.

### nigerian agip oil company limited

Incorporated in Nigeria – RC 2974

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18 October 2019

The goal of an effective prevention programme is to minimise the risk of pollution occurring in the first place. But once contamination has occurred, the key to limiting the potential damage is a prompt and effective response. Yet the evidence shows that IOCs are failing to respond rapidly or effectively, significantly exacerbating the harm caused by the pollution incidents that occur.

Under the terms of Nigerian law, oil producers are required to form a JIT and conduct a JIV within 24 hours of a spill being reported to the authorities.

However, independent analysis of IOCs' JIV forms by Amnesty International suggests that adherence to the law is patchy and there is significant divergence between different IOCs in their level of compliance. In the period between 2014-2017, Eni (Agip), despite suffering more spills, was found to have held a JIV within the prescribed time period in 76 percent of its cases.<sup>353</sup> It took Eni (Agip) two days on average to hold a JIV. By contrast, Shell took on average seven days to hold a JIV and only met the legal requirement on timing in a quarter of all its cases.

These averages hide considerable variation. On at least 10 occasions, it took more than 100 days to organise a JIV; in one case an inspection was delayed for 430 days.<sup>354</sup>

#### On 12 March 2015 former Bayelsa State

**Commissioner for the Environment, Iniruo Wills, stated that** *“nonchalant and clumsy management of oil pollution... that has placed Bayelsa State as the worst petroleum-polluted geography in the entire world, is largely due to the fact that the decision-making executives of these polluting operators are stationed in cities too far away for them to care about the ravaging effects of their corporations' operations on Koluama, Ikebiri, Oluasiri, Keme-Ebiama, Biseni and other petroleum host communities in the state.”*<sup>355</sup>

Wills was speaking in response to the failure of SPDC and NAOC to respond in a timely manner to two large spills affecting the Ikbiri community in the Ogboinbiri River in Southern Ijaw LGA and along Agip's Ogboinbiri-Tebidaba pipeline.

The frustration Wills expressed echoed the views of many who spoke to the Commission. Numerous witnesses spoke of the lack of effective responses to pollution incidents and the impact that this had on their communities.

**One witness in Nembe told the Commission that** *“even though the regulation says 24 hours to respond by the polluter, oftentimes it takes the company one to two weeks to respond... The regulation says that the penalty for a failure to respond to a spill is just 500,000 Naira (US \$1,220) and this is one of the reasons why the companies can afford to not respond to spills...”*<sup>356</sup>

Witnesses also claimed that NOSDRA had failed to help them seek information and redress from polluting oil companies. In April 2020, lawyers representing the Opu Nembe Kingdom wrote to NOSDRA pertaining to spills linked to Aiteo's operations in the area. The community called on NOSDRA to facilitate the immediate release of the JIV reports covering spills in the area and waited for them to lead the conduct of a joint post-spill impact assessment. However, this was never addressed and the reports never released. Opu Nembe Kingdom was subsequently forced to initiate legal action against the oil producer.

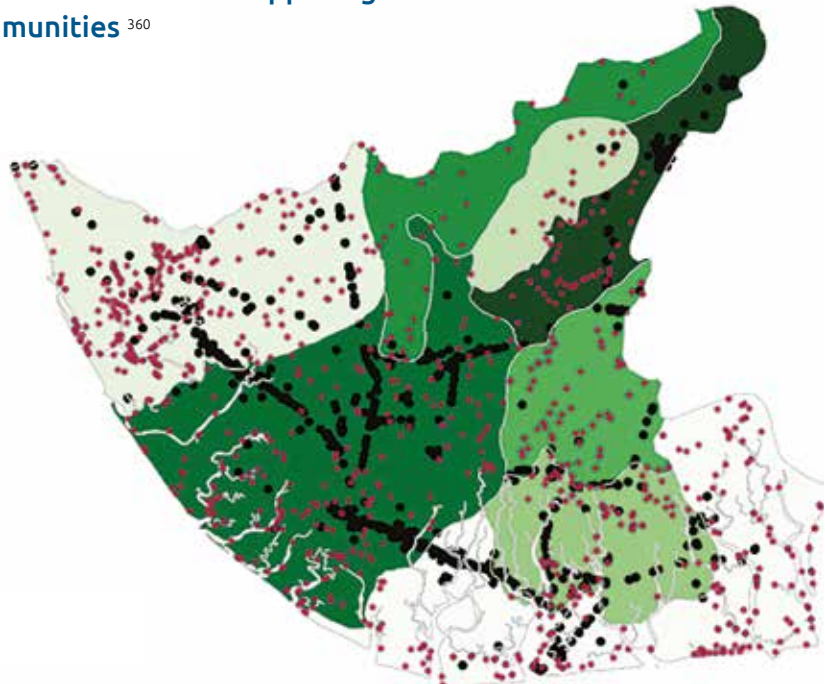
It was a similar story in Yenagoa LGA. There, the Commission heard evidence of how delays to clean-up operations and tardy oil company responses were commonplace, meaning that by the time the companies tackled the issue, the oil would have already spread through farmlands, damaging crops and affecting livelihoods.<sup>357</sup>

Oil companies claim that many of the delays are due to the inaccessibility or insecurity of spill sites. Although there are notable exceptions, in general these claims do not stand up to scrutiny. Many of the spill sites have been located close to population centres or access points, as the map of leak sites shows. In some of the most high-profile cases, there appears to be little correlation between accessibility and response times. For instance, it took Shell 252 days to arrange a JIV for the leak in its Ugbuegun pipeline, despite the fact that the breach took place just metres outside a major Chevron installation.<sup>358</sup> Similarly, in the Aghoro community in Ekeremor LGA in Bayelsa, it took almost three weeks to address a leak that was less than several kilometres from a major facility.<sup>359</sup> Similar analysis of the most excessively delayed visits finds that, in most cases, no explanation for the delay is recorded.

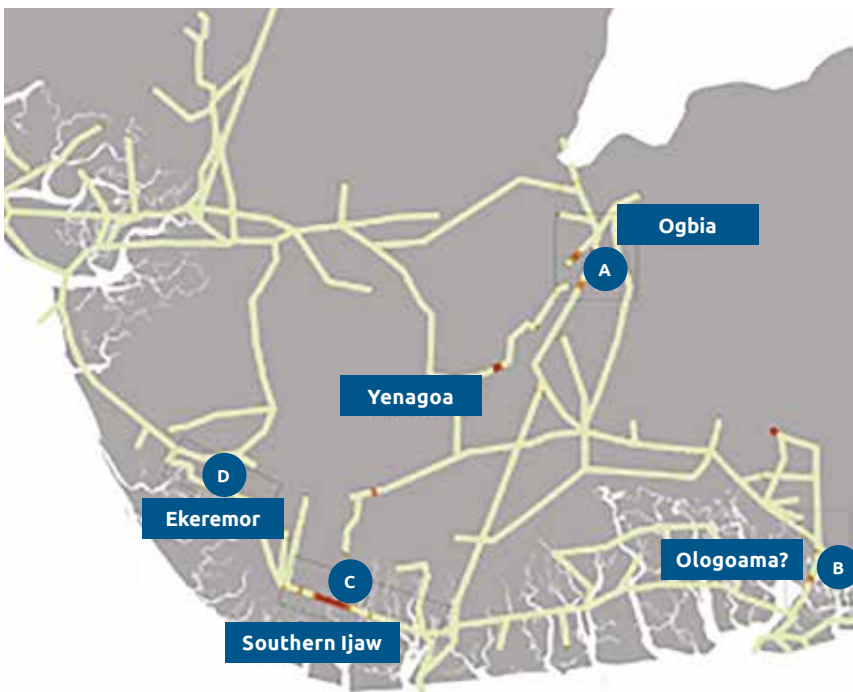
Map of leak sites by Local Government Area mapped against population centres and communities <sup>360</sup>

- Brass
- Ekeremor
- Kolokuma/Opokuma
- Nembe
- Ogbia
- Sagbama
- Southern Ijaw
- Yenegoa

- Community
- Oil Spill



Corridors of oil spill hot spots by spill intensity <sup>361</sup>



**Spill Intensity**

- None
- Low
- Medium
- High
- Very High





The pattern of delays, and the variations in company performance, suggests that in many instances, these reflect primarily the failure of the oil producers to put in place adequate processes and capacity.

These failures in timely responses matter, as the flow of oil is normally not halted nor any containment or remediation activity begun until after the JIV has taken place. Spills that would be shut down in minutes in other countries are permitted to continue for days, sometimes even weeks. The delays directly exacerbate the levels of pollution and the damage caused by the spills, as do failures to assess spills accurately.

**Oil producers are officially obliged to submit a risk-based assessment of any spill within two weeks of the incident. Yet, an analysis of NOSDRA data from between January 2010 and August 2015 suggests that they failed to submit any form on 62% of occasions. Furthermore, even where the relevant reports were submitted, they were often largely incomplete. Of the 6,333 spills reported to NOSDRA over that period, 82% had no estimate of the spill area recorded, 71% had no description of the impact, and 83% had no stop date recorded.<sup>362</sup>**

This failure to file responses significantly degrades the effectiveness of the response system and impedes any remediation activities. So too does the weakness of the methodologies for estimating the impact of potential spills. JIVs tend to use relatively crude techniques, based on visual assessment, to evaluate the volume and spread of oil pollution. More sophisticated techniques that are widely found in other jurisdictions, such as the use of satellite imagery and drones to better assess the size of spills, are rarely if ever used in Nigeria.

Especially when applied to leaks occurring in water where much of the spill volume may be washed downstream, these methods may lead to a systematic under-estimation of the size of spills. For example, in 2008, Shell estimated the size of the leak from its pipeline in Bodo, Rivers State, at 1,640 barrels. Independent experts estimate that the figure was some 60 times higher, at over 100,000 barrels. Based on its original estimate, Shell offered only £4,000 of compensation. When the case came to court in the UK, Shell abandoned its estimate and settled the case by paying residents £55 million.<sup>363</sup>

Even where there is a response, containment measures are often not effective, especially if delays allow the pollution to spread. For instance, in the case of the large offshore Bonga and Koluama spills, delays and lack of containment led to massive spill volumes directly impacting coastal communities.

## Bonga Oil Spill, 2011

The Bonga oil spill emanated from a Shell facility on 20 December 2011, during which 40,000 barrels of crude oil spilled into the Atlantic Ocean according to NOSDRA.<sup>364</sup> The immediate cause was identified as operational failure by Shell Nigeria Exploration and Production Company Limited (SNEPCO). The spill continued for 12 days. There was no full investigation (by either Shell or the government) to assess the consequences, and the question of impact on coastal communities was never fully assessed and the compensation remains unresolved. As a consequence, there are lingering resentments among the affected communities and litigation is still in train a decade later.

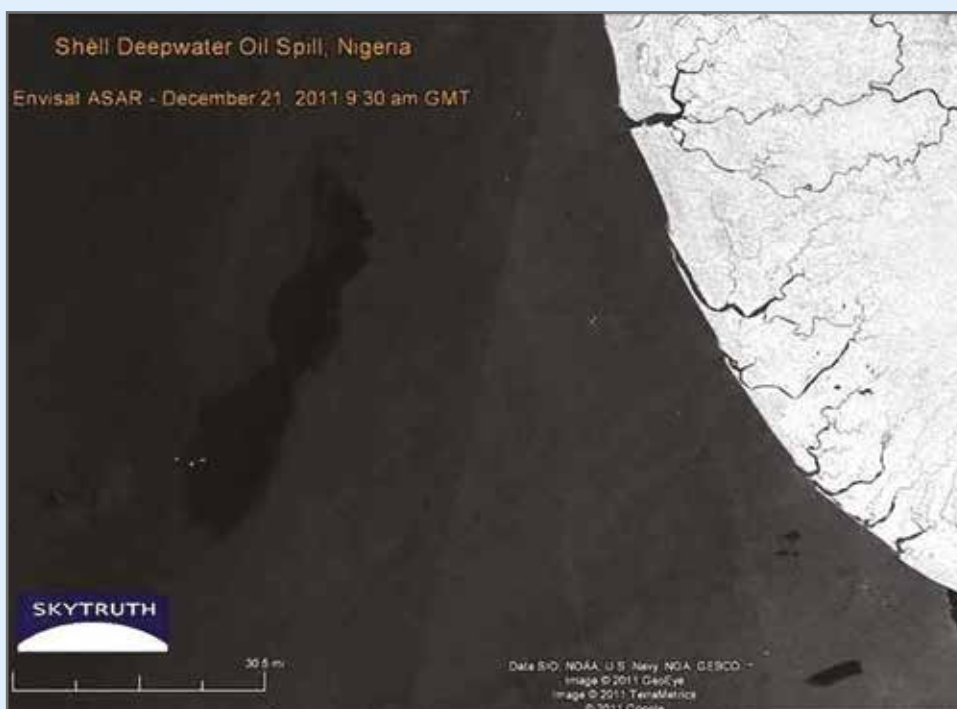
At least 350 communities in Delta and about 168,000 people were said to have been affected directly by the spill affecting the fishers whose source of livelihood is the ocean waters. An announcement by NOSDRA ordering the fishers out of the waters, led to a suspension of their activities. Compliance with the stay away directive by NOSDRA from 22 December 2011 to 23 April 2012 caused hardship and loss of income for some 30,000 fishers across the five states of the Niger Delta. A radar satellite image from 21 December 2011 reveals a slick covering 923 km<sup>2</sup>.

Bayelsa in particular was especially badly hit. ERA's field visit reports undertaken within a matter of days and weeks after the event, confirmed that communities alleged that harmful chemical dispersants SNEPCO used to breakdown and disperse the spilled crude oil, in turn spread to the fishing areas, where they became the causes of the diseases afterward prevalent in the communities. Common ailments affecting the communities according to ERA included mental disorders; hypertension; eye irritations; nose, throat and skin lesions; vomiting and rectal bleeding; liver and kidney damage; short-term memory loss and confusion; respiratory problems; miscarriages; and blood in urine.

As a penalty for the spill NOSDRA levied US \$1.8 billion as compensation for the damages done to natural resources and consequential loss of income by the affected shoreline communities as well as a punitive damage of US \$1.8 billion. However, while a minimal amount of aid was delivered to coastal communities, Shell contested the NOSDRA decision and no fines were paid. In 2014, Nigeria's National Assembly said Shell should pay US \$3.96 billion for the 2011 spill in the latest assessment of damage to the environment.

In 2016, Shell brought NOSDRA before a Lagos Division of the Federal High Court challenging the fine arguing that the NOSDRA Act which empowered the

agency to conduct remediation and damage assessment regulations encroached on the judicial powers exclusively vested in the courts and the legislative powers of the National Assembly. The company further argued that the imposition of the US \$3.6 billion fine by the agency was a violation of its right to a fair hearing.



To date there has been no resolution and no fines have been paid. The Nigerian government filed another suit in 2016 against Shell at a federal high court demanding US \$3.6 billion as compensation on behalf of the victims and communities affected by the Bonga oil spill. A Federal High Court sitting in Lagos dismissed in June 2018 a suit by SNEPCO challenging the imposing of US \$3.6 billion fine on it by the Federal Government. Shell has refused to pay the fine. As of early 2022 there had been no resolution to the Bonga spill and no fines nor compensation paid or remediation measures implemented.<sup>365</sup>

Notwithstanding the new PIA passed by the Federal Government in 2021, the existing regime provides strong incentives to the parties involved to minimise the alleged size of an incident and thereby reduce the potential compensation and clean-up liabilities they are exposed to. The Commission heard evidence that as a consequence of these incentives, the oil company operators have tended to exercise undue influence over the process and, ultimately, the content of the JIV reports.<sup>366 367</sup>

*Shell's oil spill clean up and remediation equipment.*





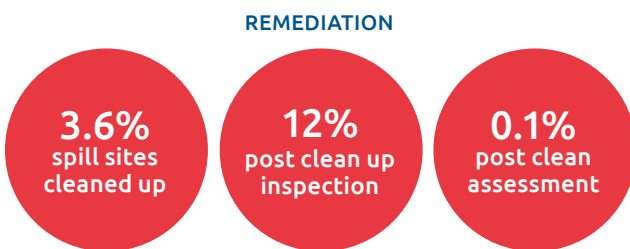
### 3. Failures of remediation

The problems created by the failures of response measures are significantly compounded by multiple and profound failures of remediation.

Analysis from a number of different sources all point to the same conclusion: in the overwhelming majority of oil pollution cases, no clean-up ever takes place.<sup>368</sup>

The IOCs claim that their remediation practices meet both Nigerian and international standards. Furthermore, one IOC told the Commission that its oil spill management processes and its remediation practices have been certified as being fully compliant by an independent third-party assessor.<sup>369</sup>

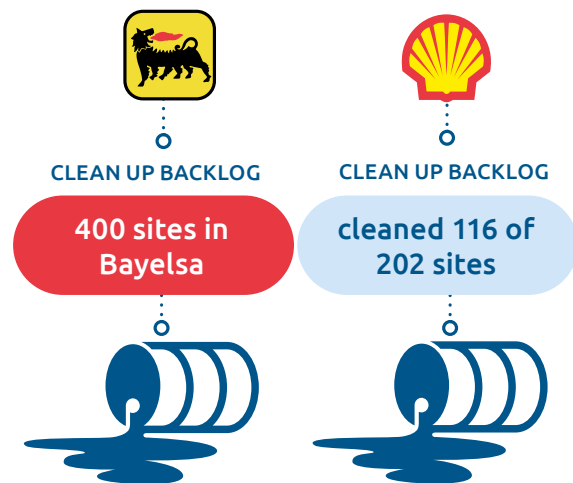
Official statistics tell a different story. According to analysis of NOSDRA's JIV data from the period 2010-2015, only a mere 3.6 percent of all spill sites – just 229 out of over 6,300 – were recorded as having undergone any kind of remediation at all. Only 12 percent of sites were subject to a post clean-up inspection and only in a scarcely believable 0.1 percent of cases was any post clean-up impact assessment undertaken.<sup>370</sup>



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Mirroring the weaknesses in the response system, the remediation and compensation forms officially required to be submitted as part of every JIV process were in fact not filed in 88 percent of the cases reviewed.<sup>372</sup>

The reality is that the IOCs are all too often simply failing to fulfil their obligations to clean up pollution and provide compensation where liability is proven. To take the example of just one producer, a recent study shows that Eni (Agip) has a clean-up backlog of over 400 sites in Bayelsa alone.<sup>373</sup> Shell admitted in its correspondence with the Commission that in 2018, it cleaned up only 116 of the 202 sites it said it had liability for remediating.<sup>374</sup>



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Oil collected from water in Biseni during a BSOEC visit.



The lack of action by oil producers to remediate their spills was raised in community after community that the Commission and its researchers visited.

In its hearings and through written testimony, the Commission heard repeated stories of the failure to remediate properly.

The Chair of the Community Development Committee of Kalaba community in Okordia told the BSOEC that most spills are *“abandoned after clamping, recovery and, in some cases, haphazard clean-up... the law demands that the company carries out proper clean-up and remediation, but in our community, there are several unclean spill sites here and there. The recent spills that need attention include the spill site at the back of the community that they came to clamp on the 30th of July 2018; it’s abandoned.”*<sup>377</sup>

*“A spill occurred in 2016, Shell didn’t come until 2018; they argued it was not them, but the JIV proved it was them, a 16 inches oil pipeline was removed. During the process of replacement, they were told that part of the pipe was still in the ground in the river. On remediation, the total area was 40.47 hectares: they didn’t even clean up to 0.018 hectares, [and] we do not see proper remediation and clean-up and compensation.*

**Community leader, Agbura**<sup>378</sup>

*“They should also be compelled to carry out proper clean-up and remediation on all crude oil spill sites in our community environment. For instance, at the spill site you just visited, you cannot eat fish harvested from there. In fact, my son used to fish there and on one occasion, when a spill occurred, he caught some fish and when we were preparing it, we discovered that petroleum products were oozing out of the fish guts. So, the company should promptly carry out proper clean-up and remediation of that spill site to prevent an epidemic. I am emphasizing this because a major spill happened in that area in 2012 and, to date, no clean-up or remediation has been carried out.*

**Senior Chief**

*“During spills, instead of cleaning up, Agip scoops the oil, gathers them in a pit and burns them, further releasing hazardous gases into the atmosphere.*

**Community leader, Azuzuama**<sup>379</sup>

*“When the spill occurred it was a thing of a battle for us in the environment, our houses were nearly set ablaze, the spill killed fish in the river, we waited for relief materials, and only few people received it.*

**Community leader, Aghoro 1**<sup>380</sup>





**Former State Environment Commissioner Wills** said *“most clean-up jobs are shoddily done, sometimes involving the hazard of burning forests and vegetation either as a deliberate ‘clean-up’ measure or as an accidental, but easily foreseeable, consequence of unprofessional and poorly monitored execution... the rampant failure of the clamps put in place to contain previous spills lead to fresh spillages.”*

Even where remediation activity is undertaken, it is often inadequate. As was discussed in the previous section, remediation efforts are often undermined by the serial underestimation of the volume and dispersal of contamination. Such efforts are also hamstrung by a reliance on clean-up methods that do not reflect international best practice.

