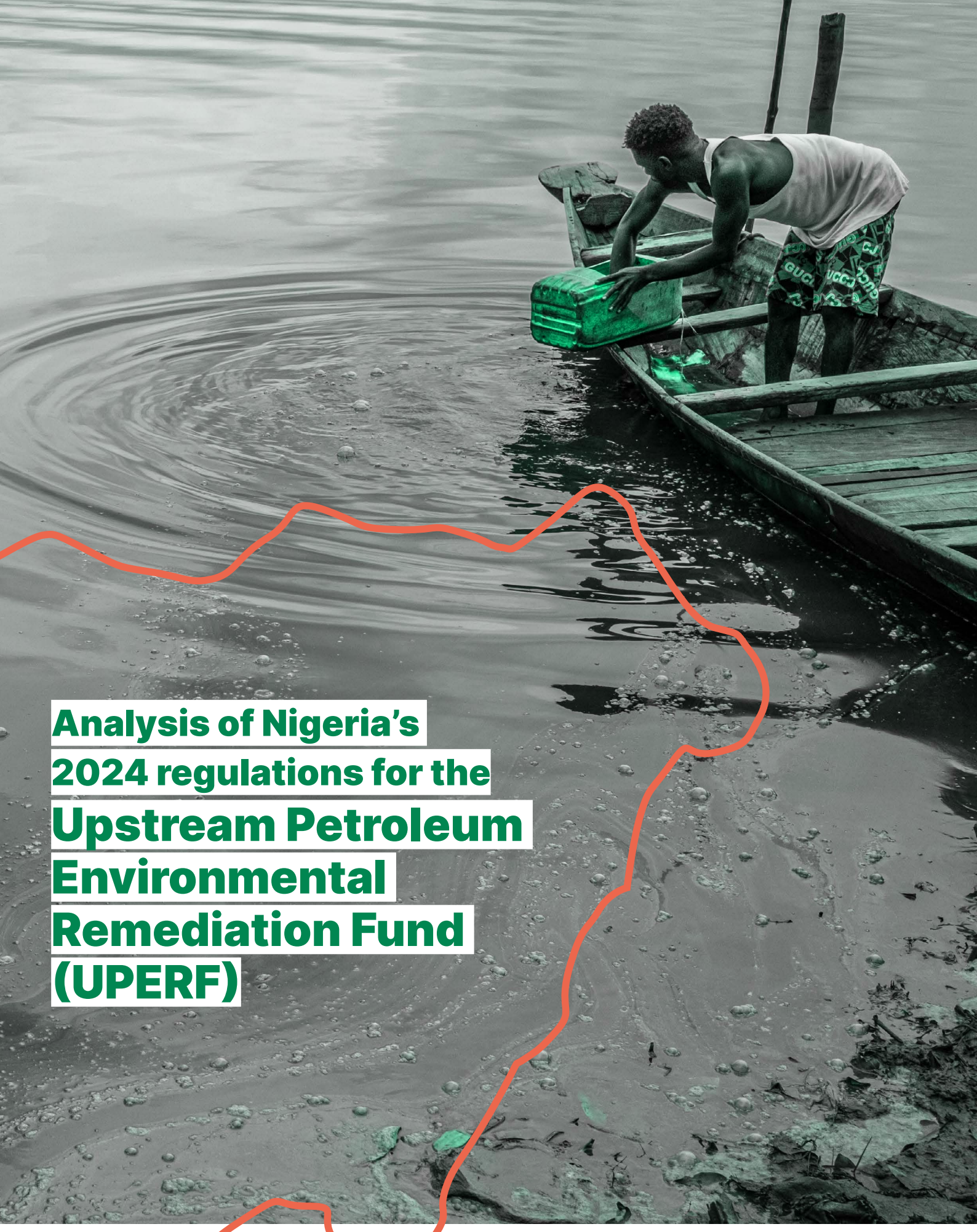

Analysis of Nigeria's 2024 regulations for the Upstream Petroleum Environmental Remediation Fund (UPERF)

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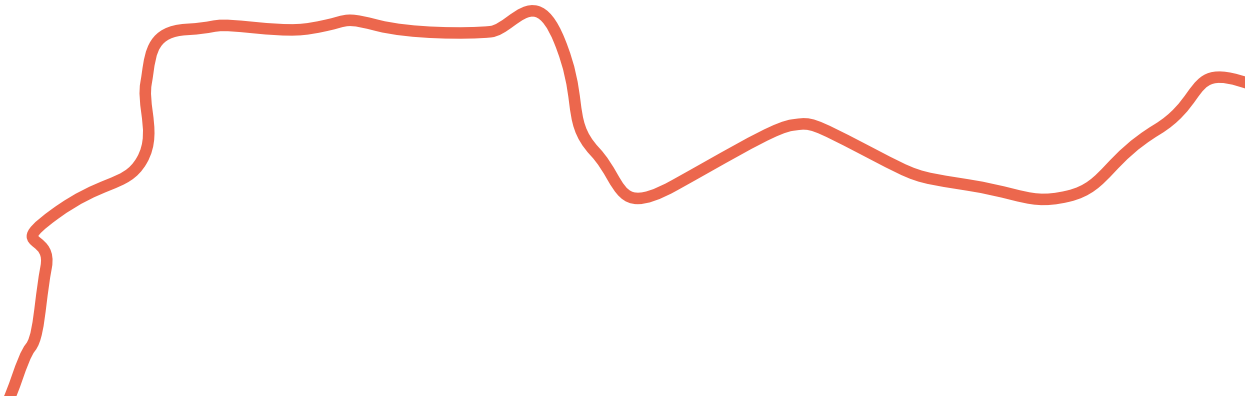


Abbreviations

AEC	African Energy Chamber
bbls	Barrel of oil, equal to 159 litres
CAPEX	Capital Expenditure
CER	Capital Expenditure Rate
CLR	Capacity for liquids rate
FY	Financial Year, January to December, as set by the Ministry of Petroleum Resources
GCR	Gas Capacity Rate
GR	Gas Rate
ha	Hectares
HCDT	Host Community Development Trust
HYPREP	Hydrocarbon Pollution Remediation Project
JIV	Joint Investigation Visit
LR	Liquids rate
MDERF	Midstream and Downstream Environmental Remediation Fund
MER	Maximum Efficiency Rate
MF	Marginal Field
mscf	Thousand standard cubic feet
NNPC	Nigerian National Petroleum Corporation
NOSDRA	National Oil Spill Detection and Response Agency
NMDPRA	Nigerian Midstream and Downstream Petroleum Regulatory Agency
NUPRC	Nigerian Upstream Petroleum Regulatory Commission
OML	Oil Mining Licence
OPEX	Operating Expenditure
OPL	Oil Prospecting Licence
OSM	Oil Spill Monitor
PIA	Petroleum Industry Act
PML	Petroleum Mining Licence
PPL	Petroleum Prospecting Licence
SDN	Stakeholder Democracy Network
TAR	Total Allowable Rate
UCER	Upstream Capital Expenditure Rate
UNCLOS	United Nations Convention on the Law of the Sea
UPERF	Upstream Petroleum Environmental Remediation Fund
USD	United States Dollars ($)

Executive Summary

This report assesses whether Nigeria's 2024 *Upstream Petroleum Environmental Remediation Fund (UPERF)* regulations are fit for purpose. It analyses the regulatory and financial mechanisms and compares the 2024 regulations with the earlier 2022 draft, to evaluate whether the changes have strengthened or weakened the framework.

The Fund is intended to finance the remediation and rehabilitation of environmental pollution resulting from upstream oil and gas operations in the Niger Delta. Contributions are made by companies holding upstream licences for the extraction and production of petroleum, but not from pipelines, since these are covered by a parallel midstream fund. Financial modelling was carried out to estimate the likely annual inflows to the Fund and compare this to the estimated cost of remediation and rehabilitation across the region.

Key findings

- Total annual contributions are estimated at just US$2.7 million under the 2024 regulations.
- Using conservative estimates of clean-up costs, this would cover only 107,000 litres of oil — just 11% of the one million litres spilled from upstream infrastructure in 2023.
- Under rates in the 2022 draft, total contributions are estimated at $6 million. The revised 2024 regulations have therefore reduced this by more than a half (-56%).
- For oil spills attributed to sabotage alone (45% of Upstream spills in 2023), the Fund would cover the cost to clean-up just a quarter of the spill volume (25%).
- These figures cover oil spills only and exclude other eligible pollution — such as air, water, and soil contamination, as well as biodiversity loss and infrastructure damage — illustrating that the Fund is too limited to address even a single pollution type, let alone the full range.

Other key findings

1. The contribution formula is fundamentally weak: even large increases in capital expenditure or production capacity result in only marginal increases in contributions. For example, if both increased tenfold total annual contributions would rise by less than half (+45% to $3.9m).
2. Between 2022 and 2024, the rates used to calculate contributions were cut by 42–90%, leading to an overall decline in the total contributions by 56%.
3. Calculations now use "production capacity" instead of actual production volumes, with no clear definition of capacity (the model uses *Total Allowable Rate (TAR)* set by the Nigerian Upstream Petroleum Regulatory Commission (NUPRC)).
4. A broader definition of eligible environmental damage has been introduced, encompassing pollution to land, air, water, ecosystems, biodiversity, and public infrastructure. This is a significant expansion beyond oil spills, and thus a positive development, but the Fund remains too small to meet such needs.

5. Criteria to access the fund has been clarified to include: (1) incidents of mysterious or undetermined origin, (2) incidents not attributable to operators, or (3) failure to act after NUPRC notification.

6. A formal administrative process now governs the Fund, involving the NUPRC and licensees/lessees. However, it excludes community participation, sidelines the Ministry of Environment, and places considerable discretion with companies responsible for pollution and the NUPRC – raising concerns about technical capacity and accountability.

7. Each remediation project will be overseen by *ad hoc* committees formed by companies, responsible for assessment, planning, implementation, and reporting. The lack of independent experts, community input, clear formation rules, or monitoring standards poses risks of delay and poor-quality remediation.

8. Importantly, use of the Fund does not absolve licensees or lessees of legal liability. Legal claims can continue for other impacts, such as compensation for lost livelihoods or lives.

Data and considerations

The formula for calculating payments into the Fund is based on three variables over the past year:

1. Location – a fixed-rate determined by the ecological risk category of the operation's location

2. Capital expenditure (CAPEX) – a percentage of the total value of upstream investment, and

3. Oil and gas volume – a percentage applied to the company's upstream production capacity.

Several gaps in data availability limit assessment of the Fund's scale and operation:

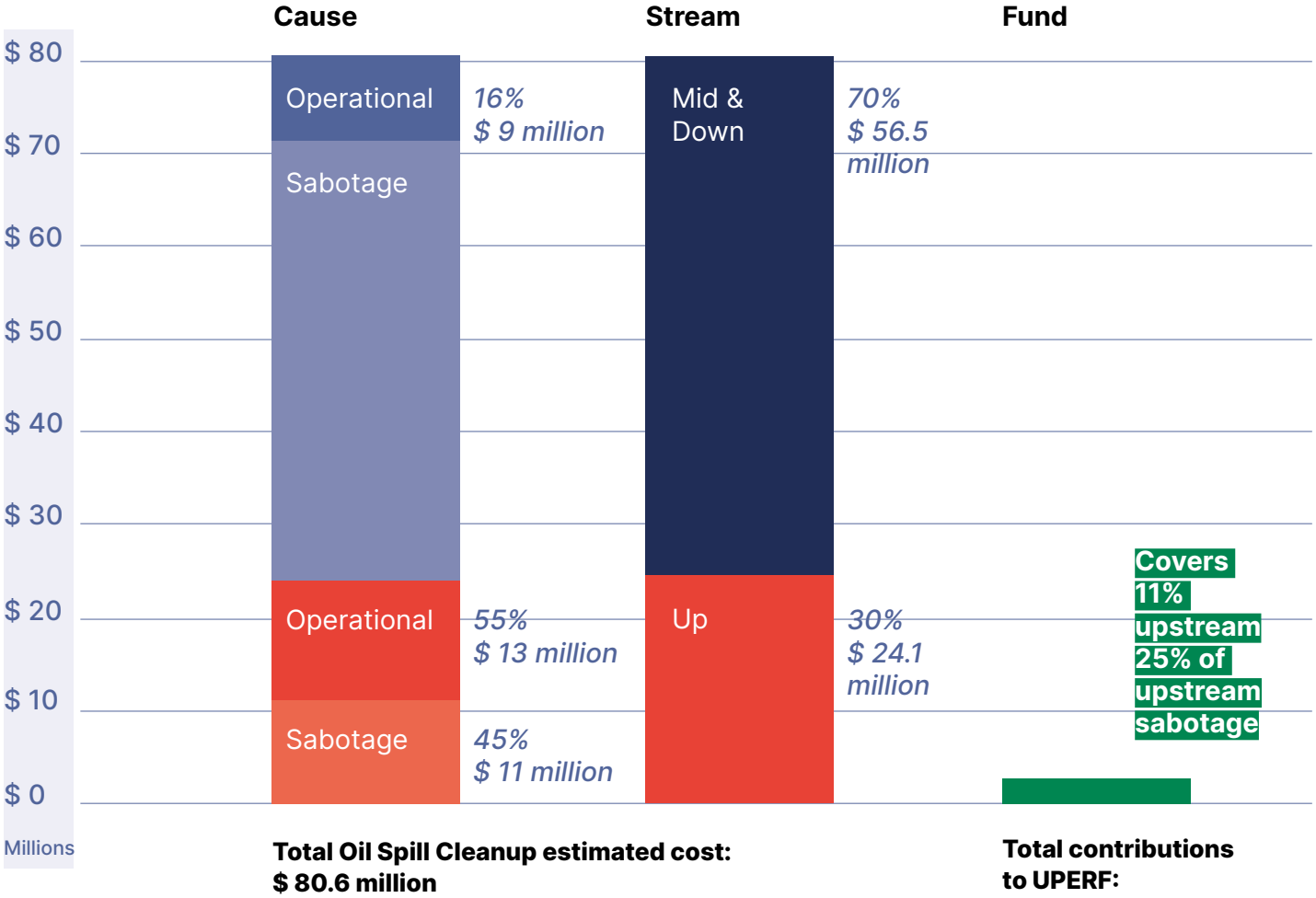
- Critical underlying data – including capital expenditure, installed capacity, and infrastructure locations – is not disclosed by companies or government.

