

IMPROVING OIL SPILL RESPONSE IN NIGERIA



COMPARATIVE ANALYSIS OF THE FORMS, DATA AND RELATED
PROCESSES OF THE JOINT INVESTIGATION VISIT (JIV) AND
SUGGESTIONS TO HOW THESE COULD BE IMPROVED



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EXECUTIVE SUMMARY

A Joint Investigation Visit (JIV) is a visit to oil spill sites usually carried out within two weeks of an onshore oil spill in Nigeria. It is designed to assess the cause of the spill, the amount spilled and the scale and extent of damage and environmental impact. JIVs are usually attended by a cross representation of oil companies, regulatory agencies and communities.

This report examines the Joint Investigation Visit in Nigeria and the forms that are completed by the various parties during this visit. It is primarily focussed on analysing the first stages of onshore oil spill notification and response and how this might be streamlined through a revised process and improved data collection.

This report then places the administrative process within wider concerns about the JIV process and the inadequacy of oil spill response in the Niger Delta; making recommendations for the improvement of the JIV in terms of its reliability, accuracy, viability and accountability towards the greater protection of the environment.

INTRODUCTION

According to 'global best practice' and in order to adequately protect the environment, all oil spills must be reported to the industry regulator.¹ In Nigeria, the Department of Petroleum Resources (DPR) is the oil industry regulator within the Ministry of Petroleum and the National Oil Spill Detection and Response Agency (NOSDRA) is the emergency responder and co-ordinator within the Ministry of Environment.

NOSDRA is generally perceived better able to regulate oil spill response than the DPR; its priority is the protection of the environment, over the maintenance of oil revenues. However, the main regulatory framework regarding environmental pollution in the Nigerian system, EGASPIN (The Environmental Guidelines and Standards for the Petroleum Industry in Nigeria), lies within the jurisdiction of the DPR.

The Joint Investigation Visit (JIV) is carried out within two weeks of an oil spill and is intended to provide the necessary data in relation to the spill. It provides an assessment of the cause of the spill, the amount spilled and the scale and extent of damage and environmental impact. The JIV is attended by cross representation of oil companies, regulatory agencies and communities.

There are wider local and international concerns related to the JIV and current oil spill response processes in Nigeria including:

- A lack of available documentation of the environmental impact of oil spills
- A compensation system that is failing to address environmental and human loss
- A lack of trust amongst the multiple stakeholders involved
- Inadequate cleanup and remediation of impacted environments
- Funding, legislative and operational constraints of environmental regulators
- An overreliance on oil companies to organise, respond to and monitor oil spill cleanup and progress

This situation is leading to sometimes serious conflict between local communities and the companies operating in their localities. This creates tensions that can compound the environmental impact of oil spills, and can lead to pipeline vandalism and loss of production.

This study draws on the insights and findings of other studies, consultations and meetings between Civil Society, Industry and Regulatory Agency Staff in Nigeria undertaken and facilitated by SDN with NOSDRA since January 2012.

In particular, it draws upon the recommendations made during consultations in Nigeria between multiple stakeholders involved directly in oil spill response and oil spill compensation in November 2014. These consultations identified the JIV and its associated documentation as highly contentious and often leading to conflict and disagreement between the various parties (communities, companies, regulators) involved in oil spill response.²

There have been many concerns over the accuracy and usefulness of the data that is captured at the JIV. This report examines the administrative forms used to record information relating to oil spills in Nigeria during the onshore JIV. The findings of this analysis highlight the way in which the underlying process of the JIV contributes to the perceived inadequacies of oil spill response.