**“** *A vast spill occurred due to facility failure. A contractor was brought to clean up the place by SPDC/Agip, they asked the contractor to build pits around the canal and bury the oils. We are crying.*

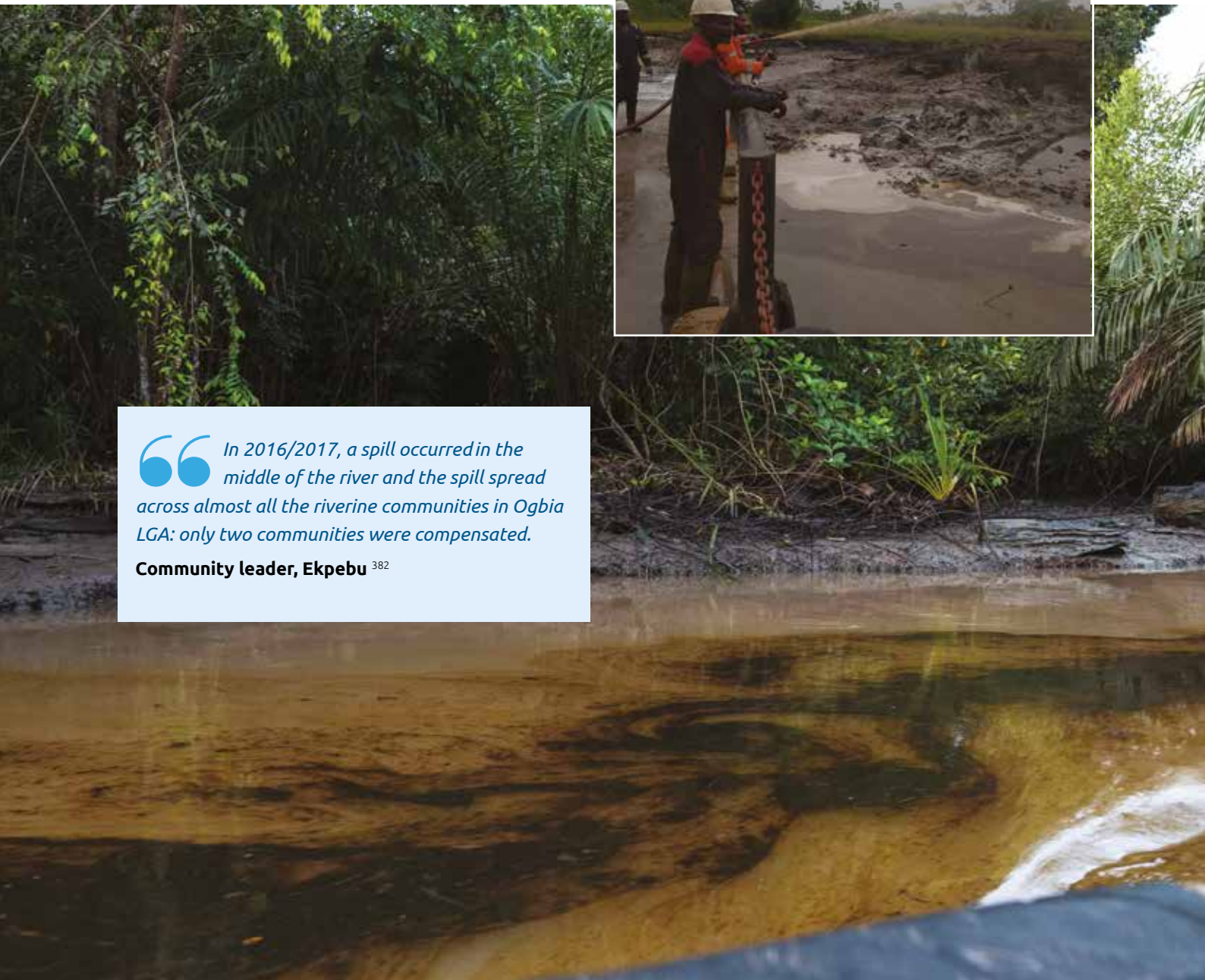
**Community member, Yenagoa LGA** <sup>381</sup>

*Remediation equipment seen by the Commission is arguably inadequate for its intended purpose.*



**“** *In 2016/2017, a spill occurred in the middle of the river and the spill spread across almost all the riverine communities in Ogbia LGA: only two communities were compensated.*

**Community leader, Ekpebu** <sup>382</sup>







*An oil spill in Ikarama Community.*

Traditionally, many of the remediation projects across the Niger Delta and in Bayelsa have used a method known as ‘Remediation by Natural Attenuation’ (RENA). Under this approach, the topsoil of polluted land is ploughed over to increase aeration and fertiliser is added to supplement the nutrient requirements of bacteria as they break down the pollutants. The 2011 UNEP report and subsequent work by the IUCN<sup>383</sup> found the technique to be largely ineffective, especially over depths of one metre, given that pollution in the Niger Delta can penetrate as far as five metres down. The IUCN have therefore advised against the use of these methods in the Niger Delta. Extensive reliance on RENA techniques in the past has meant that much of the remediation previously undertaken has, unfortunately, only been partially effective.<sup>384</sup>

Over the past few years, the IOCs have acknowledged the limitations of RENA approaches and have sought to switch to the use of bioremediation as their primary remediation approach.<sup>385</sup> There is emerging evidence of this approach’s effectiveness in remediating certain forms of pollution, but there remains significant disagreement about its general efficacy and its applicability.

There are also questions about how effectively and how often such techniques are actually implemented on the ground. This may reflect, in part, the fact that the remediation contractors charged with implementing a bioremediation approach often lack the capacity to do so effectively.

Most remediation work in the Niger Delta is subcontracted to local companies.<sup>386</sup> In many cases, they are chosen primarily for their record of achieving regulatory certification from the government and because of their

connections with the oil producers, rather than reasons related to their technical capabilities. All too often it is alleged that remediation contracts are used not to deliver effective pollution clean-ups but rather as vehicles for the distribution of patronage and economic rents to favoured local groups. The Commission has heard evidence that the strength of incentives these relationships create are such that some involved in remediation work have even been alleged to have sponsored members of the local community to sabotage pipelines to increase the flow of remediation funds.<sup>387</sup>

Underpinning much of this is a flawed approach to community engagement. The IOCs have no senior level representation in Bayelsa. Community liaison officers manage relationships at community level, often supporting factions without widespread legitimacy and weakening community cohesion. Many voices are excluded from the decision-making processes, often outlined in a GMOU, about the allocation of IOC social investment commitments. Moreover, all too often, communities that are impacted by pollution, in particular those downstream of spill sites, are excluded altogether from GMOUs and, as a result, receive little if any support.

Even where such agreements are struck, many of those who testified to the Commission confirmed that the commitments are often not followed through and instead become a source of community conflict.

During its investigations, the BSOEC heard repeated testimonies from across the state about the failure of oil companies to honour their commitments under GMOUs and MOUs and the extent to which these agreements were fuelling conflict.

“ [We] entered into a [GMOU] with Agip. Nothing has been done.... we entered into so many agreements with Shell. One is to train youths to work with this company. Nothing is going on. The youths are roaming.

**Community member, Egbemo/Angalabiri** <sup>388</sup>



“ Some examples of uncompleted, long abandoned, failed GMOU projects in the Gbarain/Ekpetiama Cluster include the Ekpetiama neighbourhood water scheme at Gbarantoru, meant to serve three communities; the Gbarain neighbourhood water scheme at Obunagba, meant to serve ten communities; the Gbarain N350 million auditorium project; the Bumoundi Gbene electricity project; the Ikibiri electricity project; the Bumoundi electricity project; the Bumoundi Gbene auditorium project; and abandoned road projects in Obunagha. There are overpriced substandard concrete walkway projects in almost every community in the cluster... these are some of our 'benefits' from the GMOU.

**Community member, Gbarain Ekpetiama** <sup>389</sup>

“ Any clause that points towards the employment of locals in the GMOU is an outright deceit. There is no doubt that a few hands are hired temporarily at the lowest levels, but it pales into insignificance when compared to their total workforce and the fact that they have been working in this well-defined geological oil and gas belt since 1956. Is it not a shame that for the entire Bayelsa State, SPDC can only boast of about a dozen employees at the medium management level?

**His Royal Majesty King Bubaraye Dakolo, Agada IV, the Ibenanaowei of Ekpetiama Kingdom** <sup>390</sup>





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“Due to the Ministry's efforts, the Kalaba Community in Yenagoa LGA was recognised as a host community for the first time by Agip in 2014, and subsequently promised a community development project after decades of hosting Agip's pipeline. Unfortunately, the water project promised by Agip has still not been executed, and a pipeline gas leakage has just occurred in the community's river two days ago, contaminating the community's only source of water.”

**Community member, Kalaba community** <sup>392</sup>

As well as failing to address the immediate need for physical rehabilitation of the environment, IOC remediation efforts often fail to adequately address the humanitarian and social dimensions of the damage done.

Despite the huge public health, economic and social impacts of pollution, remediation projects are confined primarily to the physical clean-up of the spill area.

IOC support for affected communities after spills is normally restricted to a limited immediate grant of funds; many communities get little. Moreover, there is little if any systematic long-term support, health monitoring or investment in environmental recovery.

And even where short-term support is offered, case studies suggest that it is often utterly inadequate, with remediation efforts often failing to address issues as basic as ensuring a supply of clean drinking water, let alone tackling issues such as the loss of livelihoods. Communities are left to fend for themselves in dealing with the long-term consequences of pollution. <sup>393</sup>

Similarly, IOC investment in the remediation of the economic effects of pollution is minimal. IOCs do contribute, as they are legally obliged to, to the running of the Niger Delta Development Commission (NDDC), whose mandate is to undertake economic development activity across the region. However, not only has the NDDC been mired in corruption, but both the scale and impact of these contributions have been limited. <sup>394</sup> Between 2014 and 2019, the NDDC's 3 percent annual budget levy from oil companies operating in the region delivered more than US \$3.2 billion from subsidiaries of Chevron, CNOOC (China), Eni, Equinor, ExxonMobil, Royal Dutch Shell Plc, Total SA and other companies. <sup>395</sup> IOCs also run a small number of high-profile economic projects. Shell, for instance, launched 84 development projects in the state in late 2019, following the launch of the Commission. <sup>396</sup> Unfortunately, all of these interventions have done little to address the economic damage oil pollution has caused. Finally, compensation payments are rare and almost always wholly inadequate. The fact that the oil companies have been taken to court almost 58,000 times since 1996 in Bayelsa alone by plaintiffs seeking restitution for damage from oil pollution indicates how inadequate the IOCs' approach to compensation has been. <sup>397</sup>

**This failure of remediation has profound implications. A 2011 report by the United Nations Environment Programme (UNEP) into pollution in Ogoni found that in the absence of comprehensive remediation, the environment of the region will take over 30 years to recover from the oil contamination it has suffered. The prognosis could be even worse for Bayelsa: parts of the state have suffered far more intensive and prolonged pollution.**





## Exploring the deep causes of pollution: the structural driving forces

Much of the responsibility for the current crisis must be borne by the IOCs, whose activities have inflicted such unimaginable damage upon Bayelsa. Their four failures – of strategy, prevention, response and remediation – have formed the immediate drivers of the pollution crisis. But the failures of the oil producers are themselves rooted in a set of deeper institutional, legal and political problems that go to the very heart of how the Nigerian federation works. These must be addressed if the pollution crisis is to be tackled on a sustainable basis.

In this section, we identify five deeper structural drivers of the pollution crisis:

- Lack of regulatory and state capacity
- A flawed legal framework
- The exclusion of communities and civil society groups
- The provisioning pact
- A lack of international scrutiny <sup>398</sup>





## Lack of regulatory and state capacity

The behaviour of the oil producers cannot be assessed separately from the dysfunction of the regulatory system. At the most fundamental level, Bayelsa's pollution crisis is rooted in profound and systemic regulatory failures at both federal and state levels of government. Flaws in almost every aspect of the design and operation of the supervisory regime have enabled or exacerbated the catastrophe now engulfing the state.

This report has already laid out in detail how the central supervisory process for the monitoring and control of oil spills is hopelessly compromised, captured by and reflecting the interests of the very companies it is meant to police. The impact of this failure of the regulatory process is significantly magnified by complementary failures to adopt international standards.

Important elements of both Nigeria's broad regulatory standards and the country's detailed technical guidelines fall below generally accepted international benchmarks. The overall environmental standards framework under the Petroleum Act regime, EGASPIN, granted significant discretion to the former DPR to permit contaminated discharges even when their own standards were exceeded. The regime employed a confusing system of dual standards to differentiate between levels of toxins seen as safe and levels of toxins that require intervention. While some levels are based on those seen in the Netherlands, it is often the case that those intervention levels are set to permit far higher concentrations of contaminants than those allowed in other jurisdictions or deemed safe by international authorities. Furthermore, at a technical level, the framework omits reference to important contaminants that are covered as a matter of course in other jurisdictions. For instance, the regulations only cover 10 types of highly toxic poly-aromatic hydrocarbons. Comparable US standards, by contrast, cover 16.<sup>399</sup>

Similarly, **Nigeria's pipeline integrity practices fall below international benchmarks, as they do not reflect widely accepted best practice processes for routine pipeline inspection and monitoring by regulators, and enforcing renewal when due.**<sup>400</sup>

Moreover, critical weaknesses in the capacity and powers of the main regulatory agencies mean that they struggle to enforce even these limited standards. Unlike the DPR, which was generally well-resourced, NOSDRA lacked and still lacks access to sufficient statutory sources of funding and is severely under-resourced. The agency lacks the capacity and capabilities to supervise the IOCs and is

reliant on them for access to pollution sites. This not only limits the agency's effectiveness, but creates a conflict of interest.

This lack of capacity has implications that go beyond NOSDRA's ability to react effectively to pollution incidents. It also means that they have little ability to conduct the kind of proactive supervision of oil producers' risk management approaches that form the cornerstone of any effective preventative system. Pipelines are rarely, if ever, inspected in the absence of a pollution incident, and there is little scrutiny of producers' risk management plans and capacities. All these factors compound the impact of the already compromised pipeline integrity regime.

**The impact of this lack of state capacity is often seen through the limited enforcement of those regulations that are on the books. Companies rarely face any sanctions for failing to submit regulatory reports or the discharge of their obligations. The examples are vast. For instance, the Commission could find no evidence that Eni (Agip) has faced any kind of sanction for failing to clean up over 400 sites in Bayelsa in defiance of its obligations under the previous Petroleum Act 1969. It appears that IOCs have faced no material sanctions for their continued flaring activity, even though the law makes them liable for fines that theoretically run into billions of dollars. Persistent under-reporting of volumes of gas flared by the IOCs also contributes to lower fines being imposed and paid.**<sup>401</sup>

Furthermore, where agencies choose to take action, their enforcement powers are limited. As Chapter One described, NOSDRA's powers to levy fines is highly constrained by legislation and the agency lacks the power to close facilities. Moreover, court rulings have further restricted NOSDRA's ability to impose administrative fines under the statute, one of the few enforcement powers it appeared to possess under the statute. This runs counter to similar powers that regulators have in other jurisdictions such as the UK.<sup>402</sup> DPR and its successors do theoretically have broader enforcement powers, although these too may be circumscribed by recent court judgements. It is also evident that the DPR was consistently unwilling to use its powers because the Department's remit covered the promotion of oil and gas production business activity alongside its regulatory role.

**Weakness in enforcement is compounded by a lack of accountability and transparency across the regulatory system. Little information is made public, thereby limiting the ability of affected communities and independent third parties to scrutinise the activity of the oil companies or the regulators. There is rarely any opportunity for public consultation or input into either the regulatory framework or its enforcement. The recently enacted PIA 2021 does seek to address the absence of transparency that has plagued the industry. In relation to this, it contains provisions to make information available to the public.<sup>403</sup> It is therefore hoped that the new Act will help to promote greater transparency regarding both petroleum revenues and environmental management.**

Many of the problems related to agency dysfunction and inadequate transparency trace their roots back to fundamental problems of institutional remit and design. The institutional landscape of oil and pollution regulation in Nigeria is profoundly flawed.

Key regulatory roles were fragmented across a number of different bodies, creating a mismatch that hamstrung the effectiveness of the regulatory regime as a whole. Until August 2021, the DPR had primary responsibility for developing regulatory standards and driving their enforcement, but it was not involved in monitoring adherence to them or responding to incidents.

The agency charged with environmental response, NOSDRA, had little input in drafting the regulations it was

meant to monitor and wields few enforcement powers. Its remit is also tightly drawn, excluding many forms of oil pollution.

Before it was replaced by the NUPRC and NMDPRA, the previous dual remit of the DPR was the source of a fundamental tension at the heart of the regulatory process. The conflict between the department's revenue maximising and regulatory roles consistently meant that regulatory priorities were relegated. The imperative to maintain and expand oil production, along with the department's close commercial relationships with the oil producers it was meant to regulate, shaped weak standards and lax enforcement. Unfortunately, it is likely that these conflicting priorities will continue to weaken the functionality of the agencies established to succeed DPR.

The problems created by the DPR's focus on revenue maximisation at the expense of effective regulation were reinforced by the overlapping and competing nature of institutional remits. NOSDRA is tasked with spill remediation but, as outlined above, only the DPR had any substantive enforcement powers. While NOSDRA's oil spill detection and remediation processes and standards are enshrined in law, the DPR's EGASPIN regulations were not, forming only a set of inadequate guidelines that were typically ignored. Furthermore, the confused nature of the law means that, for instance, although oil operators are required to notify NOSDRA of spills, they have not been obliged to inform the DPR and its successors. The fragmentation of regulatory roles across an 'alphabet soup' of agencies that have overlapping remits but differing powers only adds to the challenge of making the oil and gas sector safe and secure.

*The Commission travelled extensively to investigate and capture the true scale of the pollution crisis.*





## A flawed legal framework

The distortions of the regulatory regime are magnified by the flawed nature of the legal framework.

A strong legal framework is essential for regulation to be effective and for individuals and communities to be empowered to hold companies to account. Yet many aspects of Nigeria's legal framework are incomplete and do not reflect international best practice, thereby allowing polluters to escape scrutiny and accountability.

The lack of 'no fault liability' and comprehensive 'polluter pays' principles in Nigerian law has had deep and profound consequences.<sup>404</sup> Together with a lack of effective enforcement, the structure of the law creates huge incentives for oil producers to underinvest in pollution prevention and drives their behaviour in gaming the JIV regime, leading in turn to an operational culture that permits higher levels of contamination than they would allow in other countries. The fact that they are unlikely to have to pay compensation or even to undertake remediation encourages the IOCs to take risks they would not take in other jurisdictions and discourages IOCs from investing in the prevention and mitigation of environmental damage.<sup>405</sup>

This process is reinforced by inconsistency and other weaknesses in the legal code. The laws governing the regulation of oil contain numerous gaps and do not define the legal duties of regulators and other actors in a consistent or rigorous manner, thereby creating loopholes that oil producers exploit.

The impact of flaws in the legal codes is compounded by the absence of an effective court and dispute resolution system. Plaintiffs often lack the considerable resources required to pursue action through the courts and the process often takes years, with well-funded defendants able to bog down proceedings on an almost indefinite basis to prevent any unfavourable rulings. There are no mechanisms for class action suits or collective legal actions by communities against polluters. And even where fines are levied, they are rarely paid.<sup>406</sup>

**There is currently no alternative dispute resolution mechanism to allow individuals or communities to pursue resolutions of compensation claims rapidly and at low cost beyond those run by the oil companies themselves, with all the flaws and biases they demonstrate.<sup>407</sup> There is potential under the PIA to address some of these issues by requiring the creation of a grievance mechanism to resolve disputes between host communities and settlers. The Act also mandates the NUPRC to determine the amount of compensation payable by oil companies for damages to land and seeks to expedite the payment process by requiring that compensation, once determined, should be paid within thirty days which is a positive step.<sup>408</sup>**



## The exclusion of communities and civil society groups

The lack of liability, accountability and transparency enshrined in the legal and regulatory regimes have contributed to the alienation of local communities, as has their treatment by oil producers and the Federal Government.

The nationalisation of subsurface mineral rights and the complexities of local property and customary land rights provides little leverage for communities – particularly communities hosting oil industry installations - to bargain with IOCs. The legally binding obligation of companies to establish community development trusts (overseen by the NUPRC and NMDPRA) and to make community development expenditures provides an opportunity to address the problems with GMOU provisions, which are often stacked against communities, while the companies' obligations and responsibilities are rarely fulfilled. IOC community development programmes are perfunctory, uneven in their effects, and, for the most part, inadequate given the endemic poverty that blights communities across the Niger Delta.<sup>409</sup> Alleged off-budget cash payments by companies and a perceived lack of transparency in the allocation of legitimate monies to those affected by the industry's activities has fostered deep antagonisms and conflicts within and between host communities. It is, in fact, hard to find a host community that has not been marked by conflicts associated with what is widely perceived as the 'divide and rule' approach of the IOCs and the lack of transparency and disclosure in company-community relations.<sup>410</sup> However, while the host community trust provisions have been hailed as an improvement on the GMOU, it is imperative that they operate side by side. They should not replace GMOUs. This is because the latter, while not mandatory, tend to provide for active engagement of host communities by way of employment, contracting, supplies, etc. These are absent from the PIA, which basically mandates "Settlers" to make financial contributions for the development of host communities, but does not extend to active engagement by way of employment or contracting.

In many of the communities, the state – federal and local – is to all intents and purposes absent. The destabilisation of communities, the use of young men as 'pipeline security', and the collapse of customary authority structures have all driven increases in the sabotage and vandalization which CSR and other community development schemes undertaken by IOCs and the government were meant to

address. All too often, IOCs are under-investing both in communities and in safety in ways that they would not be permitted in other countries.

The limited power of communities in their relations with companies and state agencies is mirrored among civil society groups. The Niger Delta has a vast array of organisations, including advocacy groups with a particular remit for the oil and gas sector, such as Social Action and Environmental Rights Action. However, as the experience of the NEITI shows, these voices have a very limited role in regulation and oversight.<sup>411</sup>

**Furthermore, the failure to engage with communities, fund CSR and compensation appropriately, and manage relationships to minimise conflict, has helped contribute to the endemic insecurity and sabotage that form an important driver of the pollution crisis.**

**The PIA requires oil companies to contribute to a Host Communities Trust Fund and consult communities on how these funds are utilised. In this way, the Act seeks to translate the GMOU process from the realm of CSR to one of legal obligation. However, the proposed structure of the host communities' framework raises more questions than it answers. For instance, while the Act confers some roles on communities, it also appears to place the burden for oil spills on them. It allows companies to deduct the costs of repairing vandalised petroleum infrastructure from monies deposited in the trust fund. This provision suggests that the government may be seeking to transfer responsibility for securing petroleum infrastructure to the host communities. Furthermore, the Act does not envisage any meaningful roles for communities in addressing their deep seated concerns regarding their relations with the government. In addition, there is no clear guidance for effective interaction between the NUPRC and host communities, as the former is not mandated to engage with the latter over regulatory activities or the award of concessions.**

## The Provisioning Pact

Many of the flaws detailed in this chapter are ultimately built on the bedrock of the mutually beneficial relationship between the IOCs, politicians and the bureaucracies at the federal, state and local government levels.

All of these actors, in particular those at the federal level, have strong incentives to keep oil flowing as it provides not just a stream of profits to the IOCs, but also the primary source of revenues to the Federal Government. It is these revenues that finance state, local and federal government budgets and also provide the main pool of public funds from which rents linked to public office can be misappropriated.<sup>412</sup>

This alignment of interests between government actors and the oil companies in the maximisation of oil production and taxable profits along with the minimisation of pipeline operation costs has led to the development of symbiotic, co-dependent and, ultimately, complicit relationships that account for the failures to legislate and regulate effectively. This resource provisioning pact that links IOCs and government serves to protect a corrupt and flawed oil and gas sector from any serious scrutiny, reform or regulation.\*

The relationship between politicians and oil companies, which the late Ken Saro-Wiwa termed 'the Slick Alliance', is the fundamental foundation from which many of the problems of oil pollution stem.

A wide range of institutions in the transparency and accountability sector, most prominently those associated with the Extractive Industries Transparency Initiative (EITI) and advocacy organisations such as Global Witness, Friends of the Earth and the Center for Research on Multinational Corporations (SOMO), have devoted significant efforts to documenting the unprecedented scale of graft and theft associated with the massive illicit flows in Nigeria's oil

sector. Property rights assigned to companies, politicians and the military often resemble clear appropriation without oversight: these include oil prospecting and oil mining leases acquired by members of the political class and sold, along with huge bribes paid to secure mega-engineering contracts. And not least, there is outright theft and pillage perpetrated at the highest levels of political leadership.

During the late military period in Nigeria from 1995-1999, the stolen assets sent out of the country by President Abacha to offshore financial centres was estimated to amount to as much as US \$5 billion. The misappropriation of assets has continued since then. In 2008, Albert J. Stanley, a former executive with a Halliburton subsidiary (KBR), pleaded guilty to charges that he conspired to pay US \$182 million in bribes to Nigerian officials in return for contracts to build a US \$6 billion liquefied natural gas complex.<sup>413</sup> The legal case over OPL245, involving Shell, Eni and former oil minister Dan Etete, while unsuccessful in the UK High Court, is simply the tip of an iceberg in terms of alleged high-level corruption. Diezani Alison-Madueke, who was Nigeria's oil minister when Goodluck Jonathan was President, has been embroiled in several global corruption scandals. It is widely understood that the theft of oil monies, historically endemic, continued to grow to unprecedented levels over the decade up to 2015.<sup>414</sup> Nuhu Ribadu, who led a Petroleum Revenue Special Task Force in 2012, estimated that political elites had stolen US \$29 billions worth of oil and oil revenues.<sup>415</sup> While the theft involved can be substantially attributed to corrupt political elites, the role of the national oil companies, along with international oil companies and trading houses, is central to any understanding of the unfathomable scale of financial haemorrhaging from the public purse.

\* The concept of a provisioning pact is taken from Dan Slater, *Ordering Power: Contentious Politics and Authoritarian Leviathans in Southeast Asia*, Cambridge University Press, 2012. A provisioning pact in which political and economic elites acquiesce in the expansion of state power and the building of state capacity, refers to the centrality of the political and economic elites who enrich themselves through the capture of rents and corruption of public office and thereby undermine state effectiveness and state capacity. Resource-dependent states like petro-states typically exhibit these powerful provisioning dynamics.