- NUPRC has not yet published the mandatory annual financial statement of the Fund, which is expected to disclose contributions, remediation projects, contracts, and expenses.

Changes in regulatory authority complicate matters further:

- Clarity over regulatory lines – A recent Presidential Directive transferred oversight of midstream (and some parts of downstream) from the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) to NUPRC. NMDPRA now retains authority only over gas processing, and downstream distribution of gas and petroleum products.

Total oil spill Cleanup Coverage by the Upstream Fund (2023)



Total Oil Spill Cleanup estimated cost:
$ 80.6 million

Total contributions to UPERF:
$ 2.7 million

- Duplication of fund – In parallel, NMDPRA has also created its own Environmental Remediation Fund for midstream and downstream operations. Rates and regulations are identical and thus also far too low. The result is two overlapping funds under different regulators, with unclear boundaries, especially after the Presidential Directive.

Conclusion

Despite data gaps and overlapping mandates, contribution rates are far too low to fund the environmental remediation Nigeria needs. Increasing capital expenditure or production capacity – whether in the upstream, midstream, or downstream sectors – does little to improve total contributions. The underlying formula has been constrained, yet it needs to be reviewed and revised upwards to ensure the Fund can meet its stated purpose.

Recommendations to strengthen modelling and clarify fund scope:

1. **Ensure transparency** by pressing NUPRC to publish overdue annual financial statements on fund contributions and spending.

2. **Clarify calculation formula and definitions** and data gathering methods used by NUPRC.

3. **Resolve institutional overlaps** by engaging NUPRC, NMDPRA, or the Ministry of Petroleum Resources on how the two Funds and agencies are meant to function.

4. **Integrate data related to the Fund into NEITI audits** to enable public scrutiny and independent oversight. This should include contributions, the scale of pollution, and remediation costs.

To improve the regulatory framework:

5. **Revise contribution formulas** to reflect the actual cost of environmental remediation.

6. **Explore merging the Funds** under independent or multi-stakeholder oversight, such as NOSDRA or the Ministry of Environment.

7. **Mandate public consultation and disclosure** at all stages of the remediation process.

8. **Allow community-initiated claims** to access the Fund.

9. **Set clear rules for remediation committees**, ensuring transparency, independent input, and community involvement.

Introduction

This report assesses whether the regulations governing Nigeria's Upstream Petroleum Environmental Remediation Fund[1] are adequate and fit for purpose. Specifically, it evaluates whether the Fund, as currently structured, is capable of fulfilling its primary environmental objectives: the remediation and rehabilitation of areas affected by upstream oil and gas operations.

To do this, the analysis applies two methods:

1. Financial modelling to estimate the total annual contributions likely to be generated; and
2. Regulatory analysis, involving a detailed review of the provisions that establish the scope, structure, and obligations of the Fund.

To assess the regulatory trajectory, the study also analyses a previous draft version of the regulations released in 2022.[2] By comparing the financial and regulatory consequences of both versions, the report identifies whether recent changes have enhanced or weakened the capacity of the Fund to mobilise sufficient resources for environmental clean-up.

Together, these methods offer an evidence-based assessment of the Fund's financial and legal foundations, and the extent to which current regulations align with its intended purpose.

Background

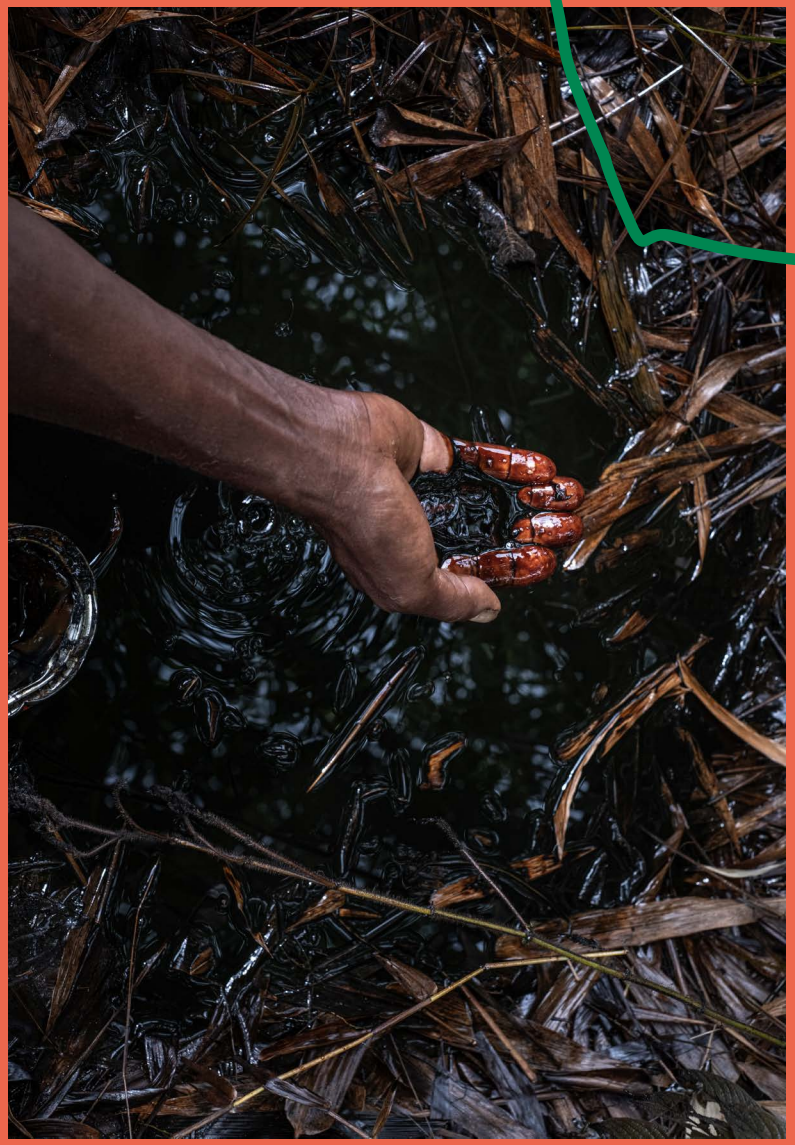
The background to this research is rooted in the Petroleum Industry Act (PIA), which when passed in 2021 marked the start of a comprehensive restructuring of Nigeria's oil and gas sector. Among its prominent innovations was the creation of Host Communities Development Trusts (HCDTs), which redefined how oil and gas companies engage with and contribute to community development in the Niger Delta.

While HCDTs have attracted considerable attention, other mechanisms introduced by the PIA – though equally consequential – have not been subject to the same scrutiny. One example is the Upstream Petroleum Environmental Remediation Fund (herein "the Fund"). A draft of the regulations was published in 2022, with stakeholders invited to submit feedback. The final regulations were approved in 2024 and published online in 2025.

The primary objective of the fund is "to provide a source of funding for the rehabilitation or management of negative environmental impacts from upstream petroleum operations." Given the scale of historic and ongoing environmental damage, the Fund represents a critical opportunity to deliver long-overdue remediation in the Niger Delta. This study seeks to assess whether the framework in place can realise that promise, and what changes may be needed to ensure it does.

The Upstream Fund is only one half of Nigeria's new framework. A parallel Midstream and Downstream Environmental Remediation Fund (MDERF) is intended to cover pollution across pipelines, storage depots, refineries and distribution networks — where around 70% of total oil spill volume in 2023 occurred. But key information on the mid- and downstream sector is not available, so its income cannot be modelled. By analysing the upstream fund, where more data is accessible, this report provides a basis for judging the midstream and downstream fund's design and likely adequacy once equivalent data emerge.

Methodology



The full methodology for this research is outlined in ***Annex 1***, covering the data definitions, challenges, approaches, sources, assumptions and limitations.

Objectives

1. To estimate the total annual contributions expected under the Upstream Petroleum Environmental Remediation Fund regulations.

2. To compare contribution estimates with the actual or projected costs of environmental clean-up and rehabilitation in the Niger Delta region, in order to assess whether the fund is likely to be adequate for its intended purpose.

3. To conduct a comparative policy analysis between the 2022 draft and the 2024 regulations as passed, identifying the differences between both versions, and the potential implications.

Approach

Data compilation: A comprehensive database was developed containing the data needed to calculate contributions. This focused on 2023, as this was the most recently available source of audited production and payment data available at the time of the study (June 2025). The data sources, assumptions, and approaches used in this analysis, are detailed in ***Annex 1***.

Estimation of Fund contributions: Using the compiled data, financial contributions to the Fund were calculated. This was done by building a financial model that can run the data through the formula used for the Fund. The full model is available alongside this report.

Cost estimation for environmental remediation: Remediation costs were estimated using oil spill data from the Nigerian Oil Spill Detection and Response Agency (NOSDRA), and World Bank cost benchmarks that have been reviewed and validated by NOSDRA.

Fund adequacy assessment: A final comparative analysis estimated the extent to which the projected Fund contributions can cover remediation costs. This "fund coverage" is expressed as a percentage of total needs.

Findings: Financial contributions and Fund adequacy

Contribution Formula

The formula for calculating payments into the Fund is based on three variables:

1. Location – a fixed-rate determined by the ecological risk of the operation's location
2. Capital expenditure (CAPEX) – a percentage of the total value of upstream investment, and
3. Oil and gas volume – a percentage applied to the company's upstream production capacity.

Location Fixed rate	x	**CAPEX** % of total investment	x	**Oil** % total production	x	**Gas** % total production	=	**Total annual contribution**

The formula underwent significant revisions between the draft regulations released in 2022 and the final version passed in 2024. These changes affect the magnitude and basis of contributions:

- Fixed-contribution rates for ecological risk are now calculated on a daily rather than annual basis, which when annualised, are 42% lower than those in the draft regulations.
- The CAPEX-based rate was reduced by 84-95% for different location categories. CAPEX is now limited exclusively to upstream operations, as all references to midstream activities have been removed.[3]
- The volume-based rate was changed from total annual production to average daily capacity. While this may stabilise Fund income, it reduces incentives for cleaner operations as high-emissions producers pay the same as lower-impact ones, if capacity is equal. The rates were also reduced by 67-90%.
- Minor changes were made to the acronyms and terminology used for each rate component.
- Contributions can also be paid in Naira now, which could affect the fund's real US$ value.