¹ Stakeholder Democracy Network, *Memorandum on 'best practice' in environment protection in the oil industry in relation to oil spills*, February 2013

² For more information on current perceived concerns regarding the JIV please see SDN's report *Towards improving the Joint Investigation Visits following oil spills in Nigeria*, January 2015

This report examines a number of paper based forms that relate to the recording of oil spill information during the initial stages of oil spill response in Nigeria including:

- NOSDRA Form A
- NOSDRA Form B
- The NOSDRA JIV form
- The Shell Petroleum Development Company (SPDC/Shell) JIV form
- The Nigerian Agip Oil Company (NAOC/Agip/ENI) JIV form
- NOSDRA form C (out of scope)

By its nature the report is also an analysis of the processes of the JIV, drawing on historical and publicly available data that has been gathered during the JIV since 2010.

The report makes recommendations related to both the processes of the JIV and to the forms used to collect data during the JIV, going into some detail as to how these recommendations could be operationalised.

JIVs are made more difficult in the case of offshore spills and are rarely carried out unless they occur closer to the shoreline or were of significant quantity to impact the shoreline. As such this report is primarily focussed on onshore oil spills.

METHODOLOGY

This study is an examination of the materials (paper forms) that relate to the JIV process. It considers the effectiveness of JIV process based on the information gathered during a sample of JIVs between January 2010 and August 2015.

Five paper forms have been examined for this study, all of which are designed to be filled in within a two week period of an oil spill being reported. Four of them usually contain information gathered during the JIV which should take place within this two week period. A narrative summary of key concerns relating to these forms, their purpose and statistical insight into their actual use follows.³

Intended to provide a definitive record of any reported spill, the forms have been assessed in response to four thematic areas: reliability, accuracy, viability and accountability. These criteria were drawn from SDN's previous analysis of oil spill response in Nigeria, and perceived areas of importance as a result of this work:

- Reliability: data collection and recording methods and management
- Accuracy: measurement and assessment of damage and environmental impact
- Viability: establishment of a baseline record for future referencing
- Accountability: perceived integrity of the data recorded

Based on these criteria more detailed operational recommendations are made as to how the JIV forms and related processes might be improved to make them more reliable, accurate, viable and accountable.

The aim of this paper is to inform and encourage public debate by examining the JIV process. The choice of criteria is not assumed to be comprehensive, but their value is primarily in providing a basis for comparison to illuminate the workings of the process.

³ For a full comparison table please see Annex 9.

ANALYSIS OF THE FORMS RELATING TO THE JIV

NOSDRA FORM A

Description of Form A:

Form A is an initial notification or leak report which must be submitted by a reporting officer of the oil company whose facilities are impacted within 24 hours following an oil spill. It is a single page paper form that provides space for capturing initial data and observations on:

- Date of the spill
- Date of observation of the spill
- Location of a spill and the type of facility
- Any containment measures that have been put in place
- What type of land and property has been impacted and to what extent
- Contact details of the company oil spill response team

Observations on the use of Form A:

NOSDRA's Oil Spill Monitor database suggests that the paper copy of FORM A is rarely submitted to NOSDRA on time. In about 51% of cases it is filled in and forwarded to NOSDRA at a later stage. The oil spill monitor has recorded Form A as having arrived in 3247 incidents out of 6333 since 2010, usually within two weeks of a spill having been reported.

As an alternative to form A, initial notification of new oil spills regularly comes in to NOSDRA offices by phone and sometimes email with the actual paper form following at a later date.

Concerns related to Form A in terms of efficiency, reliability, usefulness, accountability and viability:

The form contains a duplication of numerous fields found on other related forms which could lead to conflicting entries and observations.

There is no specific location for a unique spill ID or reference number on the forms making cross-referencing difficult.

Having a paper copy of form A arrive at a NOSDRA office within 24 hours of a spill is unrealistic and a paper form is therefore an unreliable means of initial oil spill notification. This is reflected in the fact that Form A rarely arrives at NOSDRA's offices within the specified 24 hour period.

Form A assumes that the oil company reporting officer will have visited the site of a spill within 24 hours and carried out an initial survey which is potentially an unhelpful expectation.

Form A is very rarely submitted in time and is quickly superseded by further documentation like form B or JIV forms rendering it obsolete relatively soon after it is completed.