### Long legal trail of oil corruption cases

EITI advocacy organisations such as Global Witness, Friends of the Earth and the Center for Research on Multinational Corporations (SOMO) has for decades documented the unprecedented scale of graft and theft associated with the massive illicit flows in Nigeria's oil sector.<sup>416</sup> Property rights assigned to companies, politicians and the military often resemble outright theft: oil prospecting and oil mining leases acquired by members of the political class and sold, or substantial bribes are paid to secure mega-engineering contracts. There is alleged corruption perpetrated at the highest levels of political leadership. During the late military period in Nigeria (1995-1999) the stolen assets sent out of the country by then President Abacha to offshore financial centres was vast (estimated at US \$5 billion), and the process continued, especially in the period after 2009. It is widely understood that the theft of oil monies was endemic growing to unprecedented levels over the decade up to 2015.<sup>417</sup> Nuhu Ribadu headed a Petroleum Revenue Special Task Force in 2012 and estimated that over a four decade period, political elites had stolen US \$380 billion of oil and oil revenues.<sup>418</sup> The role of the national oil companies and international oil companies and trading houses are central to understanding the unfathomable scale of financial haemorrhaging from the public purse. In 2008 Albert J. Stanley, a former executive with a Halliburton subsidiary (KBR), pleaded guilty to charges that he conspired to pay US \$182 million in bribes to Nigerian officials in return for contracts to build a US \$6 billion liquefied natural gas complex.<sup>419</sup> Although recently acquitted by a court in Milan, the long-running legal case over OPL245 involving Shell, Eni (Agip) and former Oil Minister Dan Etete, revealed practices that were just the tip of an iceberg.<sup>420</sup>

**The Chair of the Commission, Lord Sentamu, described this as organised theft on an unprecedented scale.**



## A lack of international scrutiny

The failures seen in Nigeria have been reinforced by the omission of international institutions and the home jurisdictions of the IOCs to effectively scrutinise their activity.

There have been numerous interventions by bilateral and multilateral agencies over the last two decades aimed at improving transparency and accountability and fighting corruption in oil producing states. The IMF's fiscal transparency codes, OECD anti-corruption engagements on National Oil Companies (NOCs), stolen asset and foreign corrupt practice laws, the Nigeria Extractive Industry Transparency Initiative (NEITI), and the important advocacy work of organisations such as Global Witness and Public Eye, have all collectively focused on the endemic corruption in oil states and, especially, the relations between the IOCs, NOCs, trading houses, and political elites.

However, these programmes were not designed to address the operational practices of oil companies, oil service contractors and local regulators, or the environmental consequences that result. While some countries are increasingly enforcing anti-corruption standards on their companies worldwide, as, for instance, in the UK via the Bribery Act and the US through the Foreign Corrupt Practices Act and the Dodd-Frank legislation, these countries have yet to take the same approach to minimum environmental standards. As a consequence, there has been a failure to scrutinise the broader behaviour of IOCs in host communities or to hold them to the operating standards that would be expected of them in their home jurisdictions.

**Two recent court judgements, one in the Hague and one in London, ruled that Royal Dutch Shell could be held responsible for neglecting its duty of care in all cases of pipeline leakage. On 29 January 2021, the Dutch Court of Appeal held that Royal Dutch Shell was liable for pollution caused by its Nigerian subsidiary SPDC, and ordered Shell to improve its pipeline network.**

### Four Nigerian farmers, Milleudéfensie v Shell (Dutch Decision)

On 2 February 2021, the Dutch (Hague) Court of Appeal held the parent company Royal Dutch Shell (RDS) liable for environmental damage arising from pollution from the operations of its Nigerian subsidiary (SPDC). The case is significant as it is the first case in Europe that holds a parent company liable on the substantive claims rather than preliminary arguments on jurisdiction. The case was brought by Nigerian farmers together with the NGO Milleudéfensie. RDS had argued that it was not responsible for the acts of its subsidiary, and that the spills had resulted from sabotage. The Appeal court found that the claim of sabotage had not been proven in at least one of the spills and that in the other cases it still remained open whether RDS could be held liable. The case was decided based on Nigerian law.

### Okpabi v Royal Dutch Shell [2021] UKSC 3.

This was a case brought in the English courts against RDS by individuals in two communities in Ogoniland in the Niger Delta for environmental damage from the operations of SPDC, the Nigerian subsidiary of RDS. RDS had challenged the jurisdiction of the English Courts to hear the matter. On 12 February 2021, the UK Supreme Court reversing the High Court and Court of Appeal, gave a landmark decision, holding that English courts did indeed have jurisdiction to hear the case against the parent company (RDS). In doing so, it established that parent companies owe a duty of care to citizens in foreign countries, based on the degree of control and de facto management that a parent company (in this case RDS) has over the subsidiary. The Court further held that such control could be merely operational (de facto) not necessarily legal (de jure) control, and could include the adoption of group-wide policies by the parent company.

## Conclusion: the toxic cocktail

The causes of Bayelsa's pollution crisis are complex and the blame for every oil spill cannot be laid at the feet of the IOCs or the Government of Nigeria. But, at the root of the problem, there lies a toxic cocktail of serial oil producer intransigence which has given rise to the four failures that form the most immediate causes of the pollution crisis, all of which arise from and are perpetuated by ineffective regulation, a flawed legal framework, the dysfunctional politics of the 'slick alliance', and a lack of international scrutiny of operational practises.

All of these findings are underpinned by a fundamental institutional neglect for the people whose lives have been blighted. The Federal Government has repeatedly ignored the interests of those living in affected communities, while the IOCs behave in ways they would never contemplate in their home jurisdictions. Intentional or not, the conduct of the oil producers shows many of the hallmarks not just of gross negligence but of environmental racism, with the interests of Bayelsa's communities discounted because of who they are and where they are from.

**In this respect, there are concerns that the new PIA may well serve to reinforce the perception of collusion between the Nigerian political elites and the oil companies. The Act may have clarified the regulatory structure of the industry by conferring separate regulatory responsibilities for upstream on the one hand, and midstream and downstream on the other, as well as restructuring the NNPC and introducing the Host Communities Trust Fund. However, so far as reining in the excesses of the oil companies is concerned, it does not appear to have gone far enough. In addition, the new Act has not created any significant new sanctions to dissuade oil companies' neglect or evasion of their responsibilities. Overall, the PIA may actually lead to the further entrenchment of the dominance of oil companies and local oil magnates who are increasingly seeking to encroach into concessions hitherto reserved for IOCs.**

Stemming the tide of pollution and the human suffering it brings with it will require a root and branch reform of the whole edifice of regulation, law and politics upon which Nigeria's oil sector is built.

But, as importantly, it will require decisive and far-reaching action to address the damage that has already been done. That action forms the focus of Chapter Four.





## 4

# Fixing the damage

In this chapter, we look at how to fix the damage already done. This too will require entirely new ways of doing the business of remediation, restoration and compensation: to repair the damage done. Nothing short of reparations is what the Commission proposes. We lay out four key recommendations that will provide the foundations for such an approach.



## Taking comprehensive action: a recovery plan for Bayelsa

As has been outlined in previous chapters, the current and highly imperfect approach to remediation relies on reactive, tactical and piecemeal action by individual operators.

Most sites receive no remediation at all, and best practice techniques are rarely used. Even where remediation takes place, the focus is almost exclusively on physical clean-up rather than on the human impacts or the environmental or economic consequences of pollution incidents. In general, the assessment of pollution is highly flawed; systematically underestimating the scale and scope of spillages, and remedial activity tends to be concentrated solely on the immediate area of any leak. Downstream communities rarely receive any help, despite suffering secondary pollution. Remediation rarely, if ever, addresses the full spectrum of pollution, with little action being taken on mitigating the damage caused by gas flaring or other forms of effluent discharge.

The implications of this analysis are clear in the context of the global climate crisis: more of the same will not be sufficient to address the legacy of 60 years of oil pollution, which has had a devastating impact not only on the environment in Bayelsa and throughout the Niger Delta, but also on carbon emissions worldwide. As a result, a paradigm shift to a new comprehensive approach to recovery is required to help remedy the impact of pollution. A Bayelsa recovery plan would both build the foundations for Nigeria's low-carbon, post-oil future and focus efforts on improving the lives and livelihoods of people in Bayelsa. Such a plan would consider all forms of pollution, use best practice techniques to assess and develop tailored solutions, and integrate sustainable approaches to physical and other dimensions of remediation.

### Recommendation 1

### A Comprehensive Bayelsa Clean up and Recovery Plan.

Develop and implement a multi-dimensional multi-year plan, informed by best practice, to address the main effects of hydrocarbon pollution. Elements of the plan should include:

- A systematic and comprehensive programme of highly tailored physical remediation of polluted land, waterways and inter-tidal zones drawing on a variety of best practice techniques.
- An environmental recovery programme to support the replanting of mangrove forests.
- Immediate interventions to address urgent health risks such as contaminated drinking water, combined with comprehensive health screening and the establishment of a long-term treatment system to support those who develop chronic or acute conditions related to pollution.
- Urgent access to safe, clean drinking water and food supplies for a sustained period.
- The creation of an economic development fund to support tailored programmes to create jobs and alternative livelihoods as a means of addressing the economic impact of pollution on families and communities and to lay the groundwork for a transition to beyond oil and gas.
- A range of measures to address artisanal refining and provide alternative opportunities for those involved.

This approach would contain several important strands:

### Physical remediation

The new paradigm of pollution remediation will need to be rooted in a fundamentally different approach to the current physical remediation of hydrocarbon pollution.

The Commission has spoken with numerous experts on oil pollution and extensively reviewed the approaches used both in Nigeria and across the oil-producing world. In addition, it has consulted the guidance issued by bodies such as the International Petroleum Industry Environmental Conservation Association (IPIECA). The effects of pollution and the most effective avenues to address them will, among other things, depend heavily on the geology and hydrology of individual spill sites and the broader affected areas. For instance, oil may soak far deeper into the soil during onshore spills than it will in incidents in intertidal zones, where it often becomes trapped in a thinner layer of mud much closer to the surface.

The differing characteristics of spill-affected areas have profound consequences for how pollution should best be tackled. It may mean that in some cases, the best strategy will, unfortunately, be to leave spilled oil in place. For example, in some tidal zones, attempting to remove oil that is locked in mud may simply exacerbate the pollution. In areas like these, remediation will need to focus on managing the ongoing presence of contaminants, rather than trying to remove them.

All of this suggests that highly bespoke measures will be required, as there cannot be a 'one size fits all' approach to remediation. A clean-up approach based on methodology developed from an international best practice tool like the Shoreline Clean-up Assessment Technique (SCAT) may provide the best foundation for a programme of physical remediation.

*Jerry cans that were initially used to scoop crude from pipelines for local refining were found abandoned.*







*Shell's batch (oil spill clean-up and remediation equipment) cleaning up oil spills in the creeks, collecting the spilled oil from the river.*

### Shoreline Clean-Up Assessment Technique (SCAT)

SCAT was developed in response to the Exxon Valdez spill and has been widely used around the world, including in Nigeria, where it has informed the remediation programme in Bodo. Under the SCAT process, a polluted area is given an initial survey - often by air - and then segmented into grid squares. Mixed teams including biologists, hydrologists, geologists and oil spill experts, as well as community representatives, visit each square, conducting both on-the-ground and in some instances aerial surveys. For individual squares, they collect a wide range of geotagged evidence, including multiple soil samples and on-the-ground and aerial video footage. They then use this information to arrive in the field to conduct an initial, consensus assessment of how the pollution in that particular grid square should be handled, including what remediation techniques should be used.

The evidence from each site is then sent for external verification and validation. Under the process as run in major international incidents, each sample collected is independently tested in two separate certified laboratories, one of which should be international, to confirm the on-the-ground findings made by the SCAT teams.

Once the treatment approach has been decided for a specific grid square area, a full range of best practice techniques are brought to bear. These may range from bioremediation, incineration and removal of contaminated soil or sediment through to bio-

piling, solvent extraction, crystallisation or the use of detergents or hydrogen peroxide. The treatment for each grid square is tailored to reflect the SCAT assessment, resulting in a highly sophisticated triage, with some areas being managed through natural regeneration or less intensive interventions, while others are subject to high intensity, multiple-technique interventions. A similar process can be used for onshore oil spills and pollution by liquid or solid contaminants.

The SCAT process can be highly effective. But to work, it must be underpinned by significant specialist capacity. Those conducting assessments and working on clean-up must be highly skilled, with all clean-up workers trained to International Maritime Organisation (IMO) or similar standards. The numbers of personnel required can be high. In Bodo, the workforce currently exceeds 800 and is expected to soon top 1,000. Even with remediation capacity on that scale, progress can be slow due to the methodical nature of the process. In Bodo, the workforce can only cover around 1,000 hectares at any given time.<sup>421</sup>

These teams must be supported by specialised remediation facilities that act as centres of excellence and are equipped with all the physical assets required to effectively deliver all forms of remediation and process contaminated items - including everything from soil to machinery - at volume. As part of this process, they also need to have access to equipment that is highly adapted to the exact conditions in each location. For instance, in shallow creeks, flat bottomed boats may need to be used to avoid disturbing oil lodged in sediment.<sup>422</sup>

All communities that have either directly or indirectly been affected by hydrocarbon pollution, including downstream communities, should be subject to an initial survey and SCAT assessment. Our initial assessment suggests that this would require about 23 percent of the state, amounting to an area of over 252,900 km<sup>2</sup>, to be assessed. This is an area about 250 times larger than that covered by the Bodo remediation. On the basis of this estimate, a highly tailored remediation plan should be formulated for all affected locations. The plans should then be executed on the fastest

possible timetable, with a target for all remediation to be completed within 12 years.

To support this ambitious approach, there will need to be significant investment in both people and remediation centres. While the exact specifications of the programme will require further detailed work, we believe that a physical remediation programme will require a workforce significantly larger than that seen in Bodo (Rivers State), involving perhaps as many as 25,000-63,000 skilled workers.<sup>423</sup>

Total Hectares	31,700 31,700	63,300 31,600	94,900 31,600	126,500 31,600	158,100 31,600	189,700 31,600	221,300 31,600	252,900 31,600
Year 1	SCAT							
Year 2	Cleaning	SCAT						
Year 3	Cleaning	Cleaning	SCAT					
Year 4	Replanting	Cleaning	Cleaning	SCAT				
Year 5	Monitoring	Replanting	Cleaning	Cleaning	SCAT			
Year 6		Monitoring	Replanting	Cleaning	Cleaning	SCAT		
Year 7			Monitoring	Replanting	Cleaning	Cleaning	SCAT	
Year 8				Monitoring	Replanting	Cleaning	Cleaning	SCAT
Year 9					Monitoring	Replanting	Cleaning	Cleaning
Year 10						Monitoring	Replanting	Cleaning
Year 11							Monitoring	Replanting
Year 12								Monitoring

To support this workforce, we believe that a minimum of two remediation centres will need to be built. At least one of these should be mobile, perhaps located on a shallow draft floating platform to allow access to hard-to-reach sites in riverine communities. The SCAT process should be complemented by strong and sustained communications

and engagement with affected communities to help maintain local support and manage expectations. It will take a minimum of two years to clean polluted areas identified in the SCAT process, followed by replanting and monitoring. This process is based on the five-year programme to clean 1,000 hectares in Bodo.

## Tackling artisanal refining and introducing modular refineries

A large-scale remediation effort will also need to be accompanied by concerted action on artisanal refining. As outlined in previous chapters, artisanal refining and bunkering contribute significantly to pollution and pose an ongoing threat to clean-up activities. To minimise their impact, initiatives to introduce modular refineries and create better alternative economic opportunities for those involved in illegal refining should be combined with measures by oil operators to reduce the risk of pipeline breaches. These measures could include the installation of remote monitoring and shutting off or caging of pipelines along with enhanced regulatory enforcement. Critically, the metering of oil volumes that IOCs have pumped should be moved from oil terminals to either wellheads or nearby flow stations. This would, at a stroke, transform the IOCs' incentives to invest in pipeline security and integrity.<sup>424</sup> All these measures will be discussed in more detail later in this chapter and in Chapter Five.

Physical remediation will be the most expensive element of the overall recovery plan. Based on international benchmarks and expert calculations, we estimate that the total cost of establishing the necessary capacity for physical remediation and restoration and operating it for a 12-year period could be as much as US \$10.5 billion.<sup>425</sup>

It should be recalled that unlicensed refining has been flagged as one of the significant causes of pollution in the Niger Delta, and in Bayelsa in particular. Among the suggestions that have been made for tackling this problem is that the Federal Government should harness the skills and energy of youth in the Niger Delta by granting them licences within a regulatory framework to operate modular or artisanal refineries. Surprisingly the PIA is silent on this issue: although it sets out sanctions to punish those engaging in unlicensed refining, it does not address the licensing or regulation of modular refineries.<sup>426</sup>

## Environmental recovery (restoration)

Simply removing or neutralising contaminants is not, on its own, enough to remediate the damage done by hydrocarbon pollution. As Chapter Two outlined, the Niger Delta has lost over 40 percent of its mangrove forests since oil production began.<sup>427</sup> This depletion has exacerbated local communities' exposure to a wide range of environmental risks, since mangroves provide natural beneficial functions such as flood mitigation, storm protection and erosion control. In addition, the loss of trees has also affected the livelihoods of households that depend on natural resources, since mangroves are an important source of fuelwood as well as breeding and nursery sites for many fish species. Populations of many important animal species have dropped significantly with the loss of mangroves. Therefore, a best practice remediation programme should also include initiatives to aid environmental recovery.<sup>428</sup>

International experience suggests that the key to accelerating environmental recovery is to replant mangrove forests. These forests act as a cornerstone for entire ecosystems by providing a habitat for countless species as well as anchoring contaminated sediment. The process of planting and maintaining mangroves also has considerable job creation potential. Restoration, however, needs to be carefully managed, with specialist mangrove nurseries overseeing the growing of saplings and their

effective transplantation with sufficient uncontaminated soil to allow them to establish themselves. The stewardship of the recovery programme by skilled professionals would make a large difference to its overall impact.<sup>429</sup>

In Bayelsa, the Commission proposes that investment should be undertaken in several specialist mangrove nurseries, ideally connected to a university or research facility, to develop and deliver an extensive replanting programme to complement the physical remediation being undertaken. This should be accompanied by training opportunities for local communities, as a labour-intensive mangrove replanting programme could provide an important source of livelihood generation and diversification.

The planting programme should be initiated through a sequence of pilots to test out the right approach in different areas before full-scale planting commences. Those delivering the planting programmes should work with experienced partners, possibly the IUCN, to ensure the maximum overall impact.

Initial estimates suggest that such a programme, if delivered over a 12-year period, could cost approximately US \$176 million.<sup>430</sup>



## Public health

As was outlined in Chapter Two, exposure to hydrocarbon pollution at the levels present in Bayelsa is associated with a range of serious chronic illnesses. Reflecting the lessons of numerous pollution and radiological incidents around the globe, as well as guidelines published by the WHO and other bodies on the management of chronic diseases caused by environmental factors, the public health response to the oil contamination crisis in the state should be multifaceted with a phased implementation over time.

The initial measures in every community should be focused on emergency steps to map sources of contamination, provide clean sources of water and, if necessary, food, along with steps to deal with any acute conditions arising from exposure to toxic contaminants. As a matter of urgency, soil, water and food samples from all potentially affected communities should be tested to identify potentially contaminated sources of drinking water and nutrition. Priority should be given to testing wells and creeks supplying fish and other marine sources of food to communities. Air samples should also be taken. Action should not just be limited to communities that have been directly affected, but also encompass those that are indirectly impacted. In the highest risk communities, blood samples should also be taken.

The local contaminants assessed should be based on the full range of internationally recognised toxins rather than the restricted EGASPIN list, and aligned with globally recognised standards for harm rather than EGASPIN's higher 'intervention values'. In communities where testing shows potentially harmful levels of contaminants, action should immediately be taken to provide alternative sources of drinking water and sustenance. This mapping exercise will also allow for health interventions to be informed by a risk-based approach, prioritising the most vulnerable communities first.

Best practice suggests that this testing should also be accompanied in serious cases with immediate treatment to flush toxic compounds from the system and limit their re-absorption.

Over the longer term, the health element of the Recovery Programme should be based on a regime of free regular testing and action to protect and treat high risk groups. A monitoring and testing regime should be established so that all members of directly and indirectly affected communities are examined and checked on an annual basis to identify early markers of potential health conditions. People showing potential disease markers should be

subject to additional monitoring and potential early treatment, as should members of high risk and vulnerable groups such as children, the elderly and expectant mothers. For these high-risk groups, effective preventative measures should be applied where possible. Where health conditions do materialise, treatment should be provided on an ongoing basis.

This regime of testing, treatment and risk-based preventive measures should be complemented by a sustained campaign of health education and communication to help change behaviours in affected communities to reduce exposure to contaminants.

International evidence suggests that the risks posed by high levels of sustained exposure to hydrocarbon contamination can persist for many years after exposure ends. A testing and treatment regime would need to be kept in place for between 20-30 years and be succeeded by a residual programme that may need to be maintained in perpetuity, especially if a measurable level of contaminants remain in the local environment.<sup>431</sup>

This coordinated series of measures will require a significant investment in Bayelsa's healthcare system, as well as ongoing financing to pay the year-on-year running costs. There are currently only two hospitals of any scale in the entire state.<sup>432</sup> Most healthcare is provided through a network of 168 primary healthcare clinics.<sup>433</sup> As coverage is limited, most communities do not have a clinic and inhabitants may be forced to rely on centres in other, often distant, communities.<sup>434</sup> For less accessible riverine communities deep in the Niger Delta, distance from health facilities may create a significant barrier to accessing appropriate levels of adequate care. For instance, residents of Ewoama in Brass LGA have to cross the often-dangerous Brass River to access functioning health clinics.<sup>435</sup>

Not only are there far too few clinics, but the ones that exist are chronically understaffed. According to one study, only 18 percent of clinics have a nurse attached to them and only 6 percent have a doctor.<sup>436</sup> They are also often inadequately equipped and dilapidated. As a result, they are frequently forced to shut or operate at highly reduced capacity. Another study found numerous instances of clinics or cottage hospitals that were either closed or offering a highly reduced service.<sup>437</sup>

Delivering an effective programme of preventative screening and treatment will require a transformation in Bayelsa's healthcare system. Significant funds will need

to be invested in repairing and upgrading the existing network of clinics. A number of new clinics will also need to be built. To complement these, the Commission believes that investments will also be needed in a number of mobile clinics to serve remote communities. Clinics based on shallow draft boats – loosely modelled on mobile facilities used in South Africa – will be critically important for providing services to hard-to-access communities.

These investments should also be complemented by increased annual funding to support the training and employment of qualified medical staff, expanded drugs and treatment budgets, and an ongoing testing regime. As these expenditures cannot realistically be supported through the current health insurance system, they will require additional external funding through the recovery programme.