Location of petroleum operation under a licence	Contribution in USD or Naira equivalent per year (and per day) - Fixed Contribution (US$)			Rate for annual upstream Capital Expenditure (CER) (%)			Rate for average daily production/capacity for liquids in USD or Naira equivalent per bbl/day (CLR) (US$)			Rate for average daily production/capacity for natural gas, in USD or Naira equivalent per mscf/day (GCR) (US$)		
	2022	2024	% Change	2022	2024	% Change	Prod. 2022	Cap. 2024	% Change	Prod. 2022	Cap. 2024	% Change
Onshore High-Risk Areas	25,000 (69)	14,600 (40)	-42%	0.010	0.001	-90%	0.006	0.002	-67%	0.0006	0.0002	-67%
Onshore - Other Areas	20,000 (55)	11,680 (32)	-42%	0.005	0.0008	-84%	0.003	0.001	-67%	0.0003	0.0001	-67%
Shallow Water - High-Risk Areas	15,000 (41)	8,760 (24)	-42%	0.004	0.0006	-85%	0.003	0.0005	-83%	0.0003	0.00005	-83%
Other Shallow Water Areas	10,000 (27)	5,840 (16)	-42%	0.002	0.0003	-95%	0.002	0.0002	-90%	0.0002	0.00002	-90%
Deep Water Areas	5,000 (14)	2,920 (8)	-42%	0.001	0.0001	-90%	0.001	0.0001	-90%	0.0001	0.00001	-90%

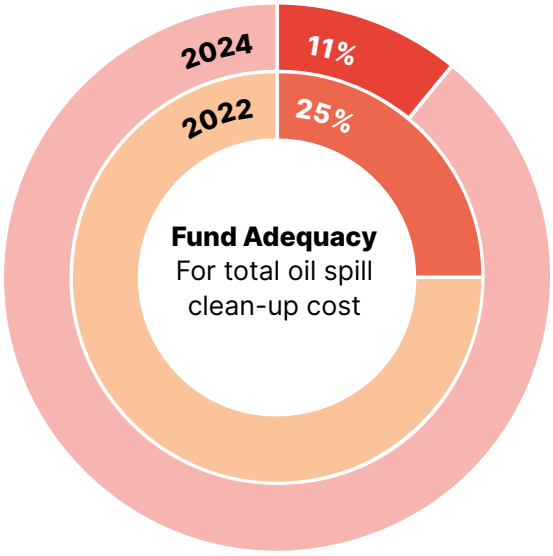
Source: NUPRC. Upstream Environmental Remediation Fund Regulations (2022); NUPRC. Upstream Petroleum Environmental Remediation Fund Regulations (2024).

Estimation of Fund Contributions

The total annual contribution to the Fund is estimated at $2.7 million. Under rates in the 2022 draft, contributions were estimated at $6 million, meaning the revised 2024 framework has reduced the expected value of the Fund by more than a half (56%).

The location-based risk contribution is the largest source of funding, making up around 47% of total payments. The oil production capacity rate contributes around 29%, gas capacity about 22%, while CAPEX rate accounts for just over 2%.

These estimates are indicative only. They rely on publicly available data and assumptions about production capacity and capital expenditure, as detailed in ***Annex 1***. The model applies high-end estimates for capital expenditure and production capacity in order to avoid underestimating potential contributions. While these variables can be adjusted easily in the model if more accurate figures become available, the current estimates are believed to provide a reasonably close approximation of likely contributions.



Adequacy for environmental remediation

The adequacy assessment compares the estimated contributions to the likely cost of remediation. For this analysis, oil spills are the sole category of environmental damage included in the model. While the upstream sector causes a broad range of environmental impacts – and the Fund is intended to address them – this focus provides a manageable starting point.

Neither oil companies nor regulatory agencies in Nigeria publish data on actual oil spill response or rehabilitation costs. To estimate these, the analysis draws on World Bank figures, validated with NOSDRA, which place clean-up costs in the Niger Delta at $3,900 per barrel and oil recovery costs at $60 per barrel.[4] As more reliable cost data becomes available for remediating other forms of environmental damage, the model can be expanded accordingly. It should be stressed that the estimated clean-up costs are conservative: The Bayelsa Commission estimates clean-up costs per barrel to be 22 times higher than the World Bank figure, suggesting current models may greatly underestimate actual costs (see ***Annex 2*** for comparative clean-up costs).[5]

Nearly one million litres was spilled from upstream infrastructure in 2023 (6,100 barrels), which would have a clean-up cost of over $24 million. Under the 2024 regulations, the estimated $2.7 million in annual contributions to the Fund would therefore cover just 11% of this cost, enough to clean-up approximately 107,325 litres of crude oil (675 barrels). Under the 2022 draft rates, annual contributions were estimated at about US$6 million, which would have covered around 25 % of the 2023 clean-up bill—roughly 250,000 litres (about 1,550 barrels).

Spills beyond upstream

As the table below shows, in 2023 NOSDRA recorded nearly 1,400 oil spill incidents across upstream, midstream, and downstream infrastructure, with a total volume of over 3.2 million litres (20,365 barrels).[6] At the estimated clean-up cost per barrel, this would require over $80.6 million for remediation.

	Total Spills			
Stream	**Number of incidents**	**Volume (bbl)**	**Volume (litres)**	**Cost to clean-up**
Upstream	177	6,098.59	969,676	$ 24,150,424.76
Midstream	1,194	14,168.19	2,252,742	$ 56,106,025.47
Downstream	0	0	0	$ 0.00
Other	25	97.91	15,568	$ 387,733.26
Totals	**1,396**	**20,364.69**	**3,237,986**	**$ 80,644,183.49**

Source: NOSDRA Oil Spill Monitor. Data downloaded on 13/06/2025

Upstream infrastructure forms a small fraction of this total – 13% of incidents, and 30% of the volume spilled – meaning the remaining 87% of incidents and 70% of volumes fall outside the Upstream Fund's scope. Spills from midstream infrastructure are nominally covered by a parallel fund administered by the Nigeria Midstream and Downstream Petroleum Regulatory Authority (NMDPRA). While data to model contributions to this fund is less accessible, the regulations indicate it is essentially a carbon copy of the Upstream Fund, applying the same rates and calculation formula. As the findings of this analysis demonstrate, these rates are fundamentally too low: multiplying next to zero rates inevitably yields next to zero contributions. Therefore, if sufficient data were available to model midstream and downstream contributions, the results would likely reveal an even greater inadequacy to meet needs.

Furthermore, calculating ecological risk is a far more complex task because pipelines run for thousands of kilometres across the Niger Delta, through biodiversity hotspots like mangroves and rainforests. Moreover, many pipelines are far older than their safe lifespan. The older they get, the more likely they are to fail, which means the spills cause greater environmental damage and the need for clean-up funds is even higher. This is discussed further later in the report (*What about midstream and downstream pollution?*).

Major incidents

In 2023, two upstream oil spill incidents would each require remediation costs exceeding the Fund's total annual contributions, with further resources still needed for full rehabilitation.

As the table below shows, the top five spills accounted for 890,241 litres – or 92% of the total spill volume from upstream infrastructure in 2023. This highlights two 'mega spills' for the year that vastly increase the total. The scale of these incidents is stark considering that even the smallest spill can have a devastating impact on biodiversity and human health.

Top 5 largest oil spills from upstream infrastructure in 2023

Rank	Company	Spill in litres	Spill location	Date	Cost to clean-up
1	Total	498,306	Egina deep offshore	15/11/2023	$ 12,410,640
2	Shell	293,355	Escravos Well 5, Ogidigben, Delta State	21/01/2023	$ 7,306,200
3	NNPC 18	73,140	Alakiri Well 4, Okrika, Rivers State	02/07/2023	$ 1,821,600
4	Seplat	15,105	Amukpe Flowstation, Sapele, Delta State	19/05/2023	$ 376,200
5	Shell	10,335	Rumuekpe Well 3, Emuoha, Rivers State	27/05/2023	$ 257,400

Source: NOSDRA Oil Spill Monitor. Data downloaded 13/07/2025.

Spills attributed to Sabotage

The majority of oil spills are blamed on sabotage by third-parties. In 2023, this reportedly accounted for 91% of incidents, and 72% of total spill volume.

Under Nigerian law, companies are responsible for cleaning up spills from sabotage, but they are not required to pay compensation.[7] Under this arrangement, the Joint Investigation Visits (JIVs) and oil spill reporting process has become widely controversial and has been repeatedly criticised for bias and weak oversight. Investigations are typically led by the operating oil company alongside regulators (NOSDRA) and community representatives, creating conflicts of interest and allowing operators to influence findings. Access for communities and independent observers is often restricted, and investigations can be delayed for days, by which time evidence of the cause or scale of a spill may have been lost. Technical capacity is limited: equipment to measure spill volumes is basic, and methods lack standardisation. Reports are usually produced manually and stored in ways that make verification or public access difficult. These structural flaws mean that NOSDRA data frequently underestimates the volume, cause and impact of spills, undermining both accountability and effective remediation.

The Fund will operate at the centre of this controversial context, because it can be accessed for incidents "not attributable to the act or omission of the operator"[8] – a category that covers sabotage-related spills. In 2023, the clean-up costs for upstream sabotage-related incidents is estimated at $11 million. At current levels, the Fund's total annual contributions would cover only 25% of that amount.

	Sabotage spills				
Stream	Number of incidents	% of total incidents	Volume spilled (litres)	% of total volume	Cost to clean-up
Upstream	132	74.6%	435,657	44.9%	$ 10,850,316.84
Midstream	1,129	94.6%	1,885,325	83.7%	$ 46,955,274.06
Downstream	-	0.0%	0	0.0%	$ -
Other*	3	12.0%	15,105	97.0%	$ 376,200.00
Totals	1,264	90.5%	2,336,087	72.1%	$ 58,181,790.90

	Non-Sabotage spills				
Stream	Number of incidents	% of total incidents	Volume spilled (litres)	% of total volume	Cost to clean-up
Upstream	45	25.4%	534,019	55.1%	$ 13,300,107.92
Midstream	65	5.4%	367,417	16.3%	$ 9,150,751.41
Downstream	-	0.0%	-	-	$ -
Other*	22	88.0%	463	3.0%	$ 11,533.26
Totals	132	9.5%	901,899	27.9%	$ 22,462,392.59

Source: NOSDRA Oil Spill Monitor. Data downloaded on 13/06/2025
**'Other' relates to spills classified as 'other' by NOSDRA, which could also not be manually assigned a stream classification by the researcher.*

Model simulations

The model allows us to test different CAPEX and production capacity scenarios. However, because the contribution rates are extremely low, the final totals remain small regardless of how high the inputs are. For example, even if both CAPEX and production capacity were increased tenfold – to $90 billion and 22.4 million barrels per day – total annual contributions would rise to just $3.9 million (an increase of less than 50%).

Summary of Fund finances

In summary, the Fund's annual contributions fall far short of what is required to clean up oil spills, which are just one form of pollution the Fund is intended to address. Additional resources would be needed to remediate pollution to the air, water, and soil, as well as biodiversity loss, and damage to infrastructure. At existing levels, even a single major spill can exceed the Fund's entire annual income, and new spills continue each year. When viewed against the backlog of pollution from over 70 years of oil extraction, it is evident that the Fund, in its current form, is not financially equipped to meet the scale of environmental remediation required in the Niger Delta. By extension, the likely size of the Midstream and Downstream Fund will also be grossly insufficient, and combined, they form a flawed mechanism for addressing environmental pollution from the petroleum industry.

Findings: Regulatory provisions

Key timeframes

Several deadlines can be deduced from the timeframes provided in the Regulations. As can be seen in the table below, the Fund should by now have been in place for over one year, with contributions for 2024 and 2025 deposited, and the first annual statement published. This is a useful point to follow up with the NUPRC, as the information will provide valuable insights into the Fund's value and early implementation.

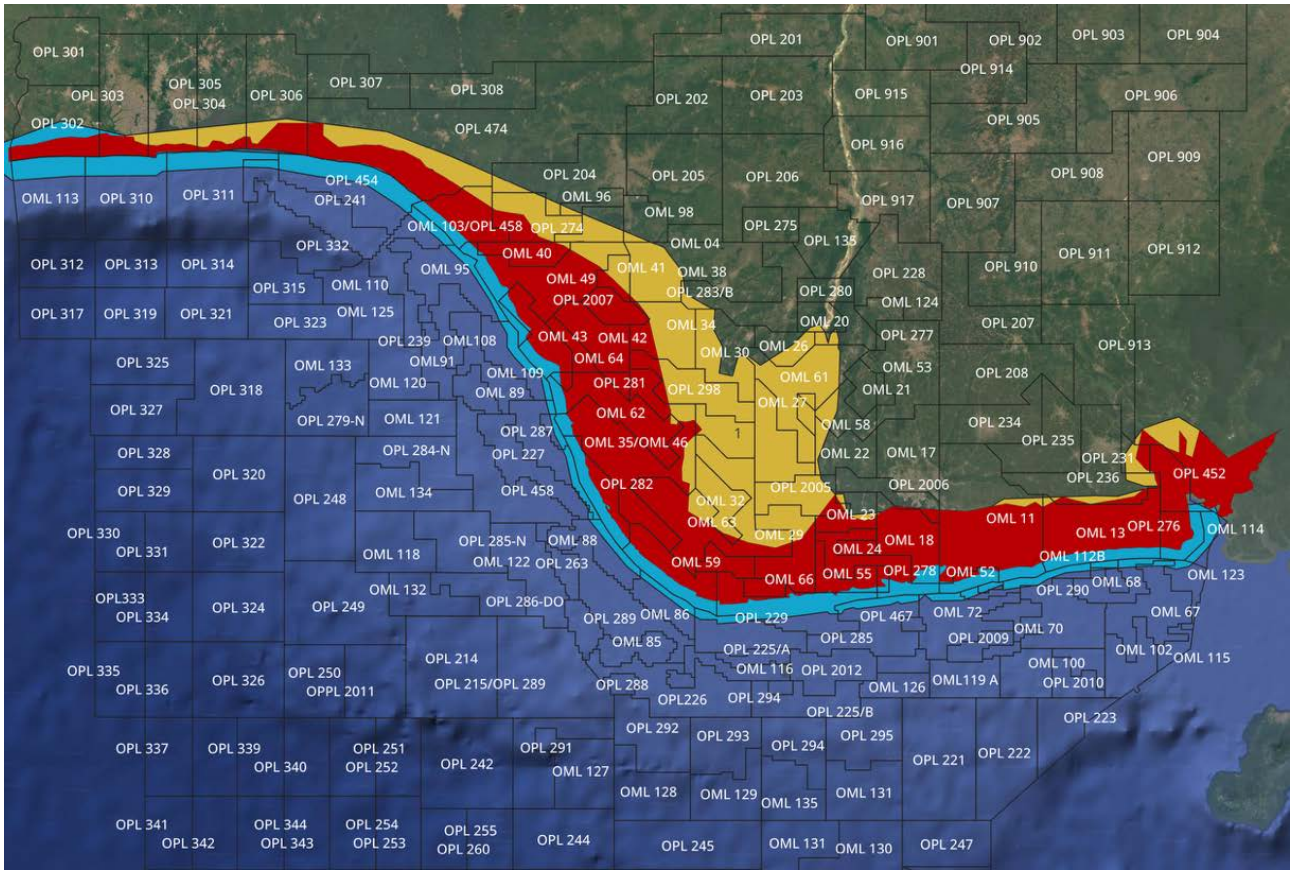
Who contributes to the Fund, and how are contributions allocated?