Form A assumes that notification of oil spills will always be from a 'Reporting Officer' from an oil company. However, spill notifications can and regularly do come from other parties via emails or phone calls, with the company then notified by NOSDRA of the oil spill details. This common eventuality is not taken into consideration in FORM A.

Due to its simplicity and the basic details it records that are usually followed up at the JIV, transparency and viability are not major concerns with form A.

NOSDRA FORM B

Description of Form B:

Risk Based Assessment (RBA) of oil spill incidence. Form B should be submitted to NOSDRA by reporting officer of the oil company whose facilities are impacted within 2 weeks following an oil spill. It usually contains information gathered during the JIV and submitted to NOSDRA after the JIV.

Form B is a two page paper form with space for clarifying and correcting details submitted in Form A plus ascertaining further basic information on the following:

- Date spill stopped
- Cause of spill
- Methods used to contain spill
- Sea or weather conditions at time of observation
- Cursory visual observations of impacted area
- Cursory assessment of impact and proximity of receptors to spill site
- Proposed cleanup method and timeframe

Observations on the use of Form B:

Available data suggests that in 3934 of 6333 (62%) oil spill incidents recorded between January 2010 and August 2015 there is no record of Form B having arrived. Of those spills where Form B is recorded as having been submitted it appears to usually arrive at NOSDRA offices after the JIV has been carried out, sometimes weeks later, but on average within a 1-3 week period after the JIV.

Concerns related to Form B in terms of efficiency, reliability, usefulness, accountability and viability:

The form contains a duplication of numerous fields found on other related forms which could lead to conflicting entries or observations.

There is no specific location for a unique spill ID or reference number on the forms making cross-referencing difficult.

The NOSDRA Warri office does not seem to record any Form B data in their digital database.

Form B assumes that a cursory impact assessment on a single A4 page, carried out by the oil company reporting officer, will capture an accountable and useful picture of the impact of an oil spill.

Form B assumes that the reporting officer has identified preliminary needs for the cleanup operation and that a single cleanup program report will be submitted within 4 weeks of the spill incident. None of these cleanup reports are available publicly.

Form B assumes that the oil companies reporting officer will provide accurate information despite there being no independent verification of the information entered onto Form B by any other party.

THE NOSDRA JIV FORM

Description of the NOSDRA JIV form:

The NOSDRA JIV form is a 3 page paper form aimed to record details and observations at the site of the oil spill, with an extra page added for all parties present at the JIV to sign, thus confirming their attendance and the agreement on the recorded information gathered during the JIV.

The form has fields for collecting information on:

- The date and location of the incident
- Key details about the incident (company, type of incident, contaminant)
- Estimation of volume of oil spilled
- Basic details about the facility
- Cause of spill
- Cursory visual observations on cleanup and containment
- Cursory visual observations of impacted area (checkboxes)
- Basic details of impacted parties and amount of land affected
- Cursory visual observations and measurements of oil slicks on water
- Whether photographs or maps were drawn (not included)
- Whether samples were taken (yes/no)
- How the investigation was carried out (multiple choice)
- Remarks and recommendations

Observations on the use of the NOSDRA JIV form:

The JIV can be said to be carried out, and the associated NOSDRA JIV form filled in, in most (circa 85%) oil spill incidents in Nigeria⁴.

Despite its problems the JIV is the most consistently attended, implemented and recorded part of oil spill response in Nigeria and appears to be the only occasion when all parties are likely to be at the site of the oil spill.

⁴ Please note: JIVs are made more difficult in the case of offshore spills, and are rarely carried out unless they occur closer to the shoreline or were of significant quantity to impact the shoreline.

Concerns related to the NOSDRA JIV form in terms of efficiency, reliability, usefulness, accountability and viability:

The form contains a duplication of numerous fields found on other related forms which could lead to conflicting entries or observations.

There is no specific location for a unique spill ID or reference number on the forms, making cross-referencing difficult.