Similarly, the Bayelsa State Health Insurance Scheme (BHIS) covers only 5 percent of the population and does not therefore offer an appropriate vehicle for accessing the testing and treatment programme.<sup>438</sup>

We would suggest that, at a minimum, people living in communities designated as directly or indirectly affected by hydrocarbon pollution under the SCAT methodology should be offered free access to healthcare. Given the difficulties in administering such care while maintaining the BHIS system in parallel, it may be more efficient to enrol all citizens in the BHIS regardless of their ability to pay or offer all Bayelsans free healthcare through the recovery programme. The Bayelsa State Government's commitment to universal health coverage for its

population creates a conducive operating environment within which IOC coordinated investment in improving the health of local people affected by the negative health impacts of oil and gas production would be welcomed. Although more work is required to develop the details of a health plan with regular targeted health screening, initial estimates suggest that it may require US \$41.6-47.6m in investment and an additional US \$9.55-20.65m a year to run, resulting in a projected cost over a 12 year period of roughly US \$247.8 m plus the initial outlay of US \$42-48m.<sup>439</sup>

**Health provision details are limited in the recently enacted PIA. Although the Host Communities' Trust Fund proposal includes the provision of health services as one of its objectives, the focus is likely to be limited only to the provision of cottage hospitals and healthcare centres. While several sections of the PIA mandate oil companies to observe health and safety standards, there are no deliberate provisions requiring oil companies to either address the health issues affecting their host communities in a holistic way, nor are there provisions relating to the recovery or compensation for persons whose health and livelihoods have been severely impacted by continuous exposure to hydrocarbon-related contamination.**



## Livelihoods and economic recovery

Chapter Two outlined the immediate and long-term economic damage of hydrocarbon pollution. Immediate drops in income – and sometimes rises in prices – are often accompanied by the ongoing loss of livelihoods that fuels food insecurity, deepens poverty and frays the fabric of communities themselves, with the results being increased conflict, the erosion of traditional community bonds and, in some cases, increased migration.

These kinds of impacts require a dual response that helps deal with the immediate loss of income caused by pollution incidents and provides access to alternative livelihoods and sources of growth for impacted communities over the longer term, especially where the effects of pollution are long lasting.

Short-term income supplement programmes, perhaps based on models seen in India and a growing number of African countries where the government provides time-limited paid work opportunities for people in affected communities, should be established. These public employment opportunities could include those associated with the physical remediation programme, particularly if affected communities are offered opportunities to train to international standards in pollution management. Additionally, a public works programme could support the conservation or enhancement of critical ecosystems, such as wetlands and forests, as South Africa does.<sup>440</sup> In this way, short-term income generation strategies would also lay the foundations for longer-term productivity and resilience through nature-based solutions to soil formation, flood protection and pest control, which are typically much cheaper than 'grey' infrastructure or commercial products. As outlined above, such programmes should complement initiatives to ensure communities have access to clean water and safe supplies of food.

Longer term, a portfolio of programmes should be developed to enable households to generate new sources of income and develop sustainable alternative livelihoods, lessening their dependence on pollution-affected activities associated with oil and gas production. Bayelsa's wetlands, forests and agricultural land, if cleaned up and restored, could provide important sources of livelihoods, particularly sustainable harvesting of fish and timber stocks, and both subsistence and commercial agriculture, against the backdrop of what will need to become Nigeria's necessary transition to a post-oil and gas future. Investing now in a more ambitious and varied range of economic opportunities could also help address some of the root

causes of conflict between and within communities, and also potentially help divert people from activities like artisanal refining that also cause significant environmental damage and which, along with gas flaring by IOCs, contribute to increased carbon emissions.

Communities should be supported to develop alternative sources of income through activities such as agriculture, agroforestry and aquaculture as regenerative practices critical to supporting recovery and restoration from oil-related pollution, the green recovery, and climate change. Bayelsa's recovery plan should also contribute to the creation of a 'post-oil' low carbon future in Nigeria. Support for the processing and refining of agricultural products will also be part of the recovery plan by enabling communities, where possible, to move up the value chain to generate more cash income and better jobs.

And in view of the deleterious impact of oil on the livelihoods of the people of Bayelsa State, an ambitious economic recovery plan geared towards positioning the people of the state to survive in a post-oil low carbon future is needed. This requires a strategic, deliberate and far-reaching plan to be put in place. This plan should go far beyond the level of communities' trusts managed by companies to collaboratively harness the resources of the oil companies, the federal, state, and local governments as well.

Supporting the management and scaling up of sustainable agricultural practices can provide a boost to rural economies and create jobs. It can also help to restore and protect the environment and contribute to long-term development that will also improve food security.

Training, where possible linked to concrete job opportunities, should be provided to young people to broaden their options. Activities such as the scheme for training pilots that Partnership Initiatives for the Niger Delta (PIND)<sup>441</sup> have established to provide skills to marginalised youth should be expanded. Investments should also be made in expanding training and capacity in potential future growth sectors, including IT and renewable energy. In general, Bayelsa will need to begin to identify and invest in engines of shared prosperity and job creation to power the economy in a post-oil world. Investment in economic remediation and development should help the state and its people to make this transition.



Similarly, investment in modular refineries should be supported to ensure communities have access to affordable fuel and to provide alternative livelihoods for those currently involved in artisanal refining. These should be accompanied by investment in renewable energy. Communities will need access to energy to power the growth of new sectors and alternative livelihoods that will be at the heart both of effective economic remediation and the embrace of a low carbon future.

Micro-credit facilities should be provided to enable people in affected areas to develop new businesses. There are a range of other interventions, including the establishment of innovation hubs, that should also be considered.

However, a careful balance will need to be struck throughout to ensure that adverse incentives are not created. The Commission has heard evidence that competition for compensation funds and contracts related to pipeline security have, on occasions, sharpened incentives for sabotage.

The mix of appropriate interventions and support will, of course, vary from community to community depending on the exact nature of the pollution suffered and the effect that this has had on their economic dynamics. The aim should be for every affected community to receive immediate short-term assistance and a flexible portfolio of longer-term support to help create strong alternative engines of employment and prosperity. Help should be calibrated to the level of harm, but should also be available to all directly and indirectly affected communities.

The flexible and varied nature of the interventions required make it difficult to estimate the exact costs of such support. However, on the basis of the number of spill sites that exist across Bayelsa and the proportion of the population that may be affected, the Commission believes that funding these programmes to ensure that all historically affected communities receive at least some help will cost roughly US \$1 billion per year.

*Remediation needs to take place to bring land back into use.*







### Social cohesion

Oil pollution has not just degraded the environment, the economy and people's health. It has also eroded the ties that bind communities together.

Unfortunately, there is no quick fix for the damage pollution has caused to social cohesion in communities across the Niger Delta. Part of the solution requires taking a different approach to community engagement that is radically different from the GMOU model. This will be outlined in Chapter Five.

However, while a new approach is put in place, there are a number of steps that can and should be taken to help begin to repair some of the rifts within and between communities, or at least to make sure that the remediation process does not exacerbate them.

The PIA's introduction of Host Communities' Trust Funds potentially represents an initial step in terms of supporting social cohesion. However, gaps as it is currently proposed have been identified, with host communities challenging key aspects of the provisions. How the Trust Funds will be administered will determine whether community cohesion or conflicts are the outcome.<sup>442</sup>

The Fund's successful implementation and ultimate effectiveness in securing the wellbeing of communities will depend on several factors, including regulatory credibility and monitoring, and transparency and sincerity from the oil companies.

Firstly, as previously emphasised, downstream communities as well as those directly affected by spills, should be included in any remediation efforts.

Secondly, strong mechanisms should be put in place to ensure that communities have complete visibility over funds being spent and how they are being distributed, so that all members of affected communities can have clarity. Fair allocation mechanisms, with clear grievance and appeal mechanisms, should be put in place. These mechanisms should be accompanied by strong and regular communication with communities to keep them informed about the progress of the recovery programme and to help manage expectations.

**In this respect, the PIA missed an opportunity as it tends to disproportionately favour the oil companies in terms of managing the funds, which may distort the distribution and management of funds to the extent that host communities will be isolated from the supervision of projects relating to their development.<sup>443</sup>**

Thirdly, the Commission believes that in the short-term, there may be a role for state and local governments in helping to mediate and support constructive dialogue within communities. However, the PIA has failed to address the better integration of states and local governments representing local people in the execution of projects tailored to develop host communities.

Funds to support these outreach approaches will need to be included in the costing of the recovery plan.

## Summary table of costs

Area	Item	Initial Outlay (US \$M)	Ongoing Annual Cost (US \$M)	Total over 12 years (US \$M)
Remediation	25,000-63,000 skilled workers and 2 remediation centres			10,500
Environmental restoration	Replanting programme			175
Health	168 clinics rehabilitated	5-6.7		
	432 clinics built	34.6		
	3 new hospitals in most affected LGAs	1.4		
	Sensitisation/ awareness campaign	0.6-4.9		
	<b>Total Health</b>	<b>41.6-47.5</b>		<b>41.6-47.5</b>
	Running hospitals and clinics		3.25	
	Monitoring health impacts		6.3-17.4	
	<b>Total Health</b>		<b>9.6-20.65</b>	<b>247.8</b>
<b>Livelihood and economic recovery</b>	<b>Portfolio of programmes</b>			<b>1,000</b>
<b>Total</b>				<b>11,970.3 (12bn)</b>





## Financing the recovery: the Bayelsa Recovery Fund

### Recommendation 2

### Set up a Bayelsa Recovery Fund.

**Establish a c. US \$12bn fund to finance the implementation of the Bayelsa Recovery Plan.**

**The Fund should be financed through contributions from the IOCs and NNPC, as in Ogoniland. It should also follow best international practice for governance, transparency and accountability.**

The Bayelsa Recovery Plan will provide a rigorous basis for systematically addressing the huge damage that over 60 years of hydrocarbon pollution has done in Bayelsa. But it will not come cheap.

For example, initial estimates suggest that remediation efforts could cost US \$12 billion and could take up to 12 years. While large, these estimates are broadly in line with the costs seen in other remediation programmes: for example, they are roughly five times the projected cost of the programme to address the legacy of oil pollution in Ogoniland, an area fifth the size of Bayelsa that has suffered less pollution.

To finance the Recovery Plan, the Commission proposes that a Bayelsa Recovery Fund should be established. The fund should be capitalised by the oil companies that have operated in Bayelsa since 1958. Reflecting the principles used to determine oil company contributions in Ogoniland, each company should contribute according to its proportion of total Bayelsan oil pumped since commercial exploitation began, perhaps weighted to reflect the company's pollution record across its operational history. Liability for volumes pumped and pollution caused at wells already divested of would depend on exact terms

of divestment contracts. Safeguards would need to be put in place if necessary to prevent oil producers attempting to divest or exit the market to avoid their liability.

In considering the governance of the Fund, and learning from the experience of the Hydrocarbon Pollution Remediation Project (HYPREP)<sup>444</sup> and other bodies, the Commission is mindful of the need for the fund to be accountable to the people of Nigeria and Bayelsa, while at the same time embedding strong safeguards to ensure probity and independence from vested interests. To strike this balance, the Fund should be held in an escrow account with an international bank or institution and governed by a board that includes representatives of key international organisations, such as the World Bank or the UNEP, as well as the Federal Government and the State Government of Bayelsa. Local communities should also be involved, perhaps through a formal advisory panel, as well as through a seat at the boardroom table. The IOCs should not, however, have seats on the board. Further work is required, but it may be necessary to establish the Fund through legislation.

The Commission appreciates that this arrangement will require negotiation with a range of parties. As with any well-governed institution, we would expect the Fund to issue annual reports, be subject to annual audits by international firms, and be subject to detailed external scrutiny.

Chapter three of the PIA mandates oil companies to establish and administer host communities' development trusts to manage trust funds financed by an annual allocation of 3 percent of the budget of each oil company in the previous year of their operations. The trusts' objectives will include the financing and execution of projects for the benefit and sustainable development of host communities. The trust funds will also be used for infrastructure development, economic empowerment opportunities, and educational sector expansion along with enhanced health facilities in the areas of the companies' operations.

### The Hydrocarbon Pollution Remediation Project (HYPREP):

Though the UNEP Environment Assessment report was submitted to the Federal Government in 2011, it took another four years (2015) for the government to implement the report's recommendations for the environmental clean-up and remediation of Ogoniland. The HYPREP, a unit of the Ministry of Petroleum Resources, was established in 2012 in response to the submission of the UNEP Report and charged with responsibility for protecting and restoring 'the environmental human rights of all communities affected by hydrocarbon pollution in Nigeria', in particular Ogoniland and its environs through the implementation of the remediation programme.<sup>445</sup> The cost of the remediation process was projected to amount to billions of dollars. However, just US \$1 billion was announced for the project, with US \$180 million to be contributed over a five-year period.<sup>446</sup> Only US \$360 million has been released so far to HYPREP, specifically to the Board of Trustees, in two tranches of US \$180 million each in 2018 and 2019.<sup>447</sup>

According to the official Gazette published by the Federal Government in December 2016, the ratio of the contribution is as follows:<sup>448</sup>

- Joint Venture Partners 90 percent to be made per their participating interests
- Refineries five percent
- Other Local Operators five percent
- It is believed that SPDC/Shell has a 30 percent stake – to contribute US \$270 million in the five-year period, or US \$54 million per annum
- The NNPC has a 55 percent stake in the SPDC JV – US \$495 million in the five-year period, or US \$99 million per annum
- 15 percent to be split by Total and Eni (Agip) – to contribute US \$135 million in the five-year period, or US \$27 million per annum.<sup>449</sup>

Concerns remain about the possibilities of actual implementation, the sustainability of the programme given the overall cost of the project, transparency issues in HYPREP, and questions over the longer term commitment by successive governments and multinational oil companies.<sup>450</sup> While a new investigation by some NGOs has berated the HYPREP and SPDC's systemic failure to clean up Ogoniland,<sup>451</sup> its estimated that it may take up to 30 years of remediation efforts at a cost of billions of dollars to reverse the damage and restore the environment.<sup>452</sup>

*A storage tank is used to store crude extracted from pipes by locals.*





## Delivering the recovery: the Bayelsa Recovery Agency

Delivering the Recovery Programme will be a mammoth undertaking. Physical remediation alone will require the training, mobilisation, deployment and effective performance management of thousands of contractors and technicians at thousands of sites across the state for many years.

Other interventions in public health, environmental recovery and economic regeneration will require a similar effort potentially extending into decades. All of this will need to be underpinned by a programme of capacity and capability building, training and investment. Taken together, the programme will demand the mobilisation of people and resources on a scale previously unseen in Bayelsa.

### Recommendation 3

#### Establish a Bayelsa Recovery Agency.

Set up a specialist agency to manage the delivery of the Recovery Plan. The Agency should draw on international experts and staff to ensure best practice implementation and performance management of the Recovery Programme. To minimise the risk of misappropriation of funds, the Agency should be

overseen by an international panel and be subject to regular international on-the-ground audits and assurance. The Agency should operate to international standards of transparency and separate independent scrutiny bodies should be established.





The management of such a programme will require high levels of bureaucratic and specialist capacity and capabilities that span not just all facets of the Recovery Plan itself, but also performance management, contract management and other skills sets required to run major, multi-year projects.

It will also require very strong processes for compliance, internal and external audit, and detailed frontline oversight. This could potentially operate on the ‘three lines of defence’ model seen in financial services. Especially given the challenges other clean-up efforts in Nigeria and beyond have faced due to failure to adhere to standards, delivery and, in the case of HYPREP, significant issues of fraud, robust oversight mechanisms will be required. A programme management architecture will need to be put in place to track and manage the implementation of initiatives, validate and quality assure work, and closely monitor expenditure. As part of this regime, best practice and specialist hubs will be needed to support effective oversight of activities. The programme as a whole will require management with a mix of deep subject matter expertise and experience in running complex, multi-year, multi-location initiatives.

This effort will need to be complemented by effective governance that offers a necessary degree of accountability to the people of Nigeria and Bayelsa, while also being safeguarded from vested interests and political interference. Any governance mechanism should be independent of the IOCs, incorporate international expertise, and embody the highest standards of probity and conduct.

While the state and federal bureaucracies may be involved as partners in delivering some elements of the programme, the Commission believes that they currently lack the capacity, skills or governance capabilities to be able to implement an initiative of this size and complexity. Similarly, the IOCs’ track record suggests that they neither have the capability nor a sufficiently independent approach to deliver and administer such a programme.

The Commission believes that a new institution, the Bayelsa Recovery Agency, should be established to deliver the core of the Recovery Plan. This institution should reflect best practice both internationally and across Nigeria.

The Commission has not determined the detailed delivery model of the Agency, but envisages that it would work with both private and public sector partners to implement the elements of the Recovery Plan. For instance, the Bayelsa State Government would likely have a large role to play in helping deliver the health elements of the Recovery Plan, while others, such as specialist clean-up providers, might be contracted primarily to highly specialised private partners.

The Agency’s management should be composed of international and local experts. Its governance, as with the Fund, should be undertaken by a mix of experts drawn from international organisations and recognised international experts, as well as representatives of the federal and state governments. This body should be complemented by the establishment of a leadership advisory entity, drawn from local communities, to ensure they have a voice.

**The Agency would be funded by drawdowns from the Recovery Fund, each of which would be scrutinised against clear deliverables by the Fund’s board to add a transparent accountability and scrutiny mechanism. In addition, the Commission believes an independent scrutiny body should be established to provide external oversight of the Agency’s activities. Small amounts of funding should also be made available to NGOs to provide independent, hands-on auditing of the Agency’s activities and effectiveness on the ground.**

**Any proposals regarding the implementation of the framework for the host communities as outlined in the PIA should consider the above recommendations since, as noted earlier, they are reflective of best practices.**

## Ensuring compensation, reparations and voice

### Recommendation 4

### Provide access to a new compensation mechanism.

Those who have suffered losses as a result of pollution should have the ability to access a new simplified grievance mechanism to help them secure compensation payments. The establishment of this mechanism would provide an alternative for those who did not want or did not have the capacity to undertake

court action. Legal advice and support should also be made available for those filing claims. Compensation should be complemented by structures to ensure the voice of affected individuals and communities is heard throughout the remediation process.

A key cornerstone of remediation is compensation. Damage must not just be repaired. Losses must be made good. People must, if possible, be made whole.

As previous chapters have outlined, all too often the victims of oil pollution have been denied the compensation they deserve. Companies rarely pay and even where they do, the amounts often do not reflect the true scale of losses. Few can afford to use the courts to pursue justice, and even if they are able to, their cases can spend years trapped in clogged courts.

A new compensation system, founded on the ideal of 'just compensation', community self-determination and reparation for past and present damages, is needed. In Chapter Five, the Commission outlines an ambitious proposal to overhaul the compensation system by introducing a new compensation fund mechanism that will provide an avenue for affected individuals to seek rapid restitution through a streamlined process. The chapter also lays out a first-of-its-kind grievance mechanism to enable rapid redress should individuals or communities be unhappy with the compensation they are offered. We also lay out proposed changes to the law on liability to encourage victims to pursue claims for compensation, regardless of the proximate causes of a spill or leak, and changes to legislation to enable class actions. Such measures would allow communities and groups of victims to press their case for compensation collectively. The PIA adds nothing new to the legal framework as far as compensation for oil spills is concerned.

The Commission proposes that all those who have suffered losses as a result of historical legacies of spills should be able to access these new mechanisms under the new proposed rules on liability and class action. This recommendation is pertinent in the light of the fact that companies which historically contributed to

the pollution of Bayelsa State are divesting from their onshore assets and, in so doing, they are likely to offload their responsibilities onto indigenous firms which may not have the capacity to remediate the environment from the impact of historical 'liabilities'. These firms also do not have the financial resources to compensate for historical spills whose impacts on the environment are ongoing. To support this, the State Government should make free legal support available to help those who have legitimate claims to submit an application and pursue their case. The Commission recognises that compensation, even if successful and fair, may mean justice for particular families and individuals, but not for Bayelsa as a whole. The Commission also acknowledges that compensatory mechanisms alone, particularly if poorly managed, can generate new forms of conflict which could be the cause of further instability and injustice.

As outlined in previous sections of this chapter, every element of the remediation programme should also be complemented with mechanisms to ensure that the voices of the people and communities who have borne the brunt of the pollution and its ill effects are heard. Local communities should be involved formally in the SCAT process and kept abreast of its progress, and multiple scrutiny bodies and local advisory councils should be established to ensure that these local voices are heard in the delivery of the remediation.

The establishment of these new mechanisms will not affect individuals' ability to seek remedy through the courts. However, substantive compensation accepted through the new mechanisms will be in full and final settlement of any claim.

## Conclusion: necessary level of ambition

The Commission is under no illusions. These are ambitious measures. Based on the sums above, the Recovery Plan, underwritten by the Fund, will require expenditure amounting to three times Bayelsa's annual GDP across its lifetime. It will involve a huge organisational effort to mobilise and effectively manage thousands of clean-up technicians, health workers and other professionals. This, in turn, will demand the development of an extensive parallel bureaucracy, rooted in an international oversight architecture. All of these proposed measures will require unprecedented levels of co-operation and co-ordination between the government at federal and state levels, oil producers, international organisations and local communities. It is undoubtedly a big ask.

But it is also a necessary one. Anything less will fail to deliver for the people of Bayelsa. The current approach to remediation is broken beyond hope of repair. The remediation required to put right 60 years of pollution is simply on a different scale to that being offered today.

Moreover, it is a fair ask. Over the lifetime of oil production in Bayelsa, the IOCs have generated tens of billions of dollars of revenues from their wells. The Nigerian Federal Government itself has benefitted to the tune of over US \$150 billion from the revenues and royalties the oil bonanza has generated.<sup>453</sup>

Much of this profit has come at the expense of Bayelsa. The oil producers – with the acquiescence and in some cases the active connivance of the federal government – have externalised many of the costs and risks of

production. It is not an accident that despite the logistical and security challenges it presents, Nigeria is seen as a low cost, high profitability jurisdiction for the oil majors.

**For instance, in a Shell Group annual report, the company states that it makes a higher profit per barrel and incurs lower production costs in the country than in virtually any other region of the world in which it operates.<sup>454</sup> The Commission believes these low costs of production are further proof that the IOCs are failing to invest in spill prevention and leaving the people of Bayelsa to pick up the tab.**

Especially given this context, the funding the Commission is seeking for remediation is relatively modest. On conservative estimates, since commercial production began, over seven billion barrels of oil have been pumped in Bayelsa.<sup>455</sup> The Commission's proposals, if fully implemented, would be equivalent to adding just US \$0.7-1.4 at 2021 values to the cost of each barrel pumped in the state over the last six decades. This is equivalent to just 1-2 percent of the value of today's oil price of US \$70 per barrel.<sup>456</sup>

These measures will be critical to enabling Bayelsa to escape the legacy of over 60 years of pollution and environmental degradation. But on their own, they will not be enough. They will need to be accompanied by a paradigm shift in the regulatory, legal and governance regime of the oil industry at both national and international level. This is the subject of Chapter Five.





# 5

## Preventing pollution in the future



The previous chapter laid out a transformational programme to enable Bayelsa to recover from the damage caused by over 60 years of oil pollution. Such a programme can only succeed if it is accompanied by action to ensure that such a crisis can never happen again.

This will require action to tackle the immediate causes of the crisis, but also its deep structural roots. The Commission's proposals to address these foundational causes of oil pollution in Bayelsa and across the Niger Delta are the focus of this chapter.

## The principles of reform

At the heart of the Commission's proposals is a belief that the systemic nature of the failures of regulation, legislation and politics that have fuelled the tide of pollution that has engulfed Bayelsa requires a systemic response. The whole ecosystem of regulation and legislation will need to be transformed to help galvanise a sea change in the behaviour of oil producers. Incremental solutions alone will not work and may exacerbate the fragmentation and incoherence of the regulatory system as it stands today. The history of regulation and the use of mechanisms like EITI show that more of the same will not be enough.

To be successful reform will need to be rooted in a set of clear foundational principles that are consistently applied.

It will also need to be informed by international experience, but not dictated by it. Best practice can provide a roadmap for change. Whilst international practice cannot simply be cut and pasted into the Nigerian context, it can serve as a basis for transforming Nigeria's ecosystem of regulation and law.<sup>457</sup>

The Commission has studied the regulatory and legal regimes of a number of different countries and consulted with a wide range of international and domestic experts. It has identified through its research 11 key principles of reform which should underpin changes to the regulatory regime.