The regulations apply to upstream petroleum operations conducted under all petroleum prospecting and mining licences,[9] (PPLs and PMLs), which is the new terminology under the PIA for oil prospecting and mining licences (OPLs and OMLs).

Milestone	Deadline	Provision
Effective date of regulations	13th March 2024	"13th Day of March, 2024". Commencement.
Establish the fund	13th September 2024	"The Commission shall within six months from the effective date of these Regulations (13th March 2024), establish the Upstream Environmental Remediation Fund ("the Fund")"
Receive first contributions	Does not specify. But this should cover contributions for the period 13th March 2024 to 31st January 2025 (a total of 325 days).	"Upon the coming into effect of these Regulations, commence payment by contributing an amount equal to the fixed cost relating to licenced facility in their operational area multiplied by the remaining days in the year."
Receive annual contributions	31st January 2025	"Make an annual financial contribution for any succeeding year that a licenced facility is in operation on or before 31st of January of every year."
Publish audit guidelines	13th March 2025	"The Commission shall, not later than one year from the establishment of the Fund, make rules or guidelines for the conduct of audit of the Fund by licensees or lessees."
Publish annual statement	31st March 2025 (if FY 31st Dec) 29th June 2025 (if FY 31st Mar)	"The Commission shall keep proper accounts and records in relation to the Fund and shall, not later than 90 days after the end of a relevant financial year, publish on its website an annual statement containing details of negative environmental impact interventions, contracts issued, contributions and expenses."

A significant change in the final regulations limits the contribution base. The draft version included contributions from midstream licence holders,[10] such as operators of pipelines and flow stations, but this provision has been removed from the final text. As a result, midstream operators are no longer explicitly required to contribute to the Fund. Yet, as discussed later, there are overlapping funds and responsibilities across upstream, midstream and downstream operations within the Ministry of Petroleum.

The deployment of the Fund is also unclear. It states that the funds released will come "from the portion contributed by licensees and lessees in that operational area."[11] This implies that contributions are ring-fenced, so that only funds generated from a particular area can be used to finance rehabilitation within that same area. However, the term "operational area" is not clearly defined. It could refer to the individual licence area (OML/OPL), or to a broader regional classification (such as the "eastern zone"). This ambiguity creates uncertainty over how much funding would actually be available for any specific rehabilitation project.



Oil prospecting and mining licences in the Niger Delta and Gulf of Guinea. Source: NOSDRA, Ministry of Environment, and author's visualisation.

Onshore Other		Onshore and outside the mangrove and freshwater swamp zone
Onshore High-Risk		Within the freshwater swamp zone
		Within the mangrove zone
Shallow Water High-Risk		Within 10 km of the coastline on Nigeria
Other Shallow Water		Beyond 10 km of the coastline of Nigeria and recorded by the government as 'continental shelf'
Deep Water		Beyond 10 km of the coastline of Nigeria and recorded by the government as 'deep offshore'

How is the location of a lease or licence determined?

The majority of a company's financial contribution is typically the fixed rate component, which is determined by the location of the operational area. As such, the classification is a key factor in determining overall payment obligations. As the map above illustrates, the entire Niger Delta – onshore and offshore – falls under an oil and gas mining or prospecting lease (OML or OPL). It is also a region of rich biodiversity and human settlement.

Under the current framework, it remains unclear how the NUPRC assessed and attributed ecological risk across the Niger Delta. For the purposes of the model, it is assumed that the Ministry of Environment's classifications were applied (see ***Methodology***). However, with no classification published as required under the audit provisions of the regulations, it is reasonable to assume that NUPRC has not carried out a systematic assessment—i.e. one that evaluates site-specific ecological conditions alongside the integrity of oil and gas infrastructure within each licence area. As a result, many areas are likely to have been placed in lower risk categories than appropriate, reducing the contributions required and leaving less money available for clean-up and rehabilitation.

During drafting, the rules changed for the worse. In the 2022 draft, if any part of a lease intersected with a higher-risk area, the entire lease was classified as belonging to the highest risk category.[12] This provision was removed in the 2024 regulations. Under the current framework, the category of operational area is to be confirmed in writing by NUPRC prior to the first payment.[13] The specific determinations have not yet been published and would need to be reviewed before assessing the full impact of this change.

The authority to determine the operational area category has also shifted: from the Federal Ministry of Environment to the NUPRC.[14] This transfer of responsibility may have implications for environmental governance, objectivity, and institutional independence. The Ministry of Environment arguably has stronger institutional expertise and capacity to assess ecological risk, whereas NUPRC's primary mandate focuses on increasing oil and gas production, potentially creating a conflict of interest that could weaken environmental safeguards.

What is the scope of environmental damage covered by the Fund?

The final regulations provide a greater level of detail than the draft, which did not specify the types of environmental damage the Fund is intended to address. The regulations state that the Fund is established "for the specific purpose of rehabilitation and management of negative environmental impact resulting from upstream petroleum operations".[15] 'Rehabilitation implies not just remediation (i.e. clean-up) – and covers restoration of the environment to its natural, or pre-extraction state.

Section 9 further defines the types of environmental harm that the Fund may be used for. It states that the Fund applies to incidents "where the negative environmental impact adversely affects –

> (a) land pollution (whether for agricultural or other purposes), air pollution, water pollution (seas, rivers, and ground water), soil pollution, waste production, noise pollution, damage to ecosystem and loss of biodiversity; or
>
> (b) public infrastructure such as access roads, bridges, public drainage systems, utility facilities, rail lines and other transportation infrastructure."

This provides a broad definition of environmental damage that the Fund can be used for. It clearly extends beyond oil spills and could also cover issues such as gas flaring, which generates air pollution, contaminates rainwater and farmland, and produces noise and light pollution that affect both human health and biodiversity.

It is not clear how environmental damage would directly affect public infrastructure, apart from cases where pollution enters drainage or water systems. However, incidents such as explosions could potentially cause direct damage to infrastructure, and gas flares contribute towards acid rain which deteriorates buildings, destroys plant life, and impacts on aquatic life.

However, the Fund does not extend to addressing the broader social and economic consequences that often accompany pollution and environmental harm, such as damage to health, loss of lives, livelihoods, or community displacement. Compensation claims for such losses would therefore remain possible only through separate legal action. This further highlights the Fund's inadequacy: it cannot on its own redress the wrongs caused by pollution, and affected citizens must still navigate a difficult legal system to seek compensation – a situation that, in effect, leaves millions of seriously impacted citizens of the Delta without any credible access to compensation and relief.

Socio-economic consequences are only considered in the context of prioritising which projects receive funding. The guidelines specify that decisions should consider the scale and severity of the environmental impact, as well as the socio-economic consequences of not acting.[16] In practice, this means the Commission will need to assess numerous funding applications and prioritise them based on the level of need. From the outset, with few funds to go round, this ranking process could become politically or administratively contentious. The provision also places the Commission at the centre of leading not only environmental but also social and economic technical assessments. While this supports an evidence-based approach in principle, it is difficult to see how the Commission could realistically carry out these responsibilities without consultation with the Ministry of Environment, NOSDRA, or input from independent experts. This means that, inevitably, some spills will remain unaddressed.

Furthermore, there is no mention of public consultation or transparency requirements in the process of determining environmental damage or in communicating the planned remediation works. Lack of consultation risks undermining trust, fuelling community tensions, and leaving affected populations uncertain about what measures are being taken to restore their land and ecosystems. In a region where grievances over envi-

ronmental degradation have historically contributed to conflict, ensuring transparency and community involvement in remediation efforts is not only good practice but may also be critical to securing long-term stability.

When can the fund be accessed?

The regulations outline three circumstances under which the Fund can be accessed. The wording suggests that these provisions were primarily drafted with oil spills in mind. However, as the preceding section shows, the Fund can also be applied to a broader range of environmental damage that is not limited to discrete incidents, such as the ongoing impacts of gas flaring. The three categories are as follows:

1. *Incidents of "mysterious or of undetermined origin"*[17]

With reference to oil spills, such incidents appear to be extremely rare. For example, according to NOSDRA data, only 3 out of 1,396 oil spill incidents in 2023 were classified as being of undetermined origin, with a total volume of 1.4 barrels of crude oil spilled.

2. *Incidents "not attributable to the act or omission of the operator of the upstream petroleum operations"*[18]

This provision is designed for incidents where the operator is not directly responsible. This category plainly includes spills caused by third-party interference or acts of sabotage, long claimed as the major cause of spills in Nigeria. In 2023 for instance, NOSDRA reported that over 90% of all oil spill incidents, and 72% of the total volume spilled, were attributed to sabotage. This raises a critical question for enforcement and policy: does the UPERF in practice shift the cost of cleaning up sabotage-related spills from operators to the Fund? If the Fund routinely pays for such incidents, it risks replacing long-standing legal duties and reducing incentives for operators to maintain and protect their infrastructure.

Nigeria's environmental laws already place a clear duty on operators to clean up all oil spills, including those caused by sabotage or other third-party interference. The NOSDRA Act (2006) and its Regulations (2011) require an operator to begin remediation within 24 hours of a spill report, whatever the cause.[19] The Oil Pipelines Act (1990) also makes the pipeline licence-holder liable to "make good" any damage from escaped oil.[20] This issue is explored further in this report.

3. *Incidents where the licensee or lessee "fails or is unable to undertake necessary rehabilitation or management of negative environmental impacts of such petroleum operations, despite the Commission having given notices"*[21]

This provision will be seen as a positive step by many communities that have long campaigned for action in cases where operators fail to respond to spills. In principle, the same approach could be extended to other forms of environmental harm, for example, to address gas flaring, where promises and commitments to end the practice have repeatedly been delayed or missed.

However, an important provision was removed from the 2022 draft which gave citizens the ability to access the Fund where the Commission fails to enforce the law.[22] Under the approved rules, the Fund can only be accessed when the Commission issues notices to the operator. If the Commission fails to issue such notices in a timely manner, the Fund cannot be triggered, leaving communities dependent on the regulator's willingness to act. Historically, delays or inaction by the regulator have been a recurring concern, with communities often reporting that petitions for intervention following spills are ignored or unresolved.

What is the process to access the Fund?

The draft version of the regulations did not explain the process for accessing the Fund. The final regulations now introduce a defined procedure, centred around the establishment of *ad hoc* committees every time there is an incident, responsible for designing and implementing remediation plans.[23]

4. **Notice of intention to access the Fund**
   When the Commission decides to access the Fund for a qualifying incident, it must give notice to all licensees and lessees in the affected operational area.

5. **Formation of *ad hoc* committee**
   The notice instructs licensees and lessees to establish an *ad hoc* Environmental Management and Rehabilitation Committee to oversee the rehabilitation programme.

6. **Submission of rehabilitation plan**
   The committee must submit a rehabilitation plan to the Commission, outlining the intervention activities, duration, costs, and implementation framework. The programme may include clean-up, remediation, reclamation, restoration, or any combination of these measures.

7. **NUPRC review, approval and fund release**
   If satisfied with the submitted programme, the NUPRC will approve it and release funds to the committee for implementation, under its supervision.

8. **Financial accountability**
   The committee is responsible for managing and accounting for the funds, and must submit a report to the Commission upon completion of the rehabilitation programme.

While the introduction of *ad hoc* committees localises responses, which can be positive, it also raises several concerns. *Ad hoc* structures risk inconsistency or inefficiency unless they are well-supported and supervised by the Commission. Notably, the process does not involve other government bodies with relevant expertise and experience, such as the Ministry of Environment or NOSDRA, nor does it require the appointment of experts to the committees.