The JIV form assumes that an accurate estimation of the quantity of oil spilled can be made and agreed upon by all parties at the time of the Joint Investigation Visit. This is a highly contentious area and estimations of volume spilled are often made by oil companies after the JIV forms have been signed in the field.

The JIV form gives space for only a cursory visual impact assessment. As such the JIV form assumes that a proper and detailed assessment of the impact of an oil spill, followed by a damage assessment, will be carried out at a later date with no indication of when that might be or whose responsibility it is.

On the publicly available JIV forms that are scanned and uploaded to the Oil Spill Monitor, the page containing the signatures of those present is not included. Although the reason given for this is explained with security concerns, this is an important record of who was present at the site of the oil spill.⁵

⁵ Please note it is of particular importance to know who from the community is present and signs the forms on behalf of the community at the JIV, as this is often cause of intra-community conflict and distrust. For more information please see SDN's report *Towards improving the Joint Investigation Visit following oil spills in Nigeria*.

THE SHELL PETROLEUM DEVELOPMENT COMPANY (SPDC/SHELL) JIV FORM

Description of the SPDC JIV form:

Very similar in nature to the NOSDRA JIV form, the SPDC form is a Field Joint Investigation Report aimed at recording core details of the oil spill at the time of the JIV which is to be signed by all parties at the Joint Investigation Visit.

The SPDC JIV form is a 6-8 page paper form with space to record the following:

- General information like spill ID or reference (repeated at top of every page), location details, name of local communities
- Incident information including date of spill, date of initial investigations, duration of investigations
- Basic visual observations and drawing of the leak point and immediate spill environment
- Cause of spill
- Descriptions of containment measures, weather conditions and proximity to sensitive habitat
- Basic notes on infrastructure repairs carried out at the JIV
- Basic notes on any experienced disruption to JIV
- Basic information on types and numbers of any properties (structures, properties, crops, economic trees, fish, nets, ponds, traps) found within the area of oil spread
- List of GIS coordinates defining area impacted by spill
- Workings out for estimates of total quantity spilled
- Space for simple line drawing overview sketch of the site and impacted area
- Cursory indication of whether impacted site needs further attention
- A list of various community, company, regulator representatives present

Observations on the use of the SPDC JIV form:

The SPDC JIV forms are the most comprehensive of those compared in this study, and appear to be completed in almost every case that there are records for.⁶

SPDC also publish cursory photographic evidence of the spill point and of the impacted area of a spill that provides a visual idea of the scale of the impacted area at the time. SPDC gives the most detailed account of the impact of a spill of those compared, and always include the workings out of quantities spilled.

⁶ According to SPDC all JIV forms are published online since 2011.

Concerns related to the SPDC JIV form in terms of efficiency, reliability, usefulness, accountability and viability:

SPDC carries out its own documentation at the JIV over and above what NOSDRA records on its JIV form. The SPDC form contains a duplication of numerous fields found on other related forms which could lead to conflicting entries or observations.

Although the SPDC form is more detailed than the NOSDRA JIV form, it duplicates and extends upon the information available on the NOSDRA forms. Therefore it does not provide enough detail to measure the extent of the impact with any accuracy, and cannot be considered a comprehensive impact assessment.

The SPDC form assumes that a detailed impact assessment will be carried out at an unspecified later date by unspecified parties. This suggests that the SPDC form assumes that a basic pencil drawing of the impacted area with cursory observations will serve as adequate and reliable data for reference in assessing the impact of an oil spill in the future.

The refusal to publicly list those in attendance at the Joint Investigation Visit points to a lack of transparency, which undermines the accountability and viability of any data in the SPDC form.

The SPDC form assumes that 'sensitive habitat' is only that which is utilised by humans. It is now commonly understood that 'sensitive habitat' is more than just areas utilised by human activity, and that there is intrinsic economic and cultural value in essential ecosystem services that provide fishing grounds, nurseries, drinking water, medicines, hunting grounds, firewood etc. A failure to recognise the natural environment as a sensitive habitat could be considered to undermine the viability of the SPDC JIV form and process.