### 1. Regulatory and commercial activities should be separated.

It is critical for effective oversight and regulation of the oil sector that regulatory activity is not influenced by commercial considerations. A key change needed is the separation of responsibility for collecting (and therefore maximising) revenues from the exploitation of oil assets and the oversight and regulation of the environmental impacts of oil production from different agencies as has been the case in other jurisdictions such as the US or UK. As part of this division, there should be strong enforcement of an arm's length relationship between the commercial and regulatory organs of the state and regulatory agencies should either sit independently or at the very least report to different departments and ultimately different ministers. Although the PIA further detaches the NNPC from the industry's regulatory aspects by incorporating it as a company under the Companies and Allied Matters Act, it still does not go far enough. This is because the NUPRC and NMDPRA will continue to have responsibility for commercial and technical regulation of the midstream and downstream aspects of the industry. This approach

still falls short of best practice, which require separate agencies to be responsible for driving the commercial aspects of the petroleum industries while others oversee technical regulation to ensure that critical monitoring and regulation of the sector are not influenced by commercial considerations.

### 2. An arm's length relationship should be introduced between regulators and oil producers.

As was outlined in Chapter Three, the lack of independence in relation to NOSDRA's core processes and the oil producers has fatally undermined the integrity of the regulatory regime for oil spills. To address this, it is critical that regulators establish an appropriate arm's length relationship with the companies they are regulating. Both institutional structures and their processes should be designed to minimise the role that oil companies play in the administration of the regulatory process, the determination of whether breaches have occurred, and the assessment of remedial action required. Reflecting this, supervisory agencies should also be resourced appropriately to ensure they are not forced to rely on the companies they are meant to supervise for the adequate performance of basic activities. Although the PIA does not directly deal with the activities of NOSDRA, it nevertheless attempts to strengthen regulation by placing the NNPC under a company law framework similar to a normal commercially driven oil company. However, the Act does not go far enough in terms of assisting NOSDRA in addressing clean-up and remediation resulting from oil spills. One solution would be for NOSDRA to supervise and manage funds from the environmental remediation fund mandated by the Act.<sup>458</sup> This could ensure that the agency has a dedicated source of funding that could minimise the extent to which it relies on oil companies for the financing of its logistics and operations.

### 3. Agencies should be assigned clear roles, with single point accountability and the alignment of powers and budgets to responsibilities.

The experience of the countries the Commission has studied illustrates that the division of regulatory roles between different agencies need not, of itself, be problematic. All facets of regulation do not need to be undertaken by a single, unified regulator in order to be effective. For instance, workplace safety in the oil industry may be better managed by a specialist, cross-sector, health and safety agency rather than by a unified oil regulation agency. In this respect, it is commendable that the PIA

assigned the regulation of the upstream sector to the NUPRC and the midstream and downstream to NMDPRA. It also removed the agencies from the office of the Minister, who, while having supervisory roles over them, does not have the extensive powers he had under the previous Petroleum Act. However it still remains the case that various regulatory responsibilities are lumped together alongside commercial functions within the NUPRC's and NMDPRA's respective remits.

However, within each domain – health and safety, environmental regulation, and ultimate responsibility among others – the appropriate powers and remits should be consolidated within a single regulator. Overlaps should be minimised and where they do exist, roles and decision-making rights should be clearly defined so there is always a single, clearly identified authority with ultimate accountability.

Importantly, formal powers, resourcing and agency capacity should be properly aligned with regulatory responsibilities. If an agency is given the responsibility for an activity, it should also be given the resources and powers to carry it out and to undertake enforcement activity if required. And, critically, agencies responsible for a regulatory activity should also lead the development of the detail of the regulation and the regulatory standards they will use in their supervision.

#### **4. A proactive model of supervision should be used.**

Reflecting the model in other countries – and other sectors in Nigeria – regulators should adopt a proactive model of regulation rather than an incident-based one. Regulators should actively review regulated entities' operations to seek out potential problems before they occur, rather than waiting for problems to be reported. Producers should face standing requirements to provide periodic plans and regulatory submissions to international standards, for instance on pipeline integrity. Moreover, oil facilities and pipelines should be subject to regular, intrusive inspections, including unannounced visits, even when no spills have occurred.

#### **5. Significant and dissuasive sanctions should be introduced, underpinned by an aggressive enforcement regime.**

Evidence from the oil sector across the globe, as well as other regulated industries, suggests that sanctions must be significant and actively enforced if the behaviour of regulated entities is to change. In particular, sanctions for failing to prevent and clean-up of pollution effectively and in a timely manner must reflect the full social cost and

impact of contamination and have a significant punitive component. Sanctions must also be rigorously enforced with strict application of timelines and comprehensive testing of affected sites to ensure effective clean-up and restoration.

#### **6. Standards and the details of regulation should draw on international practice and benchmarks.**

This report has identified numerous instances where Nigerian standards, such as EGASPIN, or detailed regulatory processes, such as those relating to pipeline integrity or remediation of spills, do not meet international standards despite ostensibly being based on them. Under a reformed regulatory system, all these standards, processes and detailed areas of technical regulation should reflect best practice as seen in cutting-edge jurisdictions and as laid out by international organisations like the WHO. To ensure that they remain current, agencies should undertake regular reviews of changes to best practice, advised by external experts. Where international practice is departed from, there should be transparency and strong rationales given. On pollution issues, the PIA does not address how international standards might be applied other than specifying that decommissioning guidelines should meet the standards prescribed by the International Maritime Organisation on offshore petroleum. While this approach may enable operational flexibility, compliance standards should ideally be identified in subsequent regulations or guidelines. However, the Act made some provisions on the environment. For instance, it provided for licence holders to contribute to an environmental management fund, to submit environmental protection plans, and to submit to the requirement for an EIA for projects that may impact the environment. It also gives to the NUPRC or NMDPRA, the right to revoke a licence or permit if there are breaches of the preconditions upon which they are given, one of which is the violation of the environment.

#### **7. Both the sweep and detail of regulation should maximise the incentives for oil companies to behave responsibly.**

Both the broad design and the detail of regulatory frameworks and specific rules should be calibrated to sharpen the incentives oil producers face to behave in ways that reflect the letter and spirit of regulation. So, for instance, rules relating to where oil volumes liable for producers' royalties are measured should be tightened to strengthen the companies' incentives to clamp down on pipeline breaches. Best practice also suggests that rather than be subject to extensive detailed 'regulations' from outside, the industry should be provided with 'guidance'



or basic standards and be encouraged to develop internal systems for implementation. Rules on decommissioning and divestment should also be strengthened to ensure companies have to pay for any clean-up, thereby enhancing their incentives to minimise pollution in the first place.

#### **8. The legal framework should enshrine the principle of 'polluter pays' and 'no fault' liability.**

Drawing on the seventh principle, a new system of regulation will require a fundamentally different set of legal foundations and incentives to shape the behaviour of oil producers. Reforms should bring Nigeria in line with other jurisdictions and introduce a strict 'no fault' framework combined with rules to enforce historical liabilities even after divestments. The PIA has retained the 'fault' liability principle, which means that victims of oil spills still have to establish fault on the part of oil companies before they can be compensated. The Oil Pipelines Act is currently being (mis)used by companies to evade their responsibility for spills by attributing them to sabotage. Nigerian law contains provisions that would make companies liable for negligence for spills, even those resulting from sabotage, because of their failure to sufficiently protect their oil installations. However, the burden of proof falls on the victims, making it difficult to bring and secure convictions against powerful oil companies in court. This is why the Commission is calling for greater clarity in Nigerian law, the removal of the burden of proof, and the explicit adoption of no-fault liability based on the 'polluter pays' principle. Any new framework for 'polluter pays' and 'no fault' liability within the legal framework should clearly emphasise the IOCs' responsibility for protecting their infrastructure, and liability for spills, including effective remediation of pollution as well as payment of compensation. Similarly, while the PIA has provisions relating to decommissioning and abandonment, it does not provide clarity on liability in the event of divestment of oil and gas assets in relation to historic pollution. And while the Act recognises the possibility of continuing obligations post-divestment with respect to obligations to host communities, it falls short of extending the same to liability for oil pollution damage.

#### **9. The regulatory regime should enshrine the principle of timely compensation and access to justice.**

Reflecting the UN Guiding Principles on Business and Human Rights,<sup>459</sup> any reformed regime should ideally include fair frameworks for compensation that reflect economic and other harms such as health, mechanisms that enable rapid and impartial decisions for damages and rapid pay-outs. There should also be a fast-track,

independent grievance system with improved access to the courts facilitated by the Federal Government and state governments. The PIA made marginal improvements in this respect, in that the NUPRC has been empowered to determine compensation in the event of damage to property by oil companies on the basis that payments be made within thirty days. However, the risk remains that as with NOSDRA, the courts could subject compensation awards overseen by the NUPRC to a prior decision of the relevant court and the PIA leaves intact the 'fault liability' principle which means that victims must establish fault on the part of oil companies in order to be compensated.

#### **10. Reforms should be built on a foundation of radical transparency and offer a strong voice for victims and affected communities.**

Independent scrutiny of both the regulators and the oil companies will be essential if a new regulatory system is to deliver genuine change. Reforms should embed radical transparency, with all information on pollution and other forms of breach being made available in real time. This should be complemented by the establishment of independently funded and run bodies to scrutinise the performance of the regulators and to give voice to those most affected by pollution and other breaches. The regulatory process should also provide formal avenues for the concerns of communities and individuals that go beyond what is currently captured in the JIV process. All of this should be complemented by a transformation in depth and scope of community engagement.

#### **11. There should be multiple points of scrutiny and oversight of oil company behaviour to minimise the risk of regulatory failure.**

While the primary responsibility for regulating oil production should stay with the Federal Government, there should also be points of oversight both below federal level, by state and local governments, and above it, through international institutions and the home governments of the IOCs. In addition, there should be explicit scrutiny mechanisms with the capacity to undertake independent scientific assessments. This approach of layered oversight will maximise pressure on companies to behave appropriately and introduce checks and balances to reduce the risk of renewed capture of regulators at federal level that may blunt the effectiveness of the reformed system. Taken together, these principles provide a lodestar for reform and offer a vision of what a regulatory regime that works for both the environment and people could look like. In the subsequent sections, we lay out how these principles should be translated into concrete proposals for change.

## Putting principles into action: fundamental changes to the regulatory regime

Reform of oil industry regulation is one of the thorniest issues in Nigerian politics today and has plagued the country for decades. The central role oil revenues play in national political life, and the inevitable distributional impacts of any changes, mean that any reform is highly contested, with numerous vested interests resisting change or attempting to hijack the agenda for their own political and economic ends. It is in this climate that the National Assembly has recently passed reform legislation in the form of the PIA.

Although it omitted some basic environmental principles, such as 'polluter pays', the PIA included some limited environmental provisions that should have come into force in 2022 following the development of required regulations.

There is, therefore, an opportunity to reform existing failing environmental regulations and create a new regulatory regime that takes account of each of the

Commission's principles in light of the environmental provisions of the PIA.

The Commission is under no illusions about how hard reform of the regulatory framework governing the Nigerian oil sector's environmental impact will be. But for the people of Bayelsa, it is essential. Neither the status quo nor the new legislative regime of the PIA can deliver the change that is required.

It is the Commission's view that a fundamental transformation of the regime for environmental regulation, in accordance with our eleven principles, will be required.

The PIA provides a window of opportunity for the Minister to create a new strengthened regulatory regime. It is essential that such a process be thorough and comprehensive and address each of the Commission's eleven principles along with its key recommendations.

### Recommendation 5

### Undertake fundamental reform of the regulatory regime.

Overhaul the regulatory regime to transform the effectiveness of environmental regulation of oil production. Key elements include:

- i. Separate responsibility for promoting commercial production from the regulation of the industry.
- ii. Move responsibility for regulating the environmental impact of the industry from the Ministry of Petroleum Resources and the NUPRC to the Ministry of the Environment (MoE). The Ministry should take on responsibility for all environmental regulation and its enforcement.
- iii. Expand NOSDRA's remit and overhaul the agency. NOSDRA should remain focused on pollution clean-up, with the MoE taking responsibility for environmental regulation overall. But NOSDRA's remit should be expanded to cover all forms of hydrocarbon pollution and it should be granted clear powers to enforce its remit.
- iv. Align capacity, resourcing and enforcement powers with responsibilities.
- v. Overhaul EGASPIN to bring it into line with international standards, enshrining this in law while placing responsibility for all environmental standards with the MoE.
- vi. Overhaul detailed regulation in areas such as pipeline integrity.
- vii. Introduce a new proactive inspection regime, including an intrusive pipeline integrity supervision regime with regular site visits and unannounced inspections.
- viii. Replace the JIV process with a process run at arm's length from oil producers, the NNPC and the NUPRC. Promote transparency, publishing all data as a matter of course.
- ix. Pro-actively enforce strong and rapid penalties for all breaches.

## Reforms to the regulatory landscape

Large scale changes to the regulatory landscape will be complicated, time-consuming and difficult to deliver. Three key changes, we believe, are essential.

First, the responsibility for the commercial development of Nigeria's oil assets must be separated from regulatory functions to prevent insoluble conflicts of interest. The Commission proposes that regulatory functions, as they relate to the environment, be separated from the commercial aspects of the industry. Under this arrangement, some aspects of regulation of the oil sector – such as monitoring fulfilment of contractual terms – will remain with the regulator. But regulation of the environmental conduct of the oil industry should be moved out of the regulator, along with all responsibility for setting environmental standards and enforcing action against any breaches. As shown earlier, the PIA combines technical regulation and commercial regulation in the NUPRC as far as the upstream sub-sector is concerned. The drawback to this approach is that commercial interests will trump ensuring that technical aspects relating to standards and guidelines for environmental protection are strictly adhered to.

Second, all responsibility for environmental regulation of oil activities should be moved to the Ministry of the Environment (MoE). That includes responsibility for setting standards and enforcing them. Reflecting this shift, the remits of other agencies, as they relate to the environmental regulation of the oil sector, should also be rationalised and transferred where possible to the MoE.

Third, the remit of NOSDRA should be expanded. NOSDRA should remain a clean-up, detection and response agency; broader environmental regulation of the oil industry should be handled by a separate part of the MoE. However, the scope of the agency's remit should be expanded to cover all forms of hydrocarbon pollution, including flaring. Critically, NOSDRA should also be granted enforcement powers to allow it to effectively execute its remit and act on non-compliance.





## Changes to powers, decision rights, budgets and capacity

Formal powers, resources and capabilities should reflect the previously mentioned migration of regulatory responsibilities.

Formerly, the DPR, whose responsibilities have now been transferred to the NUPRC and NMDPRA, wielded substantial, although admittedly blunt, enforcement powers. Unfortunately, it rarely used them. As they relate to environmental regulation, these powers should be transferred to the MoE. A process should also be undertaken to map where environmental regulatory and enforcement powers currently lie to facilitate the transfer of these powers to the MoE. New powers may also be needed to provide a full portfolio of enforcement tools to ensure effective environmental supervision and the legislation currently in place should be developed as part of this process.

A similar process should be undertaken for NOSDRA. Inevitably, there will be cases where the MoE's or NOSDRA's new remit will potentially conflict with that of another agency, even after environmental activities are consolidated into the MoE. In such cases, a clear set of protocols should be developed, outlining each agency's decision rights and also outlining how they will work together to handle cases that straddle the boundary between their remits.

The resourcing and capacities of the MoE and NOSDRA should also be overhauled to reflect their newly enhanced remits and powers. The supervision of the oil sector has long been under-resourced in Nigeria. There needs to be significant investment in expanding supervision capacity across government departments, supporting it with the right training and tools, including logistical support and inspection equipment. In the case of the MoE, this will require, among other things, the revision and renewal of wage scales and career paths. The Ministry often struggles to attract the most experienced staff, as other departments, in particular the DPR, paid higher wages and was seen as more prestigious. The Ministry's capacity will need to be dramatically strengthened to enable it to apply a proactive supervisory regime effectively.

The same is true for NOSDRA. There will need to be a transformative overhaul of its capacity to enable it to discharge its duties effectively and operate independently of the oil producers it is meant to supervise. This will require not just an expansion and substantial upskilling of its staff, but a significant upgrade in its response infrastructure and assets.

The Commission has studied the capacity and capabilities of clean-up agencies in a range of jurisdictions, including Australia, Norway and the UK. All operate with significant logistical infrastructure so that they can access spill sites rapidly. They maintain strategic stockpiles of specialised spill-fighting equipment in key locations, including fixed wing capabilities to monitor and track spills and, in the case of offshore incidents, assist in dispersal if necessary. The purpose of this capacity is not to displace the role of the oil companies, who still have primary responsibility for containing and cleaning up spills, but to complement and support them to ensure containment is rapid, clean-up is comprehensive, and any enforcement is effective.

The Commission believes that both the MoE's and NOSDRA's capacity, and the budget to fund it, will need to be expanded significantly to bring it into line with international practice. One possibility is for this expansion to be financed through a regulatory surcharge placed on every barrel of oil pumped. Oil producers already pay a small charge to the International Tanker Owners Pollution Federation (ITOPF) for every barrel of oil shipped on the high seas to contribute towards the global industry's spill preparedness infrastructure. The Commission believes the same principle could usefully be extended to Nigeria to help cover the costs of rigorous environmental oversight of the industry.



## New standards: learning from international practices

Changes to the regulatory landscape should be complemented by detailed reforms of technical regulations, processes and standards to bring them into line with international practice.

The Ministry of the Environment should undertake a detailed review of international practice, supported by external experts, and update regulations to reflect the standards seen in best practice jurisdictions.

As part of this process, EGASPIN should be overhauled, with, for instance, the difference between target and intervention levels abolished and the levels of toxins considered actionable brought into line with guidance from the WHO and other jurisdictions. Its guidance should also be extended to cover the full range of contaminants cited by other jurisdictions.

In addition, technical regulation should be significantly modified. Among the changes that should be made are:

- **Asset integrity rules and processes should be completely overhauled.** A new asset integrity regime, modelled on those seen in the US and Europe, should be introduced. Producers should be required to submit detailed integrity plans annually, which they are inspected against. They should be required to introduce a full range of best practice measures to prevent corrosion and to regularly inspect their own pipelines, including aerial and satellite surveillance, as well as physical inspection. A strong and intrusive supervision regime should be introduced to underpin these measures.
- **New rules on maximum operating ages of assets should be introduced along with requirements for periodic replacement.** These should be underpinned by statutory investment requirements to prevent under-investment in leak prevention.
- **New rules governing pipeline security and target-hardening should be introduced.** Where there is a risk of third-party interference, pipeline operators should be under an obligation to deploy a range of best practice techniques as specified by NOSDRA (some of which are laid out in Chapter Three). In particular, all operators should be required to fit a full spectrum of remote leak detection and shut-down technologies on all their pipelines as a matter of urgency. New metering obligations should also be put in place, with

companies required to measure the volumes pumped at the wellhead or nearby flow stations. As laid out in Chapter Four, this will transform IOCs' incentives to act on pipeline interference.

- **Tighter requirements for operating standards and capacity requirements should be introduced.** International standards for overall operating procedures should be introduced, with clear expectations laid down for staff skill levels, all of which should serve as benchmarks for inspections.
- **Strengthened EIA requirements should be introduced.** The obligation to carry out EIAs should be strictly enforced, with additional asset integrity measures mandated where an area is identified as a High Consequence Area.
- **Strong requirements regarding the speed and comprehensive nature of responses to any pollution incident should be put in place.** New response rules should be put in place to regulate much more strictly what is expected. As part of this framework, the regulation should lay down specific response capabilities that all companies are expected to demonstrate.

According to the PIA's requirement for an environmental management plan, asset integrity provisions should be included in line with international standards. Provisions on effective and timely responses to pollution should also be contained in the Act.

- **New remediation standards should be enacted.** Much more stringent rules governing how rapidly pollution must be remediated, the scope of remediation, and the portfolio of techniques to be used, should be put in place. A new process should be introduced to ensure that all sites are independently inspected by the regulators both before and after remediation to assess the damage, using internationally recognised methodologies and review processes to assess whether a clean-up has

been carried out effectively. Strong sanctions should be put in place for failures to remediate effectively or for delays in undertaking clean-up. To ensure the effectiveness of remediation, the measures and obligations outlined for historical spills in Chapter Four should also be applied to future pollution. In particular, regulations should be established to enshrine companies' obligations to carry out economic remediation, environmental recovery, and take action to address both short and long-term health implications of any pollution incidents.

- **Much stronger requirements for industry wide clean-up infrastructure should be put in place.** In other major oil producing jurisdictions, there is significant joint investment by oil producers in shared spill response infrastructure. Nigerian regulation should include greater obligations for the industry to invest in and maintain a significant shared spill response infrastructure.

## A proactive approach and enhanced enforcement

High standards should be married with a much more proactive regulatory approach. At the moment, environmental supervision appears to follow a purely reactive model, mobilising only once an incident has occurred. Reflecting practice seen both internationally and in other sectors, such as financial services, including those within Nigeria, there should be a move to an active supervision regime, with inspections and examinations being undertaken on a regular basis regardless of whether or not there have been incidents.

Regulators should conduct ongoing testing and reviews of oil producers' plans and processes, supported by regular on-site inspections of facilities, pipelines and other assets. Regulators should also make regular, unannounced visits to sites to check compliance with regulation, with significant sanctions for breaches.

In tandem with this, enforcement should be significantly stepped up. New regulation will mean little if it is not enforced. As was noted in earlier chapters, oil producers regularly breach regulations with few consequences. This permissiveness should end, replaced by a zero-tolerance regime to help drive change in the culture and practices of oil producers.

This shift in regulatory doctrine should be supported by a change in the resourcing and capacity of the MoE and NOSDRA, and an increase in the agencies' skill levels both through training of existing staff and the recruitment of outside experts.

*The Commission visited many communities to collect testimonies*





## An overhauled JIV process

At the heart of this new approach should be a complete revamp of the regulatory process for the investigation and remediation of pollution incidents. The JIV process should be replaced by an independent, regulator-led approach. Such a process should provide only a limited role for the oil companies, with all inspections, investigations and analyses, as well as interactions with local communities, conducted independently of the companies.

This proposed approach may not require an extensive restructuring of the steps of the investigation process itself. Many countries operate processes that are, on paper at least, similar to the JIV. The main difference lies in the way the processes are run, how decisions and determinations are made and the content of the relationship between the oil companies and the regulators.

In the jurisdictions the Commission has reviewed, when a spill is reported, government officials are deployed to assess the situation, decide the best course of action and gather evidence to make a determination about the causes of and potential culpability for any leak. The oil operator – often supported by shared industry infrastructure – normally has responsibility for undertaking clean-up operations, but, depending on the determination of government officials overseeing the incident, government and other clean-up capacity may also be deployed to complement and assist their efforts.

In these countries, the oil companies work with the regulator and provide input into their assessment, as do local communities and other stakeholders. But the decisions are ultimately the regulator's and they act independently of the oil companies. This reflects regulator best practice in other sectors, such as financial services. None of this is to idealise the process in other countries. Oil companies still play an outsized role and often wield a degree of influence over regulatory determinations and decision-making. But the process is at least somewhat impartial.

By contrast, in Nigeria, as has been outlined in previous chapters, the process has been 'captured' by the oil companies. The steps of the process are similar, but they are fundamentally driven by the oil companies, who control access to spill sites and appear to strongly influence NOSDRA's assessment of spills and the determinations of culpability. Furthermore, as the primary concern of the oil companies appears to be avoiding liability for compensation, JIV inspections tend to be

focused heavily on influencing the official assessment of a spill's cause rather than identifying what should be done to remediate it. Evidence gathered repeatedly shows that oil companies' influence distorts the process, turning it from a spill assessment into a liability management exercise.