Procedurally, there are no timelines for the formation of committees or the review of their remediation plans, no penalties for delay, and no formal requirements for monitoring the quality of remediation once implemented. As such, the formation of such committees may delay rapid-response remediation efforts. There is also

a risk in communities that such structures may create opportunities for internal division and external influence, potentially allowing oil companies to exploit local power imbalances within communities and weaken collective organisation.

In addition, no guidelines are provided on how to design or prepare an effective rehabilitation plan for environmental damage. If the plan must be submitted prior to accessing the Fund, claimants would first need to mobilise the necessary environmental expertise to assess the damage and develop the plan. Without access to such expertise, there is a risk that poorly designed rehabilitation efforts could waste funds and, in some cases, cause additional harm or pollution.

The regulations now clearly define financial procedures for disbursing funds, including formal checks and documentation requirements.[24] After the rehabilitation programme is approved, the committee must submit a request for the release of funds. The regulations refer to an online form for submitting such requests, but this form does not appear to be available.[25] In addition, no timelines are provided for how quickly requests will be reviewed or funds released. This lack of defined timeframes may further hinder the Fund's ability to respond to emergency situations, or to prevent pollution from spreading and causing further damage while awaiting disbursement.

The funding is to be disbursed based on milestones and "monitored" by the NUPRC. However, the regulations do not specify how the Commission will review the committee's financial and operational performance. Nor do they provide mechanisms to challenge or hold the committees accountable if they fail to deliver. This creates significant risks that hastily formed committees may mismanage funds, deliver substandard rehabilitation work, or even divert resources for personal or political gain, potentially leading to further conflict and undermining community trust.

Does this affect liability and operator responsibility?

A critical provision was introduced preserving operator liability under the regulatory framework. It makes it clear that the application of the Fund to finance rehabilitation does not release the responsible owners from legal accountability for the damage caused. Specifically, it states that even if the Fund is used: "the licensee or lessee shall nevertheless be responsible to the full extent of the law for any damage to any person, property or the environment caused by the negative environmental impact from its upstream petroleum operations."[26]

This clause effectively preserves the principle of operator primary liability, ensuring that the Fund operates as a safety net mechanism rather than as a substitute for legal and financial responsibility. It prevents operators from using the existence of the Fund as a defence or shield against civil, administrative, or criminal claims arising from environmental harm. In practice, this means that even after the Commission has intervened using Fund resources, and the environmental damage is certified as "made good", affected individuals, communities, or government authorities may still pursue legal action against the operator to seek compensation

for personal loss, property damage, or broader environmental harm.
Wider Nigerian laws are clear on clean-up obligations but less certain on compensation: companies must remediate but are not automatically required to pay damages where sabotage is proven. This is being tested in *Alame & Others v. Shell* (2025[27]). The High Court of England and Wales are examining whether section 11 of the Oil Pipelines Act also gives communities a statutory right to claim compensation even when a spill results from third-party interference. The case highlights that sabotage is not automatically a defence and that operators may still face liability if they failed to protect or maintain their pipelines.

However, in practice, the enforcement of liability is highly constrained. Disputes over the cause of spills – whether arising from sabotage or operational failure – commonly lead to legal contests and prolonged delays. Even where courts award compensation, companies frequently appeal, further stalling or reducing payouts. These procedural hurdles, combined with weak enforcement capacity, mean that operator liability, though preserved in law, is rarely realised in practice, leaving victims with limited access to justice.

What are the transparency measures in place?

The regulations contain some limited transparency provisions, though significant gaps remain. The NUPRC is required to publish an annual audit on its website, which should cover contributions received, rehabilitation plans approved, and other fund activities.[28] Based on the regulations, the first such disclosure should already have been published if the financial year-end is assumed to be 31 December. However, as of now, it has not been made public. This audit would provide an important opportunity to assess how the Fund is functioning in practice and to gauge early compliance with the financial management provisions of the regulations.

Under Section 10, contributors (i.e. licensees and lessees) may request an audit of the Fund at any time, which could enhance transparency and build trust. However, these audits would be conducted at the requesting operator's own cost, which may deter smaller contributors from exercising this option. The regulations do not specify whether audit findings will be made public or shared with other stakeholders, including affected communities or civil society organisations. Moreover, the right to request an audit is reserved exclusively for licensees and lessees, meaning other stakeholders, including impacted community members, have no mechanism to trigger independent scrutiny of the Fund.

Beyond financial disclosures, the regulations contain no requirements for public reporting on how environmental damage is assessed, how rehabilitation plans are developed, or how decisions are made regarding the allocation of funds. Nor do they require the Commission to consult with affected communities, publish information on ongoing rehabilitation works, or disclose the outcomes of completed projects. This creates a risk of limited accountability, particularly in a context like the Niger Delta, where public confidence in regulatory oversight remains fragile.

The NUPRC is also required to issue guidelines for auditing the Fund, which should be published on its website no later than one year from the Fund's establishment.[29] There are currently no related guidelines on the NUPRC website. How detailed and robust these guidelines are will be important for ensuring financial oversight and public confidence in the management of the Fund.

What are the penalties for non-compliance?

Section 11 of the regulations introduces enforcement mechanisms for failure to comply with the Fund's contribution requirements. Where a licensee or lessee fails to make the required payments, the Commission may impose a fine of US$100,000 for the initial offence, and an additional US$10,000 for each day the contravention continues (or the Naira equivalent). This makes financial compliance an explicit regulatory obligation rather than a contractual or administrative expectation. The size of the fine is significant and intended to discourage delays or deliberate avoidance. The regulations do not, however, specify whether they are to be paid directly into the Fund itself or retained by the Commission as general revenue.

Beyond financial penalties, continued non-compliance may trigger more severe regulatory consequences. Provisions enable the Commission to escalate enforcement measures, which may ultimately include suspension, revocation, or refusal to renew licences and leases for operators who fail to deposit their statutory contributions.[30]

These are the only penalties outlined in the regulations. There are notably no sanctions or consequences for misuse of funds by committees. This is challenging given the existing weakness in accountability, as the Commission is relying on self-reporting from committees and companies without requiring external audits, or consultation with communities.

What about midstream and downstream pollution?

As highlighted earlier, upstream infrastructure forms just one part of the petroleum industry chain. In terms of oil spills, upstream infrastructure accounted for 13% of incidents, and 30% of the volume spilled in 2023. This means the remaining 87% of incidents and 70% of volumes fall outside the Upstream Fund's scope.

Spills from midstream infrastructure are nominally covered by a parallel fund (Midstream and Downstream Environmental Remediation Fund (MDERF)) administered by the Nigeria Midstream and Downstream Petroleum Regulatory Authority (NMDPRA).[31]

This could be a much broader contribution base. The NMDPRA portal lists 21 categories of licences (detailed in ***Annex 3***), ranging from petroleum pipelines managed by large firms to retail outlets and fuel trucks operated by smaller businesses. This likely amounts to thousands, if not tens of thousands, of licensed entities. If each were required to contribute – including a fixed rate of $11,680 to $14,600 for onshore operations – the cumulative total could be substantial. However, it is unrealistic to assume that all companies with licences for activities in the mid- and downstream will contribute, particularly given the scale of the fixed rates. Small operators – for example, companies with a few trucks to transport petroleum products – are unlikely to be able to afford such an expense. Contributions to the Fund are therefore expected to apply only to major licence holders, but in the absence of any definition or criteria in the Midstream and Downstream Fund regulations, this remains too unclear to attempt to model.

While data to model contributions to this fund is less accessible, the regulations suggest it is essentially a carbon copy of the Upstream Fund, applying the same provisions, contribution rates, and calculation formula. As the findings of this analysis demonstrate, these rates are fundamentally too low: multiplying next to zero rates inevitably yields next to

zero contributions. Therefore, if sufficient data were available to model midstream and downstream contributions, the results would likely reveal a similar inadequacy to meet needs.

A further layer of complexity arises from a 2023 Presidential Directive that redefined the allocation of regulatory oversight between NUPRC and NMDPRA.[32] The Directive transfers responsibility to NUPRC for "licensing, administration, and monitoring of petroleum facilities that are operationally linked from extraction, to and including (a) crude export terminals, and (b) the gate of the natural gas processing plant". This significantly expands NUPRC's jurisdiction well beyond its conventional upstream remit.

In practical terms, NUPRC's regulatory scope now covers not only wells and production facilities but also pipelines, flow stations, storage facilities, oil refineries, and oil export terminals – infrastructure that would traditionally be considered midstream or downstream. NMDPRA, by contrast, retains control over operations beyond these points, including refined product pipelines, product storage depots, product terminals, natural gas processing plants, retail stations, and other downstream distribution networks, such as barges and trucks.

This shift was controversial at the time, as many viewed it as reversing the PIA's original attempt to break up the monolithic Department of Petroleum Resources. However, in practice it means that NUPRC now oversees most physical oil and gas infrastructure – and likely most environmental remediation contributions. There is therefore an overlap between the two funds, and uncertainty over responsibilities.

Responsibilities under 2021 PIA

Upstream *Exploration and Production*	**Midstream** *Transport and export*	**Downstream** *Refining and distribution to end users*
Seismic surveys	Gathering systems	Gas refining
Drilling and wells	Pipelines	Oil refining
Production	Storage of oil and gas	Storage of refined products
		Retail outlets
		Export terminals

Responsibilities following 2023 Presidential Directive

Upstream *Exploration and Production*	**Midstream** *Transport and export*	**Downstream** *Refining and distribution to end users*
Seismic surveys	Gathering systems	Oil refining
Drilling and wells	Pipelines	Gas refining
Production	Storage of oil and gas	Storage of refined products
		Retail outlets
		Oil export terminals
		Gas export terminals

NUPRC

NMDPRA

Summary of findings

Financial contributions

1. Total annual contributions are estimated at just US$2.7 million.

2. Under rates in the 2022 draft, contributions are estimated at $6m. The revised 2024 regulations have reduced this by more than a half (-56%).

3. Total annual contributions would cover the clean-up of only 675 barrels of oil – just 11% of the 6,100 barrels spilled by upstream infrastructure in 2023. For spills attributed to sabotage, the Fund would cover clean-up of just a quarter of the spill volume (25%).

4. These comparisons exclude the costs of cleaning up other eligible pollution such as air, water, soil contamination, ecosystem damage, biodiversity loss, and infrastructure damage.

5. The contribution formula is fundamentally weak: even large increases in CAPEX or production or capacity result in only marginal increases in total contributions. For example, if both increased tenfold total annual contributions would rise to just $3.9 million (+45%)

6. Between 2022 and 2024, the financial rates used to calculate contributions were cut by 42 to 90%, depending on the variable, effectively halving the total annual contributions to the Fund.

7. Calculations now use "production capacity" instead of actual production volumes, but capacity is undefined, and no figures are publicly available to verify company contributions.

8. NUPRC has not published mandatory annual financial statements disclosing contributions, remediation projects, contracts, or expenses.

Administration

1. A broader definition of eligible environmental damage has been introduced, encompassing pollution to land, air, water, ecosystems, biodiversity, and public infrastructure. This is a significant expansion beyond oil spills, and thus a positive development, but the Fund remains too small to meet such needs.

2. Access criteria have been clarified to include: (1) incidents of mysterious or undetermined origin, (2) incidents not attributable to operators, or (3) failures to act after notification.

3. Importantly, use of the Fund does not absolve licensees or lessees of environmental liability. But it does not extend to social or economic impacts of environmental damage. For example, compensation for lost livelihoods or lives is not covered under the Fund, so affected communities would still need to seek redress through separate legal action.

4. The Fund is managed through a formal process led by NUPRC and companies, but excludes communities, sidelines the Ministry of Environment, and gives NUPRC significant control – raising concerns about technical capacity and accountability.

5. Remediation projects are overseen by *ad hoc* committees set up by companies, with no requirements for independent experts, community input, or monitoring standards — increasing risks of delay and poor-quality outcomes.

Regulatory uncertainty

1. Changes in regulatory authority complicate matters further. A recent Presidential Directive transferred oversight of midstream (and some parts of downstream) from NMDPRA to NUPRC. NMDPRA now retains authority only over gas processing, and downstream distribution of gas and petroleum products.

2. In parallel, NMDPRA has also created its own Environmental Remediation Fund for midstream and downstream operations. Rates and regulations are identical and thus also far too low. The result is two overlapping funds under different regulators, with unclear boundaries, especially after the Presidential Directive.

Conclusion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This analysis has demonstrated that the financial framework established under Nigeria's 2024 Upstream Petroleum Environmental Remediation Fund (UPERF) regulations is not currently fit for purpose. Contribution rates are set at levels far too low to address the scale and cost of environmental damage caused by upstream petroleum operations. Even under favourable assumptions, the Fund is only capable of covering a fraction of the cost required to clean up oil spills – let alone the broader range of pollution it is mandated to address.