Additional useful data recorded on the SPDC JIV form:

- That there is a requirement to record coordinates of the impacted area
- That there is a requirement to record people and communities affected in the area
- That assessment of properties in vicinity of the oil spill is given more prominence
- That there is a reference on the top of every page
- That maps are drawn of the spill area
- That the workings out of estimated quantities are shown

THE NIGERIAN AGIP OIL COMPANY (NAOC/AGIP/ENI) JIV FORM

Description of the NAOC/AGIP JIV form:

Very similar in nature to the NOSDRA and SPDC JIV forms, the NOAC form is a Joint Investigation Report aimed at recording core details of the oil spill at the time of the JIV which is to be signed by all parties at the Joint Investigation Visit.

It is a 3 page paper form with space for recording the following information:

- Incident Reference number
- Basic location, date of spill and follow up to it including date reported to regulators and date of initial investigations
- Cause of incident
- Observations of impacted infrastructure
- Narrative descriptions of cause and spill circumstances
- Cursory visual observations of impacted area
- Basic line drawing overview sketch of the site and impacted area
- Table of coordinates encasing impacted area
- Cursory narrative details of damage to property and community
- Estimated spill quantity and recovered quantity
- Whether or not photography or video recordings were made
- Additional comments and remarks

Observations on the use of the NAOC/AGIP JIV form:

The Joint Investigative Visit can be said to be carried out, and the associated NAOC JIV form filled in, in most NAOC oil spill incidents in Nigeria. Despite ENI having recorded over 50% of all oil spills in Nigeria between January 2010 and August 2015, they only began to make scanned copies of their JIV forms available via their website from 2014.

The NAOC JIV forms available are filled in in a comprehensive manner with drawings made of the spill impacted area and coordinates taken.

Concerns related to the NAOC JIV form in terms of efficiency, reliability, usefulness, accountability and viability:

The NAOC JIV forms generally give a more detailed picture of oil spills than NOSDRA's equivalent, although it is still basic. The form contains a duplication of numerous fields found on other related forms which could lead to conflicting entries or observations.

Being very similar to NOSDRA's JIV form the NAOC JIV form assumes there is a need to record a separate, more detailed set of observations than those on the NOSDRA form, and to have this form also signed by all parties in the field.

The NAOC JIV form also assumes that a comprehensive impact assessment should not be included at this stage of oil spill response but does make some attempt at assessing impact to property and communities.

The form assumes that a line drawing with coordinates plus cursory observations will be an adequate record of the impacted area at the time of the JIV.

The refusal to publicly list those in attendance at the Joint Investigation Visit points to a lack of transparency, which undermines the accountability and viability of any data in the NAOC JIV form.

NOSDRA FORM C - OUT OF SCOPE

Description of form C:

Form C is a site cleanup and remediation assessment form. It is designed to be filled in and signed by an oil company reporting officer after cleanup operations at an unspecified time after an oil spill.

It is a 3 page paper form, filled in after initial cleanup has taken place, and with no specified submission period. It has limited space for basic information on:

- Environmental impact information
- Details of initial containment and cleanup methods
- Remediation details
- Lab test analysis results (table)
- Basic details of costs and compensation settlements
- Request for rehabilitation plan (to be attached as an annex)

Observations on the use of form C:

According to the data in the Oil Spill Monitor, Form C has been submitted to NOSDRA for only 734 spill incidents since January 2010. This means that in 5600 (88%) oil spill incidents during this time no site cleanup and remediation assessment report form was recorded as having been submitted to NOSDRA by oil companies.⁷

Concerns related to form C in terms of efficiency, reliability, usefulness, accountability and viability:

There is no room for a unique reference from either NOSDRA or the Oil Company on this form leading to potential problems with reconciling this with other paper records.