This difference goes to the core of how the JIV process needs to change. The Commission believes that the JIV needs to be re-established as a truly independent, regulator-led process. NOSDRA should lead and manage all stages of the process, including independently accessing all sites. Like other stakeholders, oil companies should be allowed to provide evidence to NOSDRA, but no more.

To limit the ability of the oil companies to wield undue influence, the nature of the on-the-ground assessments themselves should be changed to focus on evidence gathering and remediation.

Determinations of causes and culpability should no longer be made on the spot. Instead, on-the-ground JIV assessments should be focused on gathering and cataloguing evidence from the broadest range of sources, with the ultimate determinations of spill causes being made by a separate NOSDRA analytic team on the basis of the evidence collected, and, if necessary, further site visits.

Beyond evidence gathering, JIV assessments should focus far more on what needs to be done to stop any further spills and ensure the effective clean-up of spill sites. A methodology heavily informed by SCAT should be used, and the composition of JIV teams should be extended to include scientists and clean-up specialists who can provide an expert, independent determination of what clean-up work needs to be undertaken. This assessment should also be supported by the use of best practice techniques, such as aerial assessment and chemical analysis of samples.

On the basis of this type of review, the NOSDRA inspection team should make directive determinations about what kind of remediation approach is required. It should not be left to the operator alone to decide how best to clean up the pollution they have caused. The decisions of the JIV team about how clean-up should be undertaken should be backed by strict enforcement powers, with strong, dissuasive fines for failure to implement or non-compliance.

The NOSDRA-led processes should be buttressed by radical transparency and outside scrutiny. All evidence collected through JIV assessments, including the basis for any decisions, should be published in easily accessible form

to allow third parties to review evidence and scrutinise decisions. In addition, the NOSDRA teams that assess evidence gathered on JIV visits and make decisions on the causes of spills should make extensive use of outside experts, including those based outside Nigeria.

The success of this approach will rest ultimately on the capacity of the agency and the skill of its staff. As outlined previously, NOSDRA's budgets and capacity will need to be significantly increased, and its staff dramatically

upskilled, with a mixture of extensive training and the hiring of significant numbers of outside experts - both domestic and international - to add the specialised knowledge and experience required. The PIA does not deal with the conduct of JIVs or responses to oil spills. Ideally, these issues would be covered in the new and revised regulations projected to be made in pursuance of the Act.



## A legal framework

A reformed regulatory architecture should be complemented by fundamental changes to the legal framework for oil production and procedures for dispute resolution.

### Recommendation 6

**Develop robust dispute resolution procedures to ensure polluters pay and to give all fast and effective access to justice.**

Reform the legal framework governing pollution incidents and the dispute resolution systems supporting it. Key elements include:

- Amend statute to enshrine the concepts of 'polluter pays' and 'no fault liability' at the heart of environmental legislation: producers should be fully responsible for both clean-up and compensation regardless of whether there was third party interference or not.
- Update legislation to permit class action suits.
- Introduce individual as well as corporate liability for pollution incidents.
- Significantly increase fines that can be levied for non-compliance and legislate to maximise the freedom of regulators to impose penalties without a court finding.
- Introduce a fast-track arbitration and awards body, completely independent of the oil companies, to adjudicate compensation awards. The body should be overseen by a panel of international experts
- Overhaul compensation legislation to define fairness and establish a compensation fund, financed by the oil companies, on the US model.<sup>460</sup>
- Legislate to enforce the regulatory measures outlined in the previous section, with the inclusion of clauses to ensure oil companies take responsibility for the safe decommissioning of wells reaching the end of their productive life and to enforce liability for historic pollution, even where assets have been divested.



## Providing adequately for compensation for oil spills

The Commission believes that six changes to the legal regime and jurisprudence relating to the environmental impact of the oil industry will be important to reducing the risk of pollution in future.

First, reflecting the Commission's seventh principle of regulatory reform, the legislation that currently makes it incumbent on victims to prove that companies have been negligent if they are to secure compensation, must be replaced to enshrine the principle of no-fault liability. This will remove the burden of proof from the victims. This will transform the ability of individuals and communities to seek compensation for the harm done by pollution and will also radically sharpen the incentives oil producers face to invest in pipeline integrity and effective security measures.

Second, the law should be changed to allow for class actions in the Nigerian courts. Allowing for collective legal action will help individuals who would not otherwise have the means to seek restitution and will also permit communities to seek redress collectively. As well as improving individuals' access to justice, it will also help forge a powerful lever for change: as the US experience shows, class actions will expose offending companies to far greater claims and, in so doing, sharpen their incentives to address the causes of pollution.

Third, the legislation covering the environmental regulation of the oil industry should be updated to strengthen sanctions. The fines and other sanctions provided for in legislation are currently too limited and the terms of their use too circumscribed to be dissuasive. They should be significantly enhanced and diversified, and regulators should be granted more latitude in imposing them. Tied to this, enforcement powers should be aligned with the regulatory regime outlined in the previous section.

Fourth, the legal framework governing pollution should be updated to introduce the concept of individual as well as corporate liability. In other regulatory fields, mechanisms of individual accountability have been used to help catalyse changes in corporate priorities and behaviour. For instance, in the UK, following the global financial crisis, regulators introduced the 'Senior Manager Regime' (SMR) to hold leaders of large banks directly accountable under law for the actions they take.<sup>461</sup> The introduction of such a framework in the oil industry – which would see named executives potentially exposed to criminal sanctions if they failed to take reasonable steps to prevent pollution and appropriately manage leak risks – could help enhance the incentives of decision-makers in the oil sector in terms of stemming oil pollution.

Fifth, the law should be strengthened in a number of places to explicitly forbid or restrict certain activities. In this respect, the PIA merely makes the continued flaring of gas an offence, and continues the practice of allowing companies to pay a fine for gas flaring. The PIA requires companies to simply provide a gas flaring elimination plan within 12 months but disappointingly, does not explicitly set a date when gas flaring has to end.<sup>462</sup>

Sixth, a mechanism should be introduced to revisit some of the jurisprudence surrounding regulation in Nigeria. Supreme Court rulings that have had the effect of preventing executive agencies from imposing administrative sanctions, such as fines, without a trial, threaten to undermine the ability of regulators to effectively supervise the oil sector and take enforcement action should breaches be identified.

## Changes to compensation and dispute resolution processes

Changes to legislation should be accompanied by reforms to ensure rapid access to fair compensation and, if necessary, to dispute resolution and justice.

The Commission has studied the approaches used in a number of countries and in a variety of major incidents and its recommendations draw on their experience.

In the event of a pollution incident, a compensation fund should rapidly be established and capitalised by the oil company in question, ideally in days not weeks. The initial size of the fund should be determined primarily by NOSDRA after their initial assessment of the damage done and be subject to revision. As in the case of the Deepwater Horizon spill in the Gulf of Mexico, individuals should be able to make rapid small claims to the fund to cover the immediate loss of income they have suffered without compromising their ability to make more substantive claims against the oil company later on, or to pursue court action.<sup>463</sup> Successful claimants should receive payments within days.<sup>464</sup>

Subsequently, individuals should be able to apply to the fund for larger, substantive compensation payments to make up for the full degree of the harm they have suffered. These larger payments, if accepted, would stand in full and final settlement of any claim. There should be a highly streamlined and simplified applications process, and independent on-the-ground support should be given to individuals wishing to file a claim. Reflecting the proposed legal changes outlined above, there should also be an option to pursue class action claims through this mechanism. The administration of the fund should be subject to oversight by NOSDRA and the MoE.

Complementing this approach, the basis for determining compensation payments should be substantially overhauled. The 1997 Oil Producers' Trade Section of the Lagos Chamber of Commerce and Industry framework is substantially out of date and systematically underestimates the scale of losses suffered.

This updated approach to compensation should be supported by a new independent dispute resolution procedure to allow individuals and communities to challenge both awards made by polluters and remedial action taken if they believe it to be insufficient. In effect, even if the NUPRC or NMDPRA determine the amount of compensation payable and the time frame, it is equally crucial that the mechanism for challenging the same either by the companies or the victims of pollution be

one that is quick and effective without necessarily going through litigation, with its consequences for costs and delay.

Learning the lessons from the criticism levelled at the Bodo Mediation Initiative,<sup>465</sup> this procedure should be completely independent of the oil companies and complement rather than replace access to the courts. The mechanism – which should be an independent, free standing institution separate from the IOCs, the Federal and State Governments and the Bayelsa Recovery Agency – should be presided over by legal, environmental and sectoral experts, both domestic and international, who are nominated by neutral international bodies such as the UN or by professional associations and local communities. An appeal mechanism that refers cases to international experts should also be introduced. All final rulings should be binding and have the force of a court judgement. The panel should aim to process all cases in a 12-month timeframe. This mechanism would be the first of its kind anywhere in the world, and could set the standard for other jurisdictions.

The panel should have the power to award damages and compel producers, regulators and other stakeholders to take action. Reflecting the EU's Aarhus Principles (which protect the public's key rights on environmental issues), communities as well as individuals should have the right to pursue redress through this mechanism.<sup>466</sup>

The mechanism should be overseen by an independent international organisation. Evidence gathering should be undertaken by independent investigators employed by the panel. To assist communities and individuals in accessing this dispute procedure, a legal advice and representation service should also be put in place.

Alongside this, provision should be made for better access to the courts both by individual litigants and by classes of plaintiffs, both in Nigeria and abroad. A fund should be made available to support litigation on behalf of people who have legitimate cases against the oil companies or other stakeholders, including the potential to fund exceptional cases in international courts to allow suits against global parent companies.<sup>467</sup> This will become particularly valuable in light of the recent Supreme Court ruling in London and the Appeal Court ruling in the Hague, confirming that polluted communities in Nigeria can bring their legal claims against Royal Dutch Shell for pollution involving its subsidiary (SPDC) before the English and Dutch Courts.

## A larger role for state government

Under Nigeria's constitution, the responsibility for regulating the petroleum industry falls exclusively to the Federal Government.

However, the Commission believes that the Bayelsa State Government has a significant role to play. Nigeria, unfortunately, has a long history of regulatory failure. As is articulated in our eleventh principle of good regulation, we believe that rigorous scrutiny of the activity of federal regulators by state and local government, as well as international actors, is a critical safeguard against regulatory capture by vested interests. Moreover, the state has a powerful and legitimate role to play in protecting the local environment and ensuring the

health and wellbeing of the local population. These factors provide the basis for re-imagining the role of the state government in ensuring the oil sector meets its environmental obligations.

There is significant precedent for the state playing such a strong role, even where the Federal Government has primary competence. Although mining is similarly an activity reserved for the Federation, the terms of the Minerals and Mining Act (2007) provide for an important role for the state. In contrast, the PIA does not adopt the same approach as the Minerals and Mining Act, but rather concentrates regulatory powers over the sector in the institutions it has created at the federal level.

### Recommendation 7

#### Establish an expanded role for state government in fighting oil pollution.

Enhance the role of state government in ensuring action is taken to prevent hydrocarbon pollution:

- Confirm the right of state government to act under existing powers such as the Land Use Act should facilities and/or producers repeatedly breach regulations and fail to comply with regulatory directions.
- Provide for a scrutiny, audit and inspection role for state government.
- Expand the scope of state-level environment legislation to address hydrocarbon pollution.
- Embed state and local government as a channel for local voices.
- Create a key role for the state in helping coordinate effective remediation of the economic, health and social effects of pollution.



State governments already have some powers under the Land Use Act that can potentially be used to take limited punitive action against oil company operators in cases of breach or failure to comply with regulatory legislation. These powers should be used more diligently and systematically.

However, reflecting this analysis, the Commission believes that the role of state government in scrutinising both the conduct of oil companies and the federal regulators who supervise them should be expanded. As the environment is clearly a matter over which states have jurisdiction under the constitution, this ought to cover the environmental impacts of the oil industry operating in their states. State governments' environment agencies should be empowered to undertake their own independent inspections of oil facilities on their territory and report any findings for action to federal authorities. They should also have a formal role in monitoring and auditing regulatory findings, enforcement action and action by companies to remedy any regulatory breaches, including the implementation of pollution clean-up programmes, with any failures reported to the federal authorities. NOSDRA and the MoE's legal powers and processes should be updated to make a formal complaint from a state government sufficient grounds for initiating action against an oil company.

This should be underpinned by an expansion of state statutes covering hydrocarbon pollution. Given that the environment is a residual matter in the Nigerian constitution, the Bayelsa State House of Assembly should enact legislation that imposes stringent criminal sanctions on operators whose actions and/or inactions inflict harm on the state's residents and their environment. This would be controversial and might be opposed both by the IOCs and the Federal Government. But gaining clarity on the role of the state and broadening the scope of its powers would help ensure regulations are appropriately enforced without fear or favour.

All of this may require increased investment in the inspection and review capacity of states' environmental protection agencies.

In addition, the law should enshrine the right of the state government to act using its existing powers under the Land Use Act and other elements of federal and state legislation should federal agencies repeatedly fail to take action on the basis of formal complaints from the state government. We appreciate the difficulties in implementing such an approach and its limits and

practical trigger points would need to be carefully thought through. However, we believe this 'break the glass' mechanism, allowing state governments to act in extreme cases where the Federal Government refuses to, will help provide a vital bulwark against regulatory capture.

Under the Land Use Act, states have the power to revoke the rights of occupancy of an occupier who contravenes the conditions contained in the statutory or customary right of occupancy. So, in order to control pollution, a governor of a state may, at the point of issuing the right of occupancy to an applicant, impose conditions requiring occupiers not to violate the human environment. Where such violation of pollution occurs, the terms of the contract would have been fundamentally breached in order to automatically authorise the governor to either revoke that occupancy or to take steps in that regard. The Commission believes that these powers should be used where the IOCs or the Federal Government fail to meet their obligations on pollution prevention and control.

As well as acting as a source of scrutiny, the state government should also act as a channel for voice. The Commission believes that state and local government should be at the heart of efforts to ensure consistent community input into the regulatory process, organising regular town hall meetings and leading efforts in affected communities to build community consensus around what action they want to see.

Finally, the Commission believes that the state government also has a significant role to play in helping to coordinate and integrate many of the economic, social, environmental and health services that will be required in future remediation initiatives. The Commission is clear that in the event of hydrocarbon pollution, oil companies should be under an obligation not just to clean up contaminants, but to provide economic, environmental and health interventions, whether directly or through massive increases in support and funding for existing government programmes, to address the broader impacts of pollution. The state government should play a major role in overseeing the portfolio of these interventions to ensure not only that they take place, but also that they are effectively integrated within the broader spectrum of state and local initiatives.







## Enhanced international scrutiny

### Recommendation 8

Develop frameworks for enhanced scrutiny of oil company behaviour both internationally and in their home jurisdictions.

Transform the scrutiny of and pressure on IOC conduct both internationally and in their countries of domicile. Measures include:

- Introduce a new international corporate responsibility framework on environmental damage.
- Press home jurisdictions of major oil companies to introduce domestic legislation to hold them to account for the environmental and human rights conduct of their subsidiaries abroad. Laws could be modelled on existing legislation in France or on extraterritorial anti-bribery and corruption statutes in the US and UK.
- Where such laws are already on the statute books, actively present evidence and lobby relevant authorities to open investigations into IOCs.

Mirroring the increased role for actors below state level, the Commission also proposes a widening role for those above, with a broadening of international oversight. This will play a vital function in ensuring that international

standards are adhered to, and providing an external check and balance to guard against the risk of renewed regulatory capture. The Commission proposes a two-fold approach.

## Building international institutions and standards

A number of international initiatives setting standards for and monitoring the behaviour of governments in resource-dependent economies already exist. For instance, EITI provides global oversight of payments to governments by extractive firms, including oil producers, to reduce the risk of corruption.

The effectiveness of such initiatives is debatable – Nigeria scores highly on the EITI index despite its oil industry continuing to be plagued with issues of corruption on an endemic scale – but they can help to provide transparency and bring international pressure to bear on the authorities in lower performing countries.<sup>468</sup>

While international frameworks exist to address issues such as corruption and financial crime, there are no such mechanisms either for issues of narrow environmental conduct or pollution, or broader concerns regarding corporate conduct and citizenship in host countries aside from the problem of corruption.

The Commission proposes that an international framework be established to specifically scrutinise the environmental behaviour and impact of international companies in host countries, including whether action taken to address any issues reflects international practices, and whether there are any connected issues of corruption or undue influence.



## Enhancing oversight by home jurisdictions

Greater scrutiny of IOCs' environmental behaviour in the international arena should be accompanied by enhanced oversight of parent companies in their home jurisdictions. A number of countries already apply world-wide jurisdiction to their citizens and companies for specific classes of offences. For instance, it is illegal for an employee or agent of a UK company to pay a bribe anywhere in the world, regardless of whether the bribe was paid in the UK or even whether it was illegal in the jurisdiction where the activity took place. The US Foreign Corrupt Practices Act (FCPA) enshrines even more draconian restrictions and marries them with very large sanctions.<sup>469</sup>

Such legislation exists mainly to stamp out corruption. But the Commission believes that this approach should be extended to broader issues of gross corporate malfeasance, including pollution. Legislation in the home jurisdictions of the IOCs should be enacted to render it a breach of domestic law for IOCs and other international companies to behave in a grossly negligent fashion that may cause environmental damage in host countries.

The law should be structured to look through corporate structure – as anti-corruption legislation does so that

parent companies can be held to account for the behaviour of subsidiaries and JVs where they exercise either a controlling interest or de facto operational control. The legislation could be carefully calibrated to set a minimum materiality threshold to prevent vexatious lawsuits and regulatory action.

Such legislation would open the way for regulatory and legal action in IOCs' home countries. This is far more likely to have an effect on polluters' behaviour than action taken in Nigeria.<sup>470</sup>

In line with the duty of states to ensure their companies respect the human rights of the communities in which they operate under the UN Guiding Principles on Business and Human Rights, a number of countries have already enacted similar laws. France, for instance, put such a law on the statute books back in 2017 (although critical elements of the law were subsequently struck out), and Switzerland has just done the same.<sup>471</sup> The Commission strongly urges the home countries of the largest IOCs, such as the US, UK, Netherlands and Italy, to follow suit. This will provide perhaps a strong mechanism to hold oil companies to account and help enforce higher standards of corporate environmental behaviour.



## Ensuring transparency, accountability and systematic, inclusive and genuine engagement

### Recommendation 9

#### Overhaul IOC approaches to community engagement to ensure transparency, accountability and voice.

The PIA has introduced legal requirements for oil and gas companies to standardise practices for development project investments in host communities, including setting up trusts to manage community development expenditure. The Commission is concerned that the PIA disproportionately empowers companies relative to the host communities, local governments and the state government and entrenches and increases the risk of more divide and rule tactics being employed by companies. These tactics pit communities against each other in the competition over development goods and could continue to generate the types of communal conflicts associated with GMOU processes in the past.

By unfairly placing the responsibility for policing petroleum infrastructure on the host communities, the Commission is concerned that PIA would exacerbate conflicts between communities and companies over sabotage claims. The Commission also believes that there is a risk of incentivising those working for the oil companies to prevent protests, which may then provoke intra-communal wars. The PIA does not define what is meant by 'the community' and how the company may determine who to consult with. The Commission believes that the Government of Bayelsa State should intervene, in line with its Constitutional mandate, to bridge this definitional gap and reduce potential tensions. The government and the oil and gas companies should ensure that the new PIA Boards of Trustees, Management Committees, and Host Communities Advisory Committees of the community development trusts are fully inclusive of diverse community interests and are managed with full transparency. In parallel, an independent body that can provide regulatory scrutiny and scientific analysis, should be established to ensure that mechanisms exist to enable the voices of the most affected communities in Bayelsa to be consistently heard throughout the process

To help address the cycles of conflict and the breakdown of social cohesion that have been the product of – and at times contributed to – Bayelsa's pollution crisis, regulatory and legal reforms will need to be accompanied by profound changes to the way communities are engaged by the IOCs to ensure that the voices of the people of Bayelsa are heard.

As was outlined in previous chapters, the flaws in oil companies' engagement with their host communities have arguably exacerbated both the security issues and the social dislocation that have accompanied the tide of pollution fallout that Bayelsa faces. The exclusion of many communities from GMOU agreements has fuelled intercommunal tensions, while the competition for control of resources has stoked conflict within communities, in particular between established community leaders and a younger generation who have seen few benefits. Furthermore, all too often oil companies have failed to deliver on the commitments made through GMOUs to host communities, further inflaming relationships.

Underlying this, all too often, is a disconnect between the IOCs and host communities, and, within the IOCs themselves, between the company departments engaging with communities and those undertaking the core business of hydrocarbon extraction. Often, IOC personnel responsible for 'community engagement' tend to be less senior and are not even based in Bayelsa. Moreover, their activities are rarely joined up with those operating oil infrastructure on the ground, or, indeed, those responsible for remediating any pollution incidents. This siloed approach within the IOCs may go some way to explaining why the oil operators so often fail to deliver on their commitments to communities.

Moreover, the community engagement architecture has on occasions been abused by companies to frustrate regulation. GMOUs and MOUs have often been used to bring pressure to bear on communities not to exercise their rights to claim compensation, clean-up and remediation in the event of environmental damage. The case of Eni (Agip) and Twon-Brass speaks volumes in

this regard. The Commission also heard testimonies and received evidence about deep divisions in communities allegedly created by the tendency of Eni (Agip) to selectively favour particular groups in order to undermine claims for clean-up or compensation.<sup>472</sup>

“Shell has a GMOU in Odioma. It expired before Shell sold to Aiteo, since Aiteo took over from Shell no GMOU has been written to us. No agenda, Aiteo has nothing to do with the community. We are not adequately compensated. The worst case is the no GMOU. They do what they like.

**Community leader, Twon Brass**<sup>473</sup>

There is unfortunately no quick fix to this problem. Unpicking the complex dynamics of inter- and intra-communal conflict, rebuilding support for local communal institutions, and restoring trust between communities and oil producers, will take time and significant investment and a fundamental change of operating practises on the part of the IOCs.

However, the Commission believes that the patchwork of GMOUs and MOUs should have been revisited before the PIA institutionalised this as best practice. Ideally the coverage of these agreements should be extended to downstream communities and, crucially, the oil companies should be held to their obligations. Regulatory mechanisms should be established to review delivery of the benefits promised in GMOUs and to rapidly remedy

the situation where commitments have not been kept. The process should be highly transparent and there should be strong communication and engagement with the communities in question to identify their potential areas of concern and grievance, and share clear information about what resources would be provided to each community.

Longer term, there is a question over whether the GMOU approach is the right one. The Commission believes that potential alternatives should be taken into account before the PIA operationalises the host community development trust model. For instance, the legal framework set out by the Minerals and Mining Act 2007 legally empowers local communities and provides for them to negotiate directly with oil producers to conclude legally binding Community Development Agreements (CDAs).<sup>474</sup> These could have provided a better model for the PIA. Such CDAs cover all the areas touched on by GMOUs and could provide a better vehicle for enforcing the oil companies' obligations, although they leave the issue of indirectly affected communities unanswered.

As well as ensuring that the voice of impacted communities is heard and responded to, any programme of regulatory and legal transformation will need to build in mechanisms to allow both the operation of the regulators and the process of reform itself to be scrutinised.

The history of proposed regulatory and legal changes in Nigeria suggests that all too often, rhetoric and expectations fail to match reality and measures that appear to promise real change are often undermined in the detail of implementation.

*Community leaders want genuine engagement from oil companies.*





**To maximise the prospect of sustained change, the Commission believes that an ecosystem of outside scrutiny and bottom-up challenge must be put in place. It should feature a number of elements.**

First, the system should be built on a foundation of radical transparency. Wherever possible, all regulatory data, reports, supervisory reviews and decisions should be published. For instance, the Commission believes it is worth exploring whether there should be a presumption that all reports from any inspection of an oil facility should be released. The same could hold true for all oil company plans submitted to the regulator. While this step is unusual, it might make sense in the Nigerian context, providing a useful tool to help minimise the risk of regulatory capture.