While this report examines the upstream fund, its findings also cast serious doubt on the parallel scheme for the midstream and downstream sector. The two funds are designed as separate mechanisms—one for upstream, one for midstream and downstream—and are run by different agencies under the Ministry of Petroleum. But their regulations are almost identical, with the same cut-rate contribution formula and policy flaws. Yet midstream operations cause the majority of Nigeria's oil-spill volume and pose even higher ecological risks. The findings illustrate that if the upstream fund, with a smaller share of the problem, cannot meet even a tenth of the cost of recorded spills, the midstream and downstream fund is certain to fall even further short. Taken together, the twin funds will provide nothing close to the resources needed to clean up ongoing pollution, let alone to restore the wider environment of the Niger Delta.

Nevertheless, the regulations represent an important starting point. They establish a legal basis for industry-financed remediation and a mechanism for regulatory enforcement. What is now required is a series of targeted interventions to make the Fund viable: including revising contribution formulas, ensuring transparency in implementation, auditing the fund and the projects it supports, clarifying institutional roles, and enabling public and community scrutiny and engagement.

Recommendations

Immediate steps to strengthen modelling and clarify fund implementation:

1. **Request immediate publication of overdue financial disclosures**: Engage NUPRC to confirm when it will publish the legally required annual financial report detailing total contributions received, remediation projects undertaken, contracts awarded, and funds disbursed under the UPERF. This transparency is essential for assessing the Fund's operation and credibility.

2. **Clarify the calculation formula with NUPRC**: Request details on how production capacity is calculated, how locations are determined, what verification processes are used for company-submitted data, and NUPRC's own estimates for total fund contributions.

3. **Clarify scope and coverage of the NMDPRA Fund vs the Upstream Fund**: Engage NMDPRA to understand their contribution formula, which types of licences fall under its scope, and the total number of licence holders expected to contribute.

4. **Resolve institutional ambiguity between regulators**: Engage NUPRC, NMDPRA, or the Federal Ministry of

Petroleum Resources to clarify how the two Environmental Remediation Funds are intended to function – including demarcation of responsibilities, coordination mechanisms, and long-term institutional arrangements.

5. **Integrate fund data into NEITI audits**: Advocate for the inclusion of Environmental Remediation Fund contributions and expenditures, by company, including details about pollution events and remediation costs, in NEITI's oil and gas industry audits to enable public scrutiny and independent verification.

Regulatory reforms to improve the capability of Environmental Remediation Funds:

6. **Review and revise contribution formulas**: The core finding is that current contribution rates are too low. The relevant regulators (NUPRC and NMDPRA) should revise the financial formulas upward to align with the actual cost of environmental remediation. Given the financial pressures the Fund will face, a clear mechanism is needed to recover clean-up costs from the operator whose infrastructure caused the spill. Without this, companies may be encouraged to shift the entire burden onto the Fund.

7. **Consider merging the two funds under unified or independent oversight**: Explore options for merging the UPERF and MDERF into a single Environmental Remediation Fund, preferably managed independently of the Ministry of Petroleum Resources – for example by the Ministry of Environment, National Oil Spill Detection and Response Agency (NOSDRA), or a newly established, multi-stakeholder oversight body, with full independence from government.

8. **Introduce mandatory community consultation and disclosure**: Amend regulations to require public engagement and transparency at all stages of the remediation process – from damage identification and planning to implementation and monitoring.

9. **Enable community-driven access to the Fund**: Establish mechanisms allowing communities to directly submit environmental damage claims for consideration under the Fund. At present, activation depends solely on the regulator and companies, with no formal pathway for affected communities to initiate or monitor remediation efforts.

10. **Establish transparent rules for forming remediation committees**: Current regulations give companies wide discretion in forming *ad hoc* remediation committees. Minimum requirements for transparency, community and civil society involvement (as has been standard practice within NEITI for 20 years), expertise, and external oversight should be added.

Annexes

Annex 1 – Data definitions, challenges, approaches, sources, assumptions and limitations

Estimating contributions required multiple data points related to the commercial operations of oil and gas leases. While some of this information is publicly available, others had to be inferred using public sources and clearly stated assumptions.

The limited transparency surrounding key data impedes independent analysis and public accountability. This applies to the Fund, as well other new financial mechanisms under the PIA, such as the Host Community Development Trusts (HCDTs). Accordingly, one of the core recommendations of this study is that the Nigerian National Petroleum Company (NNPC) and its regulatory agencies should make the necessary data publicly accessible.

Fixed Contributions

Definition: The fixed contribution rate is determined by a lease's location and the corresponding environmental risk. The Commission also holds discretionary authority to classify an area within a specific risk category. Definitions as per the regulations and the Petroleum Industry Act (PIA) are:

Onshore High-Risk	"(i) mangrove areas, (ii) wetland swamp areas, (iii) a zone of 500 metres along any river or lake". Section 4(8)(a)
Other Onshore Area	"The part of Nigeria that is defined as onshore and frontier acreages in the Act". Section 4(8)(c). "Any land areas above the high-water mark, other than frontier acreages". (PIA, interpretations)
Shallow Water High-Risk	"A zone of 10 km seawards of a high-water mark". Section 4(8)(b)
Other Shallow Water Area	"Any area within the territorial waters, continental shelf or exclusive economic zone offshore of Nigeria up to and including a water depth of 200 metres". (PIA, Interpretations)
Deep Water Area	"Any area within the territorial waters, continental shelf or exclusive economic zone offshore of Nigeria having a water depth in excess of 200 metres". (PIA, interpretations)

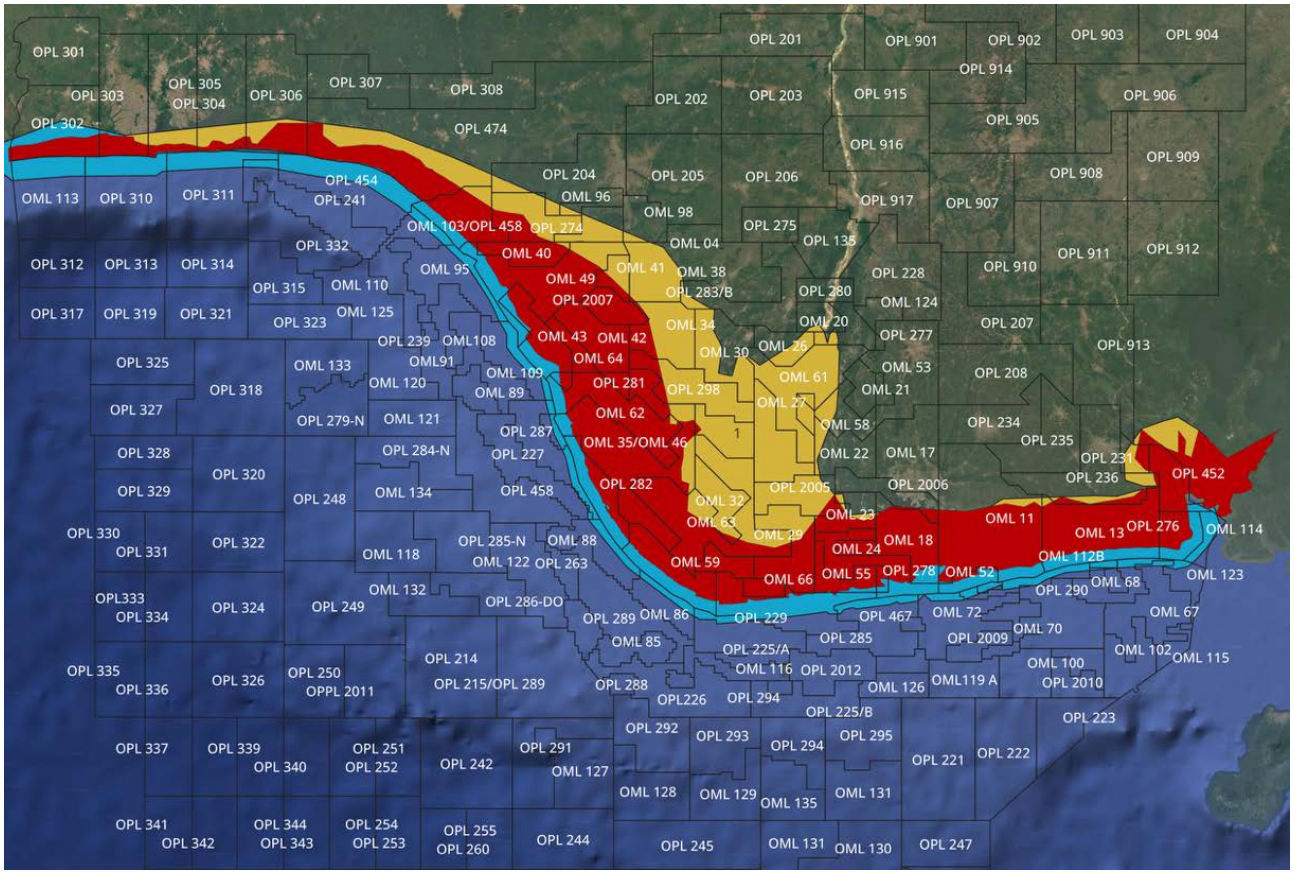
Section 4 of the Regulations (8)(a-e).

Challenges: NUPRC does not disclose the risk categorisation of individual lease areas. Furthermore, risk categories in the regulations do not align with how leases are labelled in official reporting from the Commission: onshore, continental shelf, and deep offshore. "Continental Shelf" is undefined in the regulations and PIA, though UNCLOS defines it as extending up to 350 nautical miles from the coast. [33] In 2023, Nigeria extended its continental shelf claim from 200 to 220 nautical miles[34], although no known concessions currently exceed 150 nautical miles. In practice, the government appears to label nearshore offshore concessions as "Continental Shelf." Neither regulators nor companies publish offshore well depths.

Approach: A custom map was created, overlaying official oil and gas lease maps with ecological risk zones as defined in regulations. Leases were then manually attributed to the appropriate category through visual inspection.

Data sources: Ministry of Environment ecological zone map[35]; Ministry of Petroleum Resources concession map[36].

Assumptions: Mangrove forests and freshwater swamps are both categorized as "high-risk" due to their biodiversity significance. "Continental Shelf" in government reporting corresponds to shallow water areas (<200m depth). Leases are classified according to the highest-risk zone they intersect i.e. the whole lease is classed as the highest risk category that it comes into contact with. This was explicit in the draft version, but removed from the passed regulations.



Oil prospecting and mining licences in the Niger Delta and Gulf of Guinea. Source: NOSDRA, Ministry of Environment, and author's visualisation.

Onshore Other		Onshore and outside the mangrove and freshwater swamp zone
Onshore High-Risk		Within the freshwater swamp zone
		Within the mangrove zone
Shallow Water High-Risk		Within 10 km of the coastline on Nigeria
Other Shallow Water		Beyond 10 km of the coastline of Nigeria and recorded by the government as 'continental shelf'
Deep Water		Beyond 10 km of the coastline of Nigeria and recorded by the government as 'deep offshore'

Capital Expenditure Rate (CER)

Definition: Capital expenditure (CAPEX) refers to the funds spent to acquire or upgrade long-term assets such as wells, pipelines, and drilling equipment. It includes exploration, development, and infrastructure costs.[37] CAPEX is typically depreciated over the asset's useful life and excludes maintenance (which falls under OPEX) and non-monetary acquisitions.

Challenges: Lease-level or company-level upstream CAPEX data is not publicly available, as it is considered commercially sensitive. Among Nigerian oil companies, only Seplat publishes CAPEX figures in its annual accounts, but these are not disaggregated by business segment (e.g. upstream vs midstream). For the purposes of this analysis, CAPEX is distributed across licences using a 2:1 Offshore-to-Onshore split, and then further attributed to specific OMLs based on production volumes. This method does not reflect actual infrastructure investment patterns, and is therefore acknowledged as a limitation in the model's assumptions. While this approach does not produce accurate licence- or company-level contributions, it provides a reasonable and balanced distribution at the aggregate level (i.e. total contribution to the Fund) to support the overall conclusions of the analysis.

Approach: As company or lease-specific CAPEX data is not publicly available, Nigeria's upstream CAPEX was derived from regional CAPEX trends. Total African upstream CAPEX for 2023 is reported at US$40 billion, with West Africa accounting for over 50% of this figure. Nigeria and Angola are cited as the two dominant contributors within the West African subregion. Drawing on historical allocations observed in past African Energy Chamber (AEC) outlooks, and external analytics from sources such as Wood Mackenzie, Nigeria's share of West African CAPEX typically ranges between 40–50%. Applying this range to the implied $20–23 billion West African CAPEX in 2023 yields an estimate of $8–11.5 billion for Nigeria, with a central estimate of $10 billion. This may be optimistic. The NUPRC reported CAPEX dropped from $27 billion in 2014 to under $6 billion in 2022.[38] Although a rebound was expected, subsequent reporting and visualised data from Wood Mackenzie suggest it may have fallen below $5 billion by 2025 (see below). Exact figures remain inaccessible. Capex contributions were therefore calculated by assuming a $9bn total capex across the sector and then calculating onshore and offshore capex values per barrel based on onshore and offshore location categorisations.