The form assumes that an oil company field officer will be present at the site following cleanup and remediation of the oil spill, and will record field observations accurately and report this to NOSDRA within no specified time period.

The form assumes that it is only the oil company field representative or reporting officer who will unilaterally decide whether further remediation is necessary.

The form assumes that a detailed cost of the oil spill will be known to the oil company reporting officer and is recorded accurately. It assumes that samples will be taken after cleanup and that a NOSDRA staff member will be present at the time samples are collected and tested at a company laboratory.

The form assumes that knowledge of any compensation settlements will be known and understood by the oil company field officer and be recorded accurately.

⁷ Please note that for small offshore and onshore oil spills it may be that no cleanup and remediation is required or necessary, rendering this cleanup and remediation form unnecessary in many cases.

CORE RECOMMENDATIONS ON THE REVISION OF FORMS AND PROCESSES RELATING TO THE JIV

Despite its many challenges and problems⁸ the JIV as a concept is fundamentally sound.

Having a joint visit by all stakeholders to the site of an oil spill soon after it has happened in order to record, gather, measure and collect data, and to then collectively agree on this data is an important and necessary part of oil spill response.

The following recommendations should be considered as part of any efforts to revise and improve the JIV process and the data gathered at it.

TO IMPROVE EFFICIENCY

- Merge all forms from all parties leading up to and including the JIV into a single longer form that can document the entire lifecycle of a spill
- Move towards a single repository of digital archives related to each oil spill

TO IMPROVE ACCURACY AND RELIABILITY

- Improve collaboration and coordination of JIV data collection between agencies and companies, in the presence of legitimate community representatives
- Gather much more reliable and accurate measurements of the impact of every oil spill
- Keep all oil spill records digitised and in good order, synchronised and up to date for ease of reference, accuracy and reliability

TO IMPROVE USEFULNESS

- Include a much more detailed record of impact and damage at the time of the JIV or soon afterwards that is ratified by all parties and can act as a useful single permanent and detailed point of reference as to the impact of each spill
- Create a single comprehensive record of each spill that can be used during the cleanup, remediation, damage assessment, and compensation processes as a definitive and agreed baseline point of reference that is publicly available and contains all relevant information and forms in digital format

TO IMPROVE ACCOUNTABILITY AND VIABILITY

- Ensure that the community representative and inclusive nature of oil spill response at the JIV is legitimate, transparent and accountable in order to ensure trust in the process and that the recording of data is seen as viable by all parties

⁸ For more detail see SDN's Report *Towards Improving the Joint Investigation Visit Following Oil Spills In Nigeria*

FURTHER INSIGHTS INTO THE USE OF JIV FORMS, AND THE RELATED PROCESS, BASED ON AVAILABLE DATA

THE ONLY TIME ALL PARTIES ARE MOST LIKELY TO BE AT THE SPILL SITE TOGETHER

Of the 6333 oil spills recorded between January 2010 and August 2015, 78% are recorded as having had a Joint Investigation Visit. This rises to around 85% during 2014.⁹

Despite its perceived problems, the Joint Investigative Visit is the most consistently attended, implemented and recorded part of onshore oil spill response in Nigeria and appears to be the only occasion when all parties are at the site of the oil spill together.

This represents an opportunity to properly document events surrounding the spill, measure its impact, outline comprehensive cleanup and remediation plans and establish a baseline to assess future activities related to this spill.

AN APPARENT LACK OF MUTUAL TRUST AT THE JIV

A comparison of the JIV forms reviewed shows that all of them are aiming to capture the same types of information and record the JIV process to varying degrees of detail and effectiveness.

This separation and duplication not only leaves open margins for error and conflicting data entry, but points to a lack of trust between parties. Ideally all parties would be seen to be working together to effectively deal with any oil spill in an efficient, professional and coordinated manner.

The simplest way to avoid duplication, reduce margins for error and risk of conflict in relation to differences in data gathered at the Joint Investigation Visits, is for all parties to work together to merge all forms related to initial oil spill response into a single, rolling public record that can be added to by all parties as spill response progresses.