Second, the regulatory system should include an arms' length formal scrutiny body. This body's role could be akin to that of the National Audit Office in the UK, providing formal external scrutiny of regulatory performance. The body should also include independent scientific capacity to give it the ability to conduct its own expert assessment of

the performance of the oil companies and regulations on the ground. The body could sit independently of ministers and report directly to the National Assembly.

Third, the ecosystem must include a strong role for NGOs. Local organisations such as ERA and BANGOF (Bayelsa Non-Governmental Organisations Forum) provide an invaluable source of scrutiny and challenge and potential ways should be explored to help them play an active role in monitoring both the development and the activity of the regulatory system.

Finally, there must be a strong role for community voice. Throughout these recommendations, the Commission has emphasised a strong role for the voices of the victims of pollution. Both through how regulations operate on the ground and through its governance, there must be a place at the table for those from affected communities. As outlined above, the state and local government have a role in making sure there are strong processes to communicate with and hear the concerns of communities. There may also be a case for other forums, including local advisory councils.



**Recommendation 10****Establish a legally binding, effective legacy and decommissioning regime.**

Steps should be taken to ensure IOCs integrate decommissioning into the entire life cycle planning of their oil and gas operations according to international standards. Such measures will oblige IOCs to fulfil their environmental and social responsibilities for the

legacies that their oil and gas operations have left behind. This will include the impacts of pollution and contamination from spills, along with effluent waste disposal, dredging, gas flaring and other associated hazards.

The PIA currently requires licence holders to establish decommissioning and abandonment funds to be domiciled and managed by separate institutions and to prepare and submit decommissioning and abandonment plans. These funds are to be at the disposal of the regulatory authorities in the event that oil companies default on meeting their decommissioning obligations. In relation to these provisions, the Commission proposes that on a forward-looking basis, the funds to be contributed to decommissioning and abandonment funds should be paid by oil producers as a percentage of every barrel pumped towards a decommissioning trust for each oil field. At the same time, the MoE or an independent body should carry out a performance assessment of the remediation needed, including addressing all environmental, economic, social and health impacts, and ensure the plan meets those requirements. As part of this, given the damaging impact of pollution from the Nigerian oil industry in general and gas flaring in particular to global CO<sub>2</sub> emissions, a full accounting of the liability of transnational JV partners for such emissions should also be included in such an assessment. This is to ensure that Bayelsa is effectively covered for any claim arising from future action on climate change.

For wells that are no longer producing or face a limited remaining operational life, the MoE should assess the clean-up and decommissioning measures needed and should be empowered to require the well owners to undertake the work. Where companies seek to divest of a well / and field, a portion of the sale price should be set aside by the regulator to cover decommissioning costs. Clawback provisions should also be explored to allow the authorities to recover remediation costs from owners who have already divested of wells and other asset decommissioning costs. In addition, targeted investments should be included to expand the MoE's decommissioning review and enforcement capacity.

As many of Bayelsa's wells begin to approach the end of their productive lives, it is critical that an effective decommissioning regime is put in place. All of this may require targeted investments to expand the MoE's decommissioning review and enforcement capacity. The tragedy of Oloibiri, left devastated by decades of pollution and ineffective decommissioning, shows the price of getting this wrong.





## Conclusion

The proposals outlined in this chapter, together with those articulated in Chapter Four, could help bring an end to the pollution crisis in Bayelsa. They provide a unified vision for a system of regulation that will help halt the continuing epidemic of pollution and drive effective clean-up.

But a huge challenge lies in their implementation.

There has been no shortage of reports written about the pollution crisis in the Niger Delta and the measures required to stop it. Yet little action has been taken. It is not enough to articulate the scale of the problem and outline solutions. We must also mobilise public opinion and stakeholders both within Nigeria and beyond to push for their adoption. Words must be matched by action. Chapter Six articulates our call to action.





## 6

## A call to action



*We have been suffering. A filling station is close to us. The smoke and gas from their operations have affected us for so long. We have complained to the SPDC and government. More pain caused to our people. Our children can get diseases and we do not know where it comes from. Clinical results said our sicknesses are due to gas production. Black substances are brought to our community. We bathe in these waters and drink it and also use it to feed our children.*

**Community leader, Ogbegbene** <sup>475</sup>





## The time is now

**Over the past 60 years, Bayelsa has suffered a pollution catastrophe on a devastating scale. Its cost has been measured not only in terms of natural environments destroyed, but also in human lives.**

The preceding chapters have detailed the devastating impact and deep roots of hydrocarbon pollution in Bayelsa. A toxic cocktail of IOC and regulatory failures have fed a crisis on an enormous scale.

Hundreds of thousands of people in Bayelsa have been forced to live on contaminated land, drink and fish in contaminated water, and breathe contaminated air.

Mortality and morbidity rates continue to rise sharply, as has the incidence of chronic disease, in communities without the resources to cope.

Countless lives and livelihoods have been destroyed. Thousands of communities and tens if not hundreds of thousands of people have seen their land and fishing grounds poisoned.

Neonatal death and child malnutrition have risen, and hundreds of thousands have been forced into abject poverty.

Communities have been driven apart by the loss of livelihoods and disputes fuelled by competition for compensation and remediation resources.

The oil industry in Bayelsa has earned huge profits for the operators, but fuelled six decades of misery for the state and its people.

All of this has happened because the IOCs have behaved in ways they would never contemplate in their home jurisdictions, acting as though Bayelsa's environment and Bayelsan lives do not matter.

And it has happened because the regulatory regime, distorted by vested interests, has failed to hold IOCs to account.

While this report has shone a spotlight on the suffering at the heart of the Niger Delta, the story itself is not new. The devastation caused by oil pollution in the Niger Delta has been in the international spotlight for almost 30 years. Countless reports have been written. Expert panels have been convened. NGOs have lobbied. International bodies have issued statements articulating their grave concerns. Yet the reality is that little has changed. All too often, the reports have ended up gathering dust on a shelf. The calls of civil society groups, both domestic and international,



have gone unheeded. Government has appeared unable or unwilling to act.

Meanwhile, thousands of communities and hundreds of thousands of lives have been blighted. As this report shows, the scale of the challenge is huge. Action is needed on a scale not seen before to address the damage done and prevent the threat of further damage in future.

Remediation will cost billions of dollars, and a new system of regulation and updated legal frameworks will be needed to minimise the risk of further oil pollution in the future. Time is running out to tackle the problem and reverse the decades of damage inflicted on communities across Bayelsa. Onshore oil reserves are decreasing - conservative estimates suggest that there may only be sufficient



oil reserves left to support 25 more years of onshore production. The IOCs have already begun programmes of divestment, selling off marginal onshore assets, and investing in deep water oil and gas. In doing so, they are seeking to wash their hands of responsibility for the problems that more than half a century of poorly regulated exploration and production have caused.

The risk is growing that if action is not taken soon, the major companies that have profited from the oil business in Bayelsa over the last 60 years could walk away, leaving the state and its impoverished residents to pick up the tab for any clean-up. The poorest could be left once again to pay the price of activities that have enriched others but not benefited them.

But there is hope. Demands for action are growing within Nigeria and international public opinion is also shifting outside the country. Within Nigeria, pressure for change is rising at all levels. Political leaders, especially at local and state level, are increasingly demanding action

Calls for change are gathering pace at the international level too. International organisations such as Friends of the Earth Europe, Amnesty International, Environmental Rights Action, Milieudefensie are demanding that the

IOCs, in particular Shell, i) provide proper compensation to all communities affected by failed or delayed clean-ups of oil spills; ii) decommission all ageing and damaged pipelines; and iii) commit to funding the clean-up of all areas of the Niger Delta that have been affected.<sup>476</sup>

Even shareholders and investors in the industry are calling for more environmentally responsible standards and a reduction in systematically polluting sources of energy.<sup>477</sup> In parallel, polluters are seeing mounting attempts to hold them to account through the courts. In this vein, Nigerian courts also appear to be taking a firmer stance in their dealings with oil companies while also adopting a more liberal approach to the interpretation of the locus standi doctrine. For example in *Shell v Agbara SC. 731/2017*, the Supreme Court imposed significant awards against Shell for the pollution of Ejama Ebubu community of Tai Eleme Local Government Area of Rivers State. And in *Centre for Oil Pollution Watch v NNPC, 2018* the Supreme Court widened the scope of the locus standi rule in order to allow civil society groups to institute actions against oil companies in the interest of the public. This ruling broke from a tradition of conservatism which had hitherto prevented interested third parties from instituting actions against oil companies on behalf of the public.<sup>478</sup>

The UK Supreme Court and Hague Appeals Court rulings on 12 February and 29 January 2021 respectively confirmed that Nigerian communities can bring their legal claims for clean-up and compensation against Royal Dutch Shell Plc and its Nigerian subsidiary in the English and Dutch courts. These judgements are largely the result of tenacious and dedicated work by NGOs and lawyers working hand in hand with affected communities in Nigeria.

Increased scrutiny of IOC behaviour is being matched by growing concern about the climate crisis and the need to chart a path to a low carbon future. There are growing demands for environmental and climate justice. And they are being matched globally by demands for racial justice. Through movements like Black Lives Matter, the international public is increasingly calling on companies to confront the legacies of colonialism and environmental racism in their approaches to extraction in the Niger Delta and their engagement with communities.

At a time when Nigeria's dependence on oil revenues is decreasing, a window of opportunity opens to set a new course and help Bayelsa begin to recover from the decades of damage it has suffered and re-imagine a different future.



## A strategy for change

Seizing the chance to set a new direction and build a new paradigm will require a new strategic approach. Too many vested interests benefit from maintaining the status quo. Lobbying driven by the IOCs and the very dynamics of Nigerian politics means that previous attempts to overhaul the system have been challenging.

Change will require a concerted and coordinated effort of national and international action. Direct pressure will need to be placed on the IOCs through legal action.

And all of this will need to be underpinned by the public in the IOCs' home jurisdictions, as well as in Nigeria, to demand change. Engaging the support of stakeholders who have long campaigned on this issue, such as NGOs in Bayelsa, will be an important first step, but mobilisation will have to go much further to reach publics that have not previously been involved.

A number of different actors will have an important role to play.

The Government of Bayelsa has already shown leadership by financing and spearheading this commission of inquiry. But change at the federal and international levels will take time. The State Government should use the powers it already has to start driving a campaign for change. Five elements will be vital.

First, the Bayelsa State Government should act to ensure the report and its findings are widely disseminated and understood in Bayelsa and beyond. The report should form the basis not only for discussions with the Federal Government, but with other states to gather support for proposals that could benefit the entire Delta region.

Second, the state should take steps to strengthen the enforcement of environmental regulations. While it has a limited remit, as Chapter One outlined, the state does wield some formal powers in the environmental sphere. It should take steps to maximise their impact. The State Government should make enforcement of oil company obligations a top priority and invest in increasing the capacity of the State Ministry of the Environment to enhance its ability to exercise its powers appropriately. To do this, the state should consider options including tapping existing ecological funds.

The State Government should also consider using its powers under the Land Use Act to revoke IOCs' land use licences and pipeline rights of way for facilities that have high leak rates. In parallel with this, the state should increase its data collection on incidents within Bayelsa.

Third, Bayelsa State Government should rapidly enact new legislation to extend its environmental enforcement powers.

Fourth, the Commission recommends that the state sets up a Bayelsa Litigation Fund to support citizens in taking legal action against oil producers who fail to discharge their obligations appropriately.

Fifth, the state should establish institutions to strengthen the scrutiny of the oil producers and the Federal Government and intensify the pressure for change. Such institutions will also have a critical role in ensuring that the voice of affected communities continues to be heard. That may mean, among other things, extending the life of the Commission or developing a successor organisation. It will



also require the establishment of an internal coordination function to help orchestrate the various streams of activity. It may be that a unit attached to the Governor's office would be best placed to play this role.

Pressure on the Federal Government and the IOCs from state level should be complemented by pressure from the international community. International institutions, NGOs and the broader international community all have a critical role to play.

Although international institutions and NGOs have already done much in this sphere, a renewed effort is needed. Dealing with the extractives industry is a core facet of policies designed to meet the Sustainable Development Goals (SDGs), especially given that Nigeria is the most populous country in Africa. International institutions should offer incentives and support to increase pressure on IOCs and their home governments to adopt best international practice in extractive operations. Nigeria's membership and support of these institutions should be dependent on meeting globally set standards.

International NGOs have campaigned on this issue for many years. But concerted, united efforts must be undertaken to raise the profile of the impact of extractive industries on the health, wellbeing and environment of

developing countries. This will help to mobilise public opinion about the critical need for home governments to regulate these issues.

In Chapter Five, we outlined the importance of the emergence of new international frameworks to hold companies and countries to account, and the incorporation into domestic law in the home jurisdictions of the IOCs of new rules to hold them accountable for environmental damage wrought overseas. It is critical that the international community bring forward these reforms and that citizens in the US, UK and Europe demand that their governments enact new laws and lead the call for change. Shareholders should actively challenge oil majors on their policies and exercise their powers to challenge IOCs on the devastation that they are wreaking on developing nations. Similarly, banks and financial institutions should insist that extractive activity in the developing world meet international best standards as a condition of financing, and apply these standards in assessing whether they will fund projects.

These measures cannot guarantee success. But taking them will help improve the odds. Most important of all is leadership.

*A youth leader speaks to the BSOEC about the impact of oil pollution.*





## A call to action

Action is possible. Action that could transform countless lives. None of the barriers are insuperable. The challenge can be met with the right mix of action, pressure, leadership and will.

“When the spill occurred, it was a thing of battle for us in the environment. We really suffered from it. Our houses were nearly set ablaze. The spill spoiled the water. We could not bathe or drink from the water. The spill killed all the fish in the river. Based on that, we cannot kill fish in the river. This causes a lot of sicknesses in the community and it has killed a lot of people. Many children died because of the spill. We cannot do otherwise than to starve. We waited for the relief materials. And only a few people received it. No food, we have been starving up till this time. That is the situation from the beginning of the spill until today. It has spoiled all the canal. Come to our help.

**Community member, mother, Aghoro 1** <sup>479</sup>

In a public hearing at which this testimony was shared by a mother, the Commissioners promised to make her voice heard. And we are absolutely determined to honour that commitment.

### **The moral, practical and economic case for remediation and reform is overwhelming.**

The IOCs have a duty to the people of Bayelsa and to posterity to alter their behaviour and clean up the appalling damage they have caused. They have a duty to prove through their actions that they truly believe that Bayelsan lives matter. Shareholders and banks have a duty to demand better behaviour from oil companies. The Federal Government has a duty to put in place a regulatory regime that will protect its citizens. International governments have a duty to ensure their companies treat host nations and communities with respect and do not behave in ways they would not countenance in their home markets.

The eyes of millions of people across Bayelsa, Nigeria and the world are upon those with the power to make change.

**The time to act is now. Justice demands it.**



## Appendix 1: Bayelsa State Oil and Environmental Commission Terms of Reference

### Background

The exploration and production of oil in Bayelsa State and the wider Niger Delta has led to significant environmental and human damage. Despite decades of debate and campaigning by local and international communities, oil spills have caused untold human and environmental devastation in the region. Henry Dickson, Governor of Bayelsa State, has mandated the formation of a Commission to collate facts and propose the development of a framework that ensures accountability to avoid future oil spills, and the clean-up of existing spills.

### Purpose

The aim of the commission is to develop a set of informed recommendations that lead to the development of a new legal framework that ensures accountability and an action plan for implementation to ensure a healthy environment by ensuring appropriate clean-up and remediation of impacted sites, and that host communities receive sufficient compensation for the impacts of environmental pollution and degradation, and reap the benefits from the production of oil within their communities.

### The Commission will achieve this by:

1. Investigating the environmental and human damage caused by the operations of the multinational oil companies, specifically as a result of oil spills, in Bayelsa State.
2. Analysing the existing legislation governing the operations of the multinational oil companies, undertake comparative analysis with legislation governing the operations of multinational oil companies in other territories, and assess the suitability of the existing Nigerian legislation for holding multinational oil companies to account for their activities.
3. Inviting evidence from the international community through evidence sessions in different locations.
4. Inviting evidence from the international community through hosting online evidence sessions where participants are able to submit oral evidence via video link or written evidence via writing to the Commission email account. [

### Composition

The Commission will be formed of two groups, one being the Investigative Group known as "The Commission" and an Expert Working Group. The commission will be chaired by the Archbishop of York.

The Chair will be responsible for:

1. Chairing the launch meeting and evidence sessions in Bayelsa State (agendas and papers will be prepared by the Secretariat on the advice and agreement of the Chair)
2. Agreeing with fellow Commissioners the final drafts of the two reports of the commission (the drafts of which will be prepared by the Expert Working Group with the support of the Secretariat)
3. Engaging in communications work, where necessary, with the support of other Commissioners and the Secretariat

The Commission will be made up of senior individuals with relevant experience. The Expert Working Group will be made up of academics with relevant expertise. The Commissioners will receive reimbursement for pre-approved travel expenses and a per diem rate while the Commission is undertaking its enquiries.

### Authority

The Commission is an independent body that will not be aligned to any Government or regulatory authority. It will therefore not have formal investigative powers or the ability to subpoena witnesses or compel anyone to engage with it or provide evidence. However, the Commission will consist of a range of senior and influential figures and experts in this area, which will provide it with significant authority.

### Secretariat

The administrative functions of the Secretariat will sit with Aequitas Consulting in London. Secretariat support will include:

1. Responsibility for all administrative arrangements relating to the Commission's meetings
2. Production of briefings and all other documentation required for the Commission's meetings

3. Desk research
4. Engagement with key stakeholders
5. Administration of calls for evidence
6. Analysis of responses
7. Facilitation of the production and publication of the two reports
8. Promotion and all communications of the two reports and relevant Commission activities.

### **Programme**

The commission will operate for a maximum of a year. During this period, the Commission is expected to meet once in Bayelsa State, the Expert Working Group twice virtually and either one or two international evidence sessions (location tbc)

The programme of work will be agreed by the Chair and Secretariat.

### **Accountability**

The Commission will be independent of any other organisation, but will be ultimately accountable to the Governor of Bayelsa State to whom they will present the final findings of the Commission.

## Appendix 2: The Remit, Composition and Methodology of the Bayelsa State Oil and Environmental Commission

### Introduction

The Bayelsa State Oil and Environmental Commission (BSOEC) was officially established by Governor Henry Seriake Dickson, Governor of Bayelsa State, on 26th March 2019. Its mission is to assess the scale and scope of oil pollution and the associated environmental damage in Bayelsa and to propose a framework to prevent future oil spills and ensure that the damage already done is effectively remediated.

The Commission is composed of internationally recognised leaders and some of the world's leading academic experts on the environmental, social, political, economic and health impacts of oil and gas activity in Nigeria's Niger Delta.

### Composition

- **Chair of the BSOEC**  
**The Rt Revd and Rt Hon the Lord Sentamu**  
**PhD (Cantab), PC**

#### Honorary Commissioners

- **HE John Kufuor**, former President of Ghana
- **The Rt Hon the Baroness Amos LG**,  
Master, University College Oxford

#### Commissioners and Expert Working

##### Group members (EWG)

- **Dr Kathryn Nwajaku-Dahou**, Commissioner (Chair Expert Working Group), Director of Politics and Governance, Overseas Development Institute (ODI) and Visiting Academic Fellow, Department of Politics and International Relations, University of Oxford
- **Professor Michael J. Watts**, Class of 63 Professor Emeritus, University of California, Berkeley, California, USA & Long-term Non-Resident Fellow Swedish Collegium for Advanced Study, Uppsala, Sweden
- **Professor Anna Zalik**, Faculty of Environmental and Urban Change at York University, Canada
- **Dr Isaac 'Asume' Osuoka**, Social Action International, Nigeria
- **Professor Engobo Emeseh**, Head of School of Law, University of Bradford, UK
- **Professor Roland Hodler**, Professor of Public Economics, University of St Gallen, Switzerland

### The work of the Commission

Since its launch, the BSOEC has met with over 500 people inside and outside Bayelsa State and has reviewed extensive existing literature and policy documents on oil spills and oil and gas related pollution in Bayelsa State and has commissioned extensive new field research. The BSOEC's work has been supported by an international network of environmental scientists and forensic experts, a local expert research team and a network of civil society actors with a long track record of documenting oil related environmental damage in the Niger Delta.

The Commissioners have undertaken three visits to the state, held town hall meetings with representatives from eight Local Government Areas (Brass, Ekeremor, Southern Ijaw, Obgria, Kolokuma/Opokuma, Sagbama, Yenagoa),<sup>480</sup> conducted on-site visits with a local team of researchers in Southern Ijaw, Aghoro and Yenagoa, and conducted case study research in Brass, Gbarain, Nembe and on bunkering and the Bonga-Koluama spill.

In addition to meeting with communities who have experienced the direct impacts of oil pollution, the BSOEC has also met with professionals from legal, health, oil servicing companies, civil society organisations, and officials at all levels of government, notably at the Ministry of the Environment, along with representatives of regulatory institutions responsible for assessment working in and on Bayelsa, namely the Bayelsa State Ministry of the Environment and state level staff of NOSDRA. The BSOEC has also received a written submission from two of the three main IOCs - SPDC/Shell Group in Nigeria and Eni (Agip) - operating Joint Ventures in the state.



## Appendix 3: Statement by Professor Allan Jamieson

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We were commissioned to conduct a review of the initial report and data in this project. Our work was conducted following the end of the project work (team selection, fieldwork, sample collection and analysis) in which we were not involved.

Our assessment included visits to Bayelsa State, meetings with the principal author (Prof Tse), meetings at and with some of the laboratories which provided data, and verification of some of the reference material included in the original report.

On the basis of our analysis following these extensive inquiries, we suggested changes to the original draft to improve the clarity of the analysis and provide more scientific background to the issues involved in this type of study.

We thank those who we worked directly with and had support from including His Excellency Henry Dixon, the staff of the Governor's Office for making our visit possible, Professor Tse for helpful discussions and comment, and the staff at the Bayelsa State Oil and Environmental Commission for facilitating so much with particular thanks to Dr Kathryn Nwajaku for her steady and delicate handling of the entire project on behalf of the Expert Working Group.

We are impressed with the scope and extent of the work undertaken which we hope will provide a foundation for a cleaner future for Bayelsa State and consequently Nigeria. We support the recommendations of the authors and sincerely hope and recommend that the State and Nation take these seriously enough to make the change necessary.

Foreword sent by Professor Alan Jamieson on 1 June 2020 to his scientific review.

## Appendix 4: Scientific Study Methodology

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The government commissioned report reviewed by Jamieson and Gomes notes that all samples were appropriately labelled and transferred to a laboratory within 48 hours using a chain of custody procedure. The samples for physicochemical parameters were obtained and placed into Ziplock bags, and samples for hydrocarbon analysis were placed in glass bottles and preserved in coolers with ice-packs in the field and freezers overnight at 4°C. During the data collection, decontamination was undertaken in a manner that avoided contaminating areas to be sampled, or the spread of contamination around or off the site.<sup>481</sup>

The Government report notes that both USEPA and the American Petroleum Institute (API) analytical protocols were adopted for the laboratory analysis, that the analysis of all samples was conducted by four different laboratories accredited either by the Federal Ministry of Environment, NOSDRA or DPR and that analytical measurements of contaminant indicators in the samples were carried out according to methods and procedures specified by the American Public Health Association (APHA, 2005) and the American Society for Testing and Materials (ASTM, 2010).