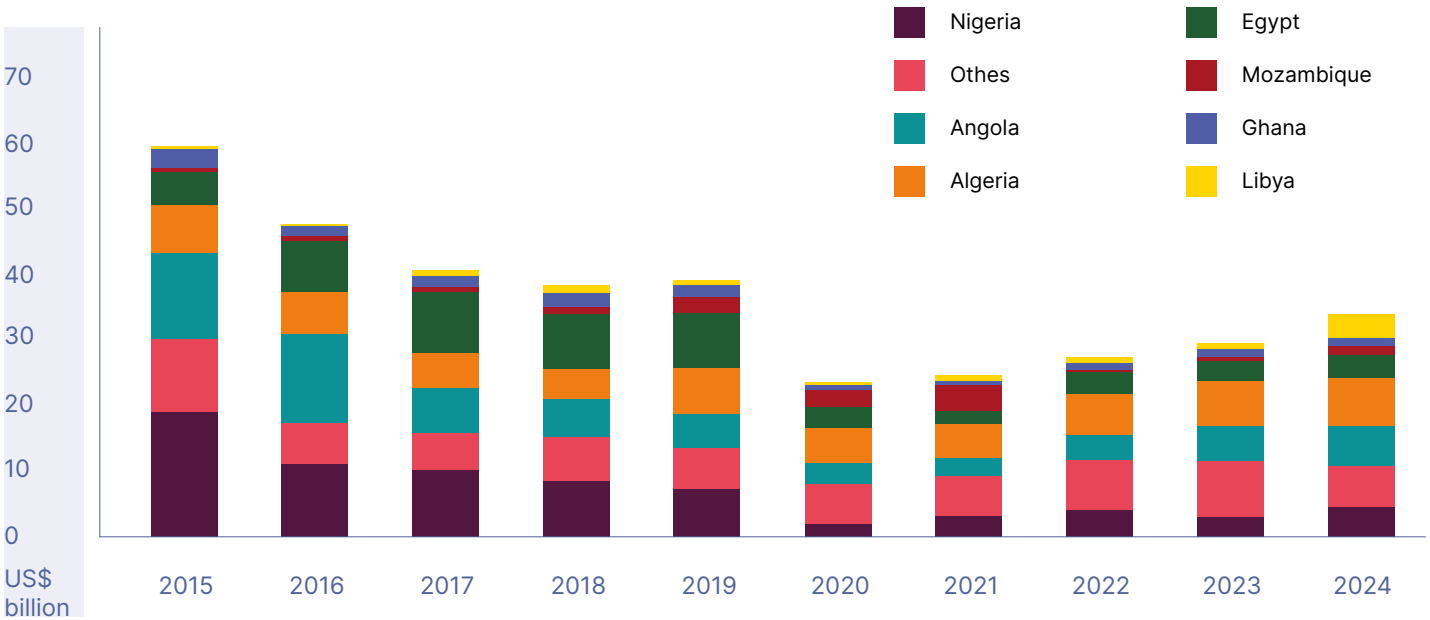
Data sources: African Energy Chamber's (AEC) *State of African Energy 2024 Outlook*; Wood Mackenzie; NUPRC statements.

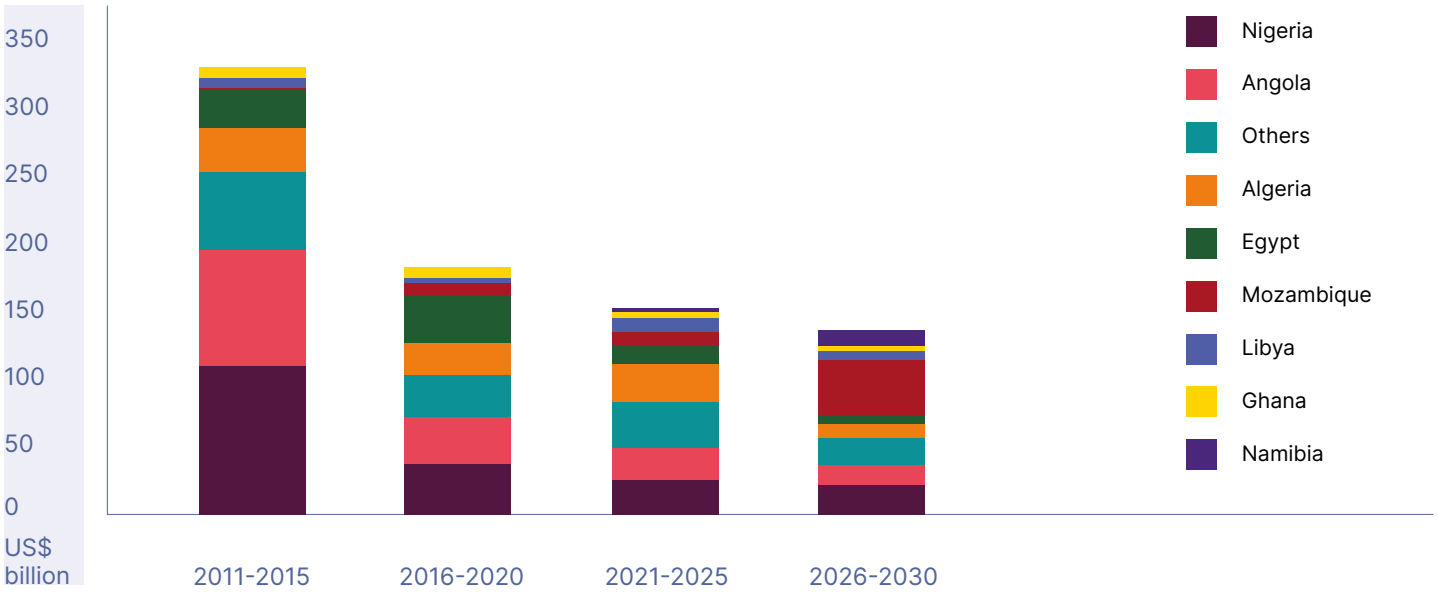
Assumptions: Average cost-per-barrel for onshore/offshore production is broadly representative across all leases. CAPEX is allocated across leases based on production volume or another proportional method.

These charts from Wood Mackenzie suggest a slightly lower total CAPEX for Nigeria in 2023. It also suggests that Angola had a higher CAPEX in 2023, but that Nigeria returned to the top in 2024. These figures are not presented in public reports. Sources: Wood Mackenzie[39]

Top 10 countries by 2024 upstream capex

Source: Wood Mackenzie Lens





Wood Mackenzie

Source: Wood Mackenzie Lens

Rate for liquids and natural gas production

Definition: Production refers to annual outputs measured in barrels (bbl) for oil/condensate and thousand standard cubic feet (mscf) for gas. These values feed into the contribution formula as per the draft 2022 regulations.

Challenge: NUPRC and NEITI both publish production data, but inconsistencies exist between figures at company and licence levels. Discussions with NEITI confirmed some of these discrepancies. NEITI tried to reconcile these discrepancies, and identified some during our research, though unresolved differences remain (particularly for gas production).

Approach: As the regulations require contributions from licensees and lessees – not operators – we first disaggregated production by equity share to determine each company's attributable output. This process revealed discrepancies between company-level and licence-level data, which were subsequently reported to NEITI. To account for these inconsistencies, contributions were estimated using multiple approaches: based on figures reported by company, by licence, and through sector-wide aggregates.

Data sources: NUPRC Annual Report 2023; NEITI Oil and Gas Audit Report 2023.

Assumptions: 2023 data, as the latest audited set, is assumed to represent a typical production year. NUPRC and NEITI reports capture production volumes with reasonable accuracy.

Rate for average daily capacity for liquids and natural gas production

Definition: In the 2024 regulations, actual production was replaced by capacity as a basis for contribution. However, "production capacity" is not defined anywhere in the regulations or the PIA. "Name plate capacity" appears in the interpretations section, but is not applied directly in the regulations. Based on this, it is assumed that capacity refers to installed or nameplate capacity.

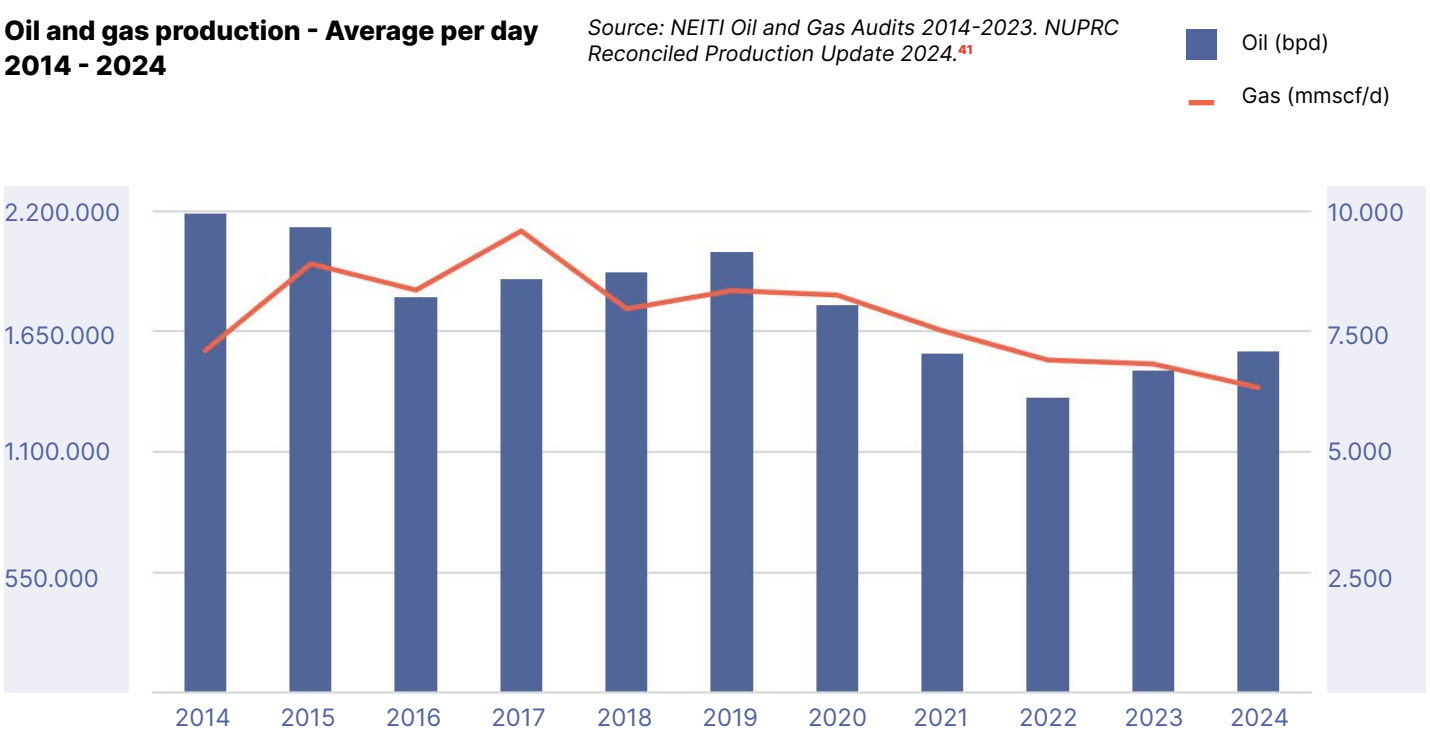
Challenge: Capacity figures are not disclosed at company or lease level. While some figures have appeared in media reporting, these are limited and not sufficient to build a comprehensive dataset covering all leases.

Approach: NUPRC defines the Total Allowable Rate (TAR) as the "optimised production capacity of all wells in-country." This is calculated using Maximum Efficiency Rate (MER) tests submitted by operators.[40] NUPRC publishes sector-wide TAR efficiency percentages in its annual report, but neither the government nor operators publish MER or TAR figures disaggregated by company or lease. The sector's TAR is reported as 68% in 2023. The analysis therefore estimates capacity by scaling actual production upwards, adjusting proportionally based on how current production compares to 100% TAR. The resulting estimate puts total capacity at just over 2.1 million bpd – a figure commonly cited as Nigeria's production capacity, though notably above the country's OPEC quota of 1.74 million bpd in 2023.

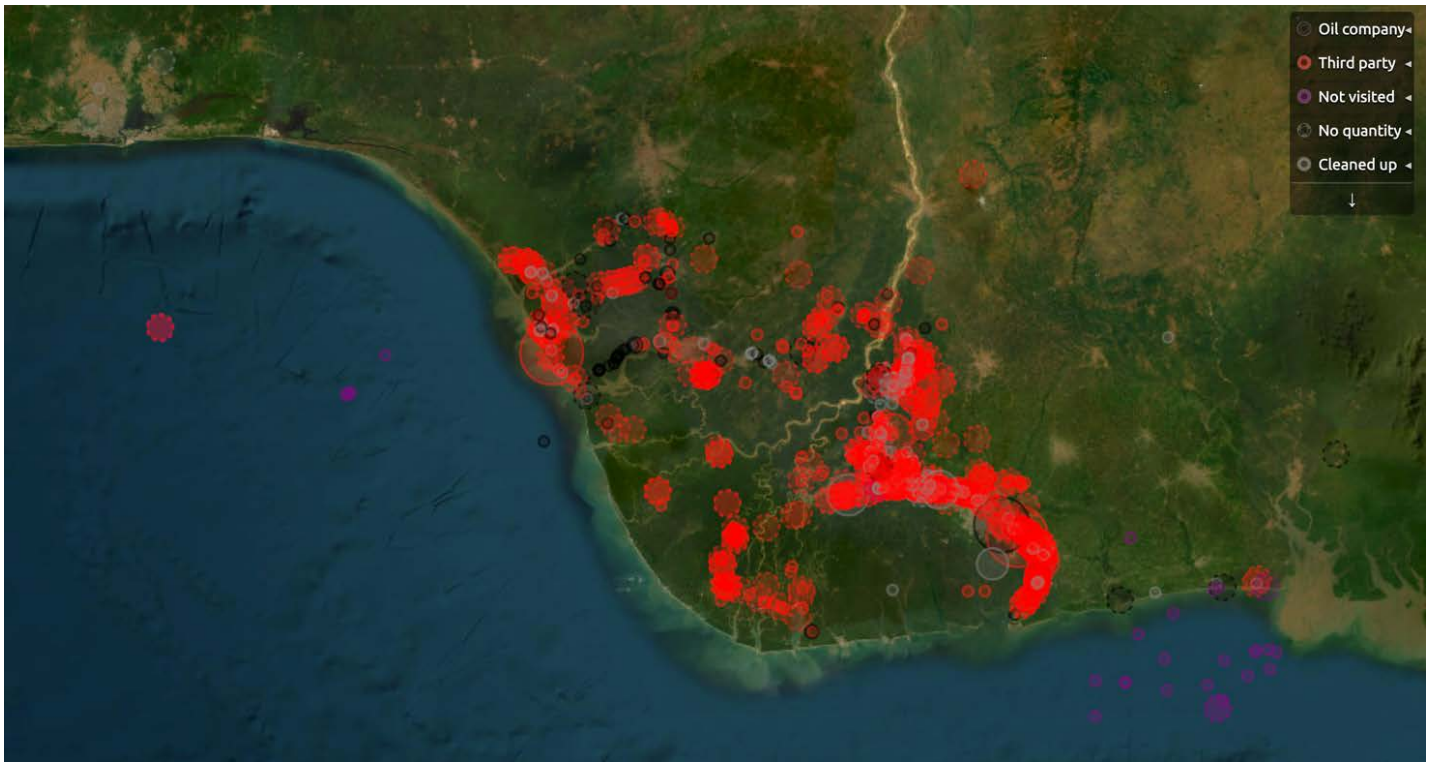
Assumptions: The model assumes that the Total Allowable Rate (TAR) represents 100% capacity for the upstream sector, and that by adjusting production upwards based on the sector-wide efficiency gap provides a reasonable proxy for lease-level capacity. This adjustment is applied uniformly to both oil and gas, with the assumption that doing so is methodologically acceptable.

Oil and gas production - Average per day 2014 - 2024

Source: NEITI Oil and Gas Audits 2014-2023. NUPRC Reconciled Production Update 2024.[41]



Oil spills documented in Nigeria 2023



Source: NOSDRA Oil Spill Monitor (www.oilspillmonitor.ng) within the period January 2023 to December 2023. Data downloaded in April 2025.

Cost of oil spill clean-up and rehabilitation

Definition: This refers to the cost associated with responding to oil spills, including containment, recovery of spilled oil, site remediation, and restoration of the affected environment to its pre-pollution condition. For the purpose of this analysis, oil spills are the only category of environmental damage from the oil and gas sector considered in the model. While it is recognised that oil extraction causes a wide range of environmental impacts – including gas flaring, soil degradation, and groundwater contamination – this focus on oil spills allows for a simplified, consistent starting point. As more reliable data on the cost of remediating other forms of damage becomes available, the model can be expanded to incorporate those elements in future iterations.

Challenge: Neither oil companies nor regulatory bodies in Nigeria publish data on the actual costs incurred for oil spill response and environmental rehabilitation.

Approach: To estimate these costs, we rely on figures provided by the World Bank, which calculated the unit cost of clean-up at approximately $3,900 per barrel and oil recovery at around $60 per barrel. These estimates were benchmarked against existing literature and validated through consultations with the National Oil Spill Detection and Response Agency (NOSDRA).

Data source: World Bank Group, West Africa Coastal Areas Management Programme and Global Programme on Sustainability.[42]

Assumptions: Clean-up costs vary based on the volume and type of crude spilled, so this average is assumed to be broadly representative of typical scenarios encountered in Nigeria.

Number of oil spills

Definition: This represents the total volume of oil spills recorded in barrels, as documented by NOSDRA within a given year. For this analysis, specifically for upstream infrastructure.

Challenge: NOSDRA's dataset reflects only a fraction of the total number of spills nationwide. Its documentation process has been widely criticized for systemic bias in favour of oil companies, often to the detriment of affected communities.[43] However, because many spills are never captured by NOSDRA in the Oil Spill Monitor, this dataset inevitably understates the scale of oil spills in the Niger Delta. In using these figures, we acknowledge that the cost of clean-up and rehabilitation is therefore likely to be much higher than the calculations in this report show.

Approach: We used the NOSDRA Oil Spill Monitor to extract all reported spills for the year 2023. The dataset was filtered to calculate the total volume of oil spilled, with attribution disaggregated by company and including the percentage of incidents classified as sabotage. Each spill was also classified by the type of infrastructure involved and mapped to its corresponding stream (upstream, midstream, or downstream) to isolate those relevant to the Upstream Fund.

Data sources: National Oil Spill Detection and Response Agency (NOSDRA) Oil Spill Monitor, which is online at www.oilspillmonitor.ng and the data downloaded on 13th July 2025.

Assumptions: While incomplete, the NOSDRA database provides the most consistent national record. It is assumed that the reported figures significantly understate the actual number and volume of spills but are sufficient for estimating an indicative annual clean-up cost.

Annex 2 – Comparative oil spill clean-up costs

Spill	Year of spill	Cost (USD)	Area (ha)	Cost per ha (USD)	Barrels spilled	Clean-up cost per barrel (USD)	Cost using WB estimate (USD)	% covered by UPERF
1. Bayelsa State	1974-2024	10,000,000,000	253,000	$39,525	110,000	$90,909	435,600,000	0.03%
2. Bodo community, Shell expenditure	2008	30,000,000	1,000	$30,000	560,000	$54	2,217,600,000	8.90%
3. Bodo community, Leigh Day Expert estimate	2008	600,000,000	1,000	$600,000	560,000	$1,071	2,217,600,000	0.45%
4. Ogoniland (4 LGAs), Rivers State	1976-1991	1,000,000,000	943	$1,060,445	2,000,000	$500	7,920,000,000	0.27%
5. World Bank/NOSDRA estimate						$3,960		

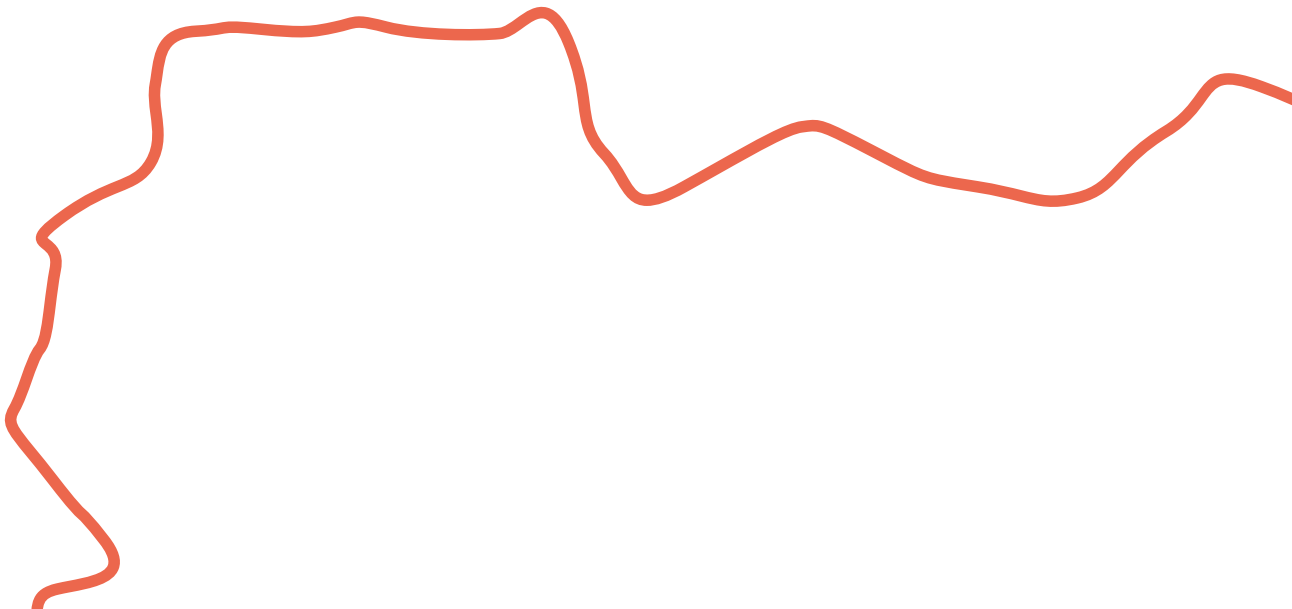
1. BSOEC P146: "P146: "While large, these estimates are broadly in line with the costs seen in other remediation programmes: for example, they are roughly five times the projected cost of the programme to address the legacy of oil pollution in Ogoniland, an area fifth the size of Bayelsa that has suffered less pollution."; Footnote 76: ""In the neighbouring Bodo community, it cost US $20-40 million for re-mediation and reparation over five years for an area of 1,000 hectares affected by oil spills. For 253,000 hectares, the costs would be 253 times higher, and therefore between US $5-10 billion over five years. Most of this would be required in the first two years for cleaning"; 110,000 barrels over past 50 years: https://news.mongabay.com/2023/05/for-weary-niger-delta-residents-shocking-oil-pollution-report-offers-little-hope/
2. BSOEC Fn 76; Leigh Day https://www.leighday.co.uk/news/cases-and-testimonials/cases/shell-bodo/
3. Conversations with Leigh Day.
4. UNEP report, in Amnesty International: https://amnesty-klimakrise.de/wp-content/uploads/327/2020_No-Clean-Up-No-Justice.-Evaluation-of-UNEPs-environmental-assessment-of-Ogoniland.pdf; UNEP report says 1976-1991 over 2 million barrels spilled in 2,976 incidents via https://www.foei.org/a-journey-through-the-oil-spills-of-ogoniland/.
5. World Bank Group. (2020). The Cost of Coastal Degradation in Nigeria: Cross River, Delta, and Lagos State. https://documents1.worldbank.org/curated/en/881071603896002534/pdf/The-Cost-of-Coastal-Zone-Degradation-in-Nigeria-Cross-River-Delta-and-Lagos-States.pdf

Annex 3 – NMDPRA Licence Categories

https://www.nmdpra.gov.ng/LPCATEGORIES

1. Automated Gas Systems for Autogas, Addon and Industrial Storage & Utilisation, Gas Depot, Reticulation, Truck Tankers and LPG Plant
2. Barging and trucking
3. CNG industrial storage
4. CNG compression station
5. Coastal vessel licence
6. Export permit (crude oil)
7. Gas terminal export portal
8. LPG depot gas licence
9. LPG refilling plant
10. LPG retailer
11. LPG storage
12. Lubo oil blending plant (LOBP)
13. Libe storage and sales licence
14. Midstream and downstream industry service permit
15. Refining plant
16. Retail outlet management system
17. Petroleum import
18. Gas import
19. Gas network code
20. Petroleum pipeline
21. Minimum industry safety training

Searching the Approved Service Companies page for a generic term such as “oil” returns thousands of companies, indicating that there must be a long list of companies with licences. https://www.nmdpra.gov.ng/ServiceCompanies



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10 Section 4(d), 2022 draft

11 Section 6(6), 2024 regulations

12 Section 3, 2022 draft

13 Section 5(16), 2024 regulations

14 Section 3(2)(iv), 2022 draft to Section 6(8)(iv), 2024 regulations

15 Section 3(3), 2024 regulations

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25 Section 7(b), 2024 regulations

26 Section 3(8), 2024 regulations.

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