## Appendix 5: Biographies

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### The Chair of the BSOEC

**The Rt Revd and the Rt Hon Lord John Tucker Mugabi Sentamu**  
LLB, MA, PhD (Cantab), PC



The Rt Revd and Rt Hon Lord Sentamu is a former Archbishop of York, and former Primate of England and Metropolitan. He practiced Law at the Bar and the Bench as an Advocate of the High Court of Uganda.

After fleeing the regime of Idi Amin in 1974, he settled in the UK. He studied theology at Cambridge, where he obtained a Master's degree and a Doctorate and was ordained Deacon and Priest on behalf of the Church of Uganda. In his ministry he has always held on to both/and in matters of the State, the work for social justice, the Rule of Law and the dignity and unique worth of every human being in the sight of God.

He has actively played a significant role in responding to racially motivated crimes and injustice. During his time as Bishop for Stepney in the Diocese of London, he served as Advisor to the Stephen Lawrence Murder Judicial Enquiry, and subsequently chaired the Damilola Taylor Murder Review. As Bishop of Birmingham he was active in tackling gangs, guns and knives by bringing hope.

In the House of Lords, he has participated in many debates and led a debate on the Living Wage and Income Inequality.

Lord Sentamu moved to the North of England in 2005, when he was installed as Archbishop of York. Serving in that role for 15 years, Lord Sentamu continued to challenge our failure to lift people out of poverty, racism and social justice. He collaborated with the setting up of Acts 435: an online charity supporting people who are struggling financially.

He also championed leadership in schools by setting up The Archbishop of York's Youth Trust, a charity offering leadership development to young people. He served as Chancellor both to York St John University, and the University of Cumbria. He holds honorary Doctorates from many universities in the UK, including Cambridge, the UK, Canada, USA, and the West Indies. His passion is for the Church, as an Embassy of the Reign of God, to make Jesus Christ visible. Lord John Sentamu became Chair of Christian Aid on 23 November 2021, following his retirement as Archbishop of York the previous year.

## Honorary Commissioners

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### **HE John Kufuor** **former President of Ghana**

HE John Kufuor was President of Ghana from 2001 to 2009 and has been credited with bringing democracy back to the country after it had been subjected to a long line of coups and military dictators. During his time in office, he implemented major changes in education, healthcare, and infrastructure development. He stabilised the country's stagnating economy through fiscal and monetary stringency, and unleashed the entrepreneurial, creative and innovative potential of Ghanaians to create wealth and prosperity. This socio-economic vision was encapsulated in the Five Priority Areas Programme: the pursuit of good governance, modernisation of agriculture for rural



development, private sector participation, enhanced social services and vigorous infrastructure development.

Mr Kufuor has also been a prominent figure on the international stage. He was Chairman of the Economic Community of West African States (ECOWAS) from 2003 to 2005, and Chairperson of the 53 nation African Union from 2007 to 2008. He led negotiations that halted the civil war in Sierra Leone, as well as negotiations and peace missions that abetted violence and political conflicts in the Ivory Coast. In Liberia, he ensured the exile of President Charles Taylor to Nigeria, thus preventing the country from plunging into a deeper civil war again. In Kenya, he led a commission which finally resolved Kenya's post-election crisis. This resulted in the declaration of a new constitution in 2010.

### **The Rt Hon the** **Baroness Amos LG** **Master of University** **College Oxford**

Baroness Valerie Amos of Brondesbury was appointed a Labour life peer in 1997 and was the first black woman to serve as a Minister in the British cabinet and in the House of Lords. She has consistently sustained an interest in, and a commitment to, development issues, and to equality and human rights. Valerie was an adviser to the Mandela Government on leadership and change management issues and was Chief Executive of the Equal Opportunities Commission between 1989 and 1994. She has also held high office as Parliamentary Under-Secretary of State at the Foreign



and Commonwealth Office between 2001 and 2003 and also held the office of Secretary of State for International Development in 2003. After a further period in the Lords as spokesperson for the Northern Ireland Office she became Leader of the House of Lords and Lord President of the Council between 2003 and 2007.

Baroness Amos served as UK High Commissioner to Australia before joining the UN in 2010 as Undersecretary General for Humanitarian Affairs and Emergency Relief Coordinator. In 2015 Baroness Amos became the ninth Director of the School of Oriental and African Studies.

Baroness Amos has been the Master of University College Oxford since September 2020, becoming the first woman Master of University College Oxford and the first black head of an Oxford college.



## Commissioners and Expert Working Group (EWG) Members

### EWG Chair

**Dr Kathryn Nwajiaku-Dahou**  
**Director of Politics and Governance,**  
**ODI - the Global Affairs Think Tank -**  
**partner to the Bayelsa State Oil and**  
**Environmental Commission**



Kathryn is the Director of ODI's Politics and Governance programme, managing ODI's team of political economy experts. She has been widely acknowledged as an expert on politics, peacebuilding, business and human rights in conflict-affected settings and corporate accountability. A fluent French speaker, Kathryn has geographical expertise in West and Central Africa and over 25 years' experience of conducting and managing research and providing policy advice at a senior level in multilateral and bilateral institutions and NGOs. As a member of ODI's Leadership Team, Kathryn currently chairs ODI's Decolonising Research and Policy Taskforce responsible

for transforming the way knowledge is produced across the organisation. Before joining ODI, Kathryn worked for the OECD as Head of Unit and Head of the International Dialogue on Peacebuilding and Statebuilding Secretariat and co-authored their 2015 States of Fragility report. She also previously worked for the Irish Government and spent eight years as a researcher and policy advisor for Oxfam and ACORD. As a consultant, Kathryn worked with various bilateral and multilateral institutions, including DfID, Danida and AfDB.

Kathryn has a PhD in Politics and International Relations from Nuffield College, University of Oxford and an MA in Area Studies (Africa) from the University of London's School of Oriental and African Studies (SOAS). Kathryn is a member of the Board of Trustees of RAID (Rights and Accountability in Development). Kathryn was appointed as the BSOEC's EWG Chair as an independent consultant in 2019 prior to joining ODI in 2020.

### Dr Anna Zalik

**Professor Anna Zalik, Faculty of**  
**Environmental and Urban Change at**  
**York University, Canada**



Dr Anna Zalik is a faculty member in the program in Global Geography, Environmental and Urban Change at York University where she teaches in the areas of international environmental politics and the political ecology of extraction. Dr Zalik's research examines the political economy of oil, gas and other extractive industries, with a focus on the merging of corporate security and social welfare interventions in strategic exporters, particularly Nigeria, Mexico and Canada. She has also examined the relationship between popular

resistance to extraction, risk analysis as carried out by global financial institutions, and the spatial reorganisation of energy and extractive infrastructure. From 2005-2007 she was a Ciriacy-Wantrup Postdoctoral Fellow at the University of California at Berkeley. Dr. Zalik has received funding from the Social Sciences and Humanities Research Council of Canada for research on a range of topics related to the political economy of hydrocarbons, substantive industrial transparency, and the contested regulation of extractive industries in oceans beyond national jurisdiction. She has given invited presentations at many universities internationally, among them the Peace Research Institute – Oslo, the University of Chicago Human Rights Centre, and the UNAM in Mexico City.

**Professor Engobo Emeseh**  
**Head of School of Law, University**  
**of Bradford, UK**



Professor Engobo Emeseh is Head of the School of Law at the University of Bradford. Emeseh obtained her PhD from the Centre for Energy Petroleum and Mineral Law and Policy, University of Dundee, and has degrees from the Nigeria Law School and the University of Wales, Cardiff. She is a former British Council Chevening Scholar and a Ford Foundation (IFP) Doctoral Fellow. Prior to her academic career, she practiced as a barrister and solicitor in Nigeria, having been called to the Nigerian Bar in 1992.

Professor Emeseh's research focuses on environmental law and policy, with a particular interest in regulation and enforcement, environmental justice, corporate social responsibility, and the interface between environmental regulation and international economic law. She has been widely published and has presented papers at academic conferences and other international fora, usually within the context of the natural resources industry in Africa. Professor Emeseh has provided expert advice and consultation to organizations including the UNDP, the Africa Capacity Building Foundation, the African Legal Support Facility and the UN Economic Commission for Africa Institute for Economic Development and Planning.

**Dr Isaac 'Asume' Osuoka****Social Action International**

Dr Isaac 'Asume' Osuoka coordinates Social Action International, an organisation promoting resource democracy and the human rights and livelihoods of marginalised communities in West and Central Africa. Osuoka previously served as Coordinator of Oilwatch Africa, a network supporting communities



impacted by the petroleum industry in the continent.

He has participated in several international conferences and has been a panellist at the United Nations' Expert Group Meeting on the Use of Non-Renewable Resource Revenues for Sustainable Local Development. Osuoka holds a doctorate in Environmental Studies and has taught at York University and Carleton University in Canada.

**Michael J. Watts**
**Class of 63 Professor Emeritus,  
University of California, Berkeley,  
California, USA & Long-term  
Non-Resident Fellow Swedish  
Collegium for Advanced Study,  
Uppsala, Sweden**

Michael J. Watts is an Emeritus 'Class of 1963' Professor of Geography and Director of Development Studies at the University of California, Berkeley. He served as the Director of the Institute of International Studies at Berkeley from 1994-2004. Watts was the Chair of the Board of Trustees of the Social Science Research Council in New York (2010-2015) and was recently awarded the Berlin Prize by the American Academy in Berlin. He was a Guggenheim Fellow in 2003 and was awarded the Victoria Medal by the Royal Geographical Society in 2004. Watts was educated at University College London and the University of Michigan and has held visiting appointments at the Smithsonian Institution, and universities in Bergen, Bologna, and London.



Professor Watts' research has addressed a number of development issues, particularly the oil and gas industry, energy security, resource development and land reform in Africa and South Asia. He has written extensively on the oil industry, focusing on West Africa and the Gulf of Guinea. Much of his research has centred on Nigeria, which he first visited shortly after the civil war, and was attached to Ahmadu Bello University and the University of Ibadan in the 1970s. Professor Watts has consulted for a number of development agencies, including the United Nations and the World Bank. Professor Watts has published nineteen books and over three hundred articles in leading research journal, has provided testimony to the US Congress and State Department, and provided expert testimony in a number of legal cases.

Watts is a fellow of the British Academy and also Long-term Fellow at the Swedish Collegium for Advanced Study in Uppsala.

**Professor Roland Hodler**
**Professor of Economics,  
University of St. Gallen**

Roland Hodler is Professor of Economics at the University of St. Gallen and affiliated with the Oxford Centre for Analysis of Resource Rich Economies (OxCarre), the Center for Economic Policy Research (CEPR), and CESifo. Before joining the University of St. Gallen, Professor Hodler was a Visiting Postdoctoral Fellow at Harvard University, Senior Lecturer at the University of Melbourne, and Professor at the University of Lucerne. He holds a PhD from the University of Bern. Professor Hodler's main research areas are development economics and political economics.



His interests include the economic, political and social effects of ethnic divisions, natural resources and foreign aid. Among others, he has studied how natural resource extraction impacts upon economic growth, financial development, governance, and conflict. In recent research focusing on Nigeria, he has studied the effects of onshore oil spills on health and infant mortality. Professor Hodler's research has been published in leading academic journals such as the Quarterly Journal of Economics, the Journal of Development Economics, and the Proceedings of the National Academy of Sciences; and covered by media outlets such as BBC, the Economist, the Guardian, Le Monde, and Washington Post.

## Glossary

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This glossary is compiled according to the authors of the report, drawing on glossaries and other resources available on the websites of the following organisations, networks and projects: the Schlumberger Energy Glossary, the Refinery Reference Desk by McKinsey Energy Insights, the United States Environmental Protection Agency and the Nigerian Government.

**Artisanal oil refining:** This is the small-scale crude oil processing or subsistent distillation of petroleum that is often outside the boundaries of the state law.

**Barrel:** Barrel is a common measure of volume used in the oil industry, for both crude oil and refined products. A barrel is equal to 42 US gallons.

**Department of Petroleum Resources (DPR):** Now the Nigerian Upstream Petroleum Regulatory Commission, it is a department under the Nigerian Federal Ministry of Petroleum Resources. It monitors the oil and gas industry to ensure compliance with relevant regulations and laws.

**Divestment:** Divestment is the process of selling subsidiary assets, investments, or divisions. In the context of this report divestment refers to the process of IOCs selling off business interests in Nigeria, often to local companies.

**Effluent Waste Disposal:** Effluent is any liquid waste, other than surface water and domestic sewage that is discharged from premises being used for a business, trade or industrial process. Trade effluent may be waste water contaminated with materials such as: fats, oils and greases; chemicals; detergents; heavy metal rinses; solids; and food waste.

**EGASPIN:** Environmental guidelines and standards for the petroleum industries in Nigeria.

**Environmental Impact Assessment (EIA):** The process of identifying the future consequences of a current or proposed action.

**Gas Flaring:** The burning of unwanted gas through a pipe (also called a flare). Flaring is a means of disposal used when there is no way to transport the gas to market and the operator cannot use the gas for another purpose. Flaring generally is not allowed because of the high value of gas and environmental concerns.

**Global Memorandum of Understanding (GMOU):** An agreement between an IOC and a group of communities identified based on local government area, ethnicity and historical affinities. The terms of the agreement define the amount of funding and community development

projects to be provided over a defined time period to the benefiting communities.

**Hydrocarbon:** Hydrocarbons are any substances made up of carbon and hydrogen. This includes crude oil and all petroleum products, as well as natural gas and coal.

**International Oil and Gas Company (IOC):** A large publicly traded oil and gas producer. Integrated oil companies operate across the entire petroleum value chain from oil exploration and production (upstream) to transport, refining, and marketing (downstream).

**Joint Investigation Team (JIT):** A JIT is formed when an oil spill occurs and includes representatives of regulatory agencies, the oil company, and the local community.

**Joint Investigation Visit (JIV):** A JIV is part of an oil spill investigation process whereby when an oil spill occurs, a joint investigation team (JIT) is mobilised to visit the spill site. The JIT includes representatives of regulatory agencies, the oil company, and the local community. JIV forms, which are to be signed by the JIT, capture data on the cause of the spill, the volume spilt and the area affected.

**Joint Venture (JV):** A joint venture is a commercial arrangement between two or more parties that agree to co-operate on a project or service.

**Liquefied Natural Gas (LNG):** Natural gas, mainly methane and ethane, which has been liquefied at cryogenic temperatures. This process occurs at an extremely low temperature and a pressure near the atmospheric pressure. When a gas pipeline is not available to transport gas to a marketplace, such as in a jungle or certain remote regions offshore, the gas may be chilled and converted to liquefied natural gas (a liquid) to transport and sell it.

**Liquefied Petroleum Gas (LPG):** Gas mainly composed of propane and butane, which has been liquefied at low temperatures and moderate pressures. The gas is obtainable from refinery gases or after the cracking process of crude oil. Liquefied petroleum gas is also called bottle gas. At atmospheric pressure, it is easily converted



into gas and can be used industrially or domestically.

**Local Government Area (LGA):** Nigeria has 774 local government areas (LGAs), each administered by a local government council consisting of a chairman and councillors. The local authorities are responsible for delivery of services such as public health; pre-school, primary and adult education; town planning; waste disposal; local transport; and roads.

**Ministry of Environment (MoE):** The MoE is a Federal Ministry which exists to ensure environmental protection, natural resources conservation and sustainable development.

**National Oil Company (NOC):** NOCs are oil companies owned and operated by the government of the country they are in. Many large oil-producing countries have NOCs that control most or all of the oil industry activities in their domestic markets.

#### **National Oil Spill and Detection and Response**

**Agency (NOSDRA):** The Agency responsible for ensuring preparedness, detection and responses to spillages in Nigeria and companies' compliance with relevant legislation.

#### **Nigeria Extractive Industry Transparency Initiative**

**(NEIT):** The Nigeria Extractive Industries Transparency Initiative (NEITI) is the national chapter of the global Extractive Industries Transparency Initiative (EITI) mandated by law to promote transparency and accountability in the management of Nigeria's oil, gas and mining revenues.

**Oil Mining Licence (OML):** A licence allowing full-scale commercial production in a lease area. It is granted to oil prospecting licence holders on the discovery of oil in commercial quantities (at least 10,000 barrels per day). It grants the lessee an exclusive right to prospect, explore, produce and undertake marketing activities in connection with the specified acreage for a period of 20 years. An oil mining lease may be renewed subject to the fulfilment of certain conditions.

**Oil Prospecting Licence (OPL):** An exclusive licence granted for any period determined by the Minister of Petroleum Resources of up to five years for onshore areas and shallow waters and up to 10 years for deep offshore and inland basins. The oil prospecting licence permits the licensee to conduct more extensive exploration activities and remove and dispose of petroleum discovered while prospecting.

**Oil spill:** An oil spill is oil, discharged accidentally or intentionally, that floats on the surface of water bodies as a discrete mass and is carried by the wind, currents and tides. Oil spills can be partially controlled by chemical dispersion, combustion, mechanical containment and adsorption. They have destructive effects on coastal ecosystems.

#### **Organisation for Economic Cooperation and**

**Development (OECD):** An intergovernmental organisation with 38 member countries, founded in 1961 to stimulate economic progress and world trade.

#### **Organisation of the Petroleum Exporting Countries**

**(OPEC):** A permanent intergovernmental organisation of 13 oil-exporting developing nations that coordinates and unifies the petroleum policies of its Member Countries.

**Particulate Matter:** Particulate matter contains microscopic solids or liquid droplets that are so small that they can be inhaled and cause serious health problems. Some particles less than 10 micrometers in diameter can get deep into your lungs and some may even get into your bloodstream. Of these, particles less than 2.5 micrometers in diameter, also known as fine particles or PM2.5, pose the greatest risk to health.

**Remediation:** Remediation of a contaminated site as a result of an industrial incident is a corrective measure to mitigate or eliminate the pollution.

**Volatile organic compounds (VOCs):** Compounds that have a high vapour pressure and low water solubility. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants. VOCs are common ground-water contaminants. VOCs are emitted as gases from certain solids or liquids. They include a variety of chemicals, some of which may have short- and long-term adverse health effects.

**PAH - Polycyclic aromatic hydrocarbons:** (PAHs) are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They result from burning coal, oil, gas, wood, garbage, and tobacco. PAHs can bind to or form small particles in the air.

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- 7 On average, the Nigerian oil and gas sector generated US \$41.6 billion in revenues per year for government and sub-national entities, including crude oil sales, taxes, royalties and other incomes, between 2009 and 2018 (data compiled from NEITI Audits. Available: <https://neiti.gov.ng/audits/oil-and-gas> [Accessed December 13 2021]). Although these figures are not broken down by state, it would be reasonable to expect Bayelsa to be the source of roughly US \$10 billion of these revenues, given that the state produces roughly 23 percent of Nigeria's daily oil production. The overall figure of \$150 billion would therefore represent a period of roughly 15 years. (Bayelsa Investment Promotion Agency. Available: <https://investbayelsa.by.gov.ng/oil-and-gas/> [Accessed December 13 2021]).
- 8 Department of Petroleum Resources. 2013. *2013 Annual Statistical Bulletin: Nigeria Oil and Gas Industry Annual Statistical Bulletin*. Abuja: Department of Petroleum Resources.
- 9 Department of Petroleum Resources. 2018. *Nigeria Oil and Gas Industry Annual Report*. Abuja: Department of Petroleum Resources.
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- 11 Royal Dutch Shell Plc. 2019. *Energy for a better future. Annual report and accounts for the year ended December 2019*. Available at <https://reports.shell.com/annual-report/2019>
- 12 NOSDRA. n.d. *Nigerian Oil Spill Monitor*. Available at <https://nosdra.oilspillmonitor.ng/> According to these official NOSDRA statistics, Bayelsa accounts for over 25 percent of all spills in Nigeria. Independent estimates of total volumes spilled range from 9 - 13 million barrels, implying up to four million barrels have been spilled in Bayelsa, which has a population of 2.3 million.
- 13 NOSDRA. n.d. *Nigerian Oil Spill Monitor*. Available at <https://nosdra.oilspillmonitor.ng/>. According to NOSDRA at least 1,814 (52.3 percent) of the 3,466 spill incidents in Bayelsa have occurred in Southern Ijaw since 2005. Given Southern Ijaw's population of 337,000, this would mean that if four million barrels were spilled in Nigeria, over two million could have been spilled in Southern Ijaw (assuming that all incidents involved the same spill amount). This would imply that around six barrels have been spilled per person in Southern Ijaw.
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- 15 Nigeria National Petroleum Corporation. 2019. 2019 *Annual Statistical Bulletin*. NNPC ASB 2019. 1st Edition. [Accessed 3 October 2021]. Available at <https://nnpcgroup.com/NNPCDocuments/Annual%20Statistics%20Bulletin%E2%80%8B/ASB%202018%201st%20Edition.pdf>.
- 16 Between 1976 and 2005, over three million barrels of oil were spilled across Nigeria, equivalent to 10 times the size of the Exxon Valdez spill which devastated over 1,000 km of Alaskan coastline. See Emuedo, O. A., Anoliefo, G. O. and Emuedo, C. O. 2014. Oil Pollution and Water Quality in the Niger Delta: Implications for the Sustainability of the Mangrove Ecosystem. *Global Journal of Human-Social Science*, 14, 9-15; Ite, A.E., Ibok, U.J., Ite, M.U. and Peters, S.W. 2013. Petroleum exploration and production: Past and present environmental issues in Nigeria's Niger Delta. *American Journal of Environmental Protection*, 1(4), pp. 78-90. A NOSDRA/ DPR estimate calculates that 2.4 million barrels were spilled between 1976 and 1996. See Odjuvwuederhie, E. I., Douglasson, G. O. and Felicia, N. A. 2006. The effect of oil spillage on crop yield and farm income in Delta State, Nigeria. *Journal of Central European Agriculture*, 7(1), pp. 41-48. Given the nature of the data collection system over this period it is certainly a wild underestimate. A recent study using DPR data estimated 3.1 million barrels spilled between 1976 and 2014. See Chinedu, E. and Chukwuemeka, C. K. 2018. Oil Spillage and Heavy Metals Toxicity Risk in the Niger Delta, Nigeria. *Journal of Health and Pollution*, 8(19), pp. 1-8.
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- 19 Jamieson, A and Gomes, S. 2020. *An Independent Forensic Assessment of Environmental Pollution in Bayelsa State*. Bayelsa State Oil and Environmental Commission
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- LGAs being Ekeremor, Southern Ijaw and Nembe. We have estimated that at least half the surface area of these LGAs has been impacted by contamination to differing degrees, amounting to a total of 256,500 ha according to 2006 census data. We have calculated the proposed remediation project's funds on the basis of the cost of the Bodo remediation exercise, to which Shell is contributing US \$40 million for 1,000 ha over five years. This estimate also takes into account advice given by the UNEP and Bodo Mediation team in an interview conducted in August 2020.
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- 478 The 2019 Supreme Court's decision in Shell v Agbara SC. 731/2017 put an end to an action that commenced in 1991. In effect, Shell would have to pay over US \$100 million to settle the Ejama Egbu community for a large and ongoing spill in Ogoniland. Similarly, the Supreme Court's decision in Centre for Oil Pollution Watch v NNPC. 2018) LPELR-50830(SC), opened the floodgates for environmental litigation as it confirmed the rights of NGOs and civil societies to sue oil companies on behalf of impacted communities.
- 479 Bayelsa State Oil And Environment Commission. 2019. Oral testimony submitted as evidence at the BSOEC hearings, Ekeremor, 11 July 2019.
- 480 Residents of Nembe LGA were invited to attend a 'town hall meeting' in Yenagoa for logistical reasons.
- 481 Jamieson, A and Gomes, S. 2020. *An Independent Forensic Assessment of Environmental Pollution in Bayelsa State*. Bayelsa State Oil and Environmental Commission.

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