CONFLICTING REPORTS ON THE NUMBER OF OIL SPILLS AND QUANTITIES OF OIL SPILLED

Comparisons of SPDC and NOSDRA's 2014 oil spill data for the number of barrels spilled shows a good correlation¹⁰, suggesting that at least in this area, data recording and entry practices are coordinated and cross-referenceable.

This however cannot be said for the number of reported SPDC incidents during 2014. There are large disparities between the number of oil spill incidents SPDC published, and the number NOSDRA recorded with SPDC appearing to under-report on numbers of oil spills.

There are also serious discrepancies between ENI's public reporting of oil spills in Nigeria and NOSDRA's recordings of the same. ENI's data for 2014 shows consistently less oil spills and less oil spilled than has been recorded by the Nigerian Environmental Regulator NOSDRA.¹¹

This suggests that there is a need to improve and harmonise data gathering, recording, and collaboration between all parties so that all data collected on oil spills can be seen to be reputationally robust and professionally managed by all involved.

⁹ See Annex 5 - Official NOSDRA reporting on oil spills between January 2010 and August 2015.

¹⁰ See graphs in Annex 3 and 4

¹¹ See Annex 1 and 2

RECORDING OF ENVIRONMENTAL AND HUMAN IMPACT RECORDS APPEAR OF SECONDARY CONCERN

The various forms filled in at the JIV all record basic information on each oil spill. They record that a spill has been responded to, try to ascertain the cause of the spill and the number of barrels spilled, make visual observations and basic measurements on the impact and then have the data signed off by representative parties.

Analysis of the currently available database of JIV forms related to oil spills from NOSDRA, NAOC and SPDC shows that often only cursory visual observations and pencil drawings of impacted areas are made as part of recording the impact, even of large oil spills of hundreds or thousands of barrels (with the SPDC JIV forms being the most detailed but far from comprehensive).

There appears to be a general assumption that proper impact assessments will be carried out at a later stage, but with no specified responsible party or within any specific timeframe. However, it is not easy to find any environmental impact assessments or recording of oil spill impacts in relation to the thousands of oil spills in Nigeria from either oil company or regulatory records.

Close examination of the photographic evidence published by SPDC, NAOC and NOSDRA at most JIVs¹² shows a small number of photos taken at a JIV, usually one image of the repaired spill point and one image of the impacted area. This visual evidence of the spill having been visited during a JIV and the spill point repaired does not give any useful indication of how big the spill is, how much the area has been impacted, nor how much the spill is likely to spread.

Statistics available also point to a lack of concern with the recording of environmental impact. NOSDRA's data currently reports that of the 6333 oil spills between January 2010 and August 2015:

- 82% have no estimation of spill area recorded
- 71% have no description of impact recorded
- 83% have no spill stop date recorded
- 33% have no estimated quantity recorded
- 99.9% are reported as not having had a post-impact assessment

If this assumption is incorrect and detailed impact assessments are carried out, then these would ideally be made public as it is in the measurement of a spill's impact, and not the estimated number of barrels spilled, that a truly useful picture of an oil spill can be built up and act as a future point of reference for cleanup teams, damage assessors, valuers, and environmental remediation experts in the course of their work.

SDN's previous research has underlined the importance of carrying out a proper environmental impact assessment in the early stages of an oil spill to act as a benchmark for cleanup, remediation, damage assessments and potential compensation. When one is not done, companies and regulators get a poor reputation, communities become frustrated, compensation and cleanup claims become very difficult to ratify and the operating environment for oil companies becomes more hostile.

During the JIV, and as part of better documenting an oil spill, regulators and companies are recommended to take more extensive photos, diagrams, maps, measurements, and documentation of the area of the spill impact and make this public. This can be partly achieved through taking more geo-located and time-stamped photographs than are currently taken (easily done with basic equipment currently used in the field), and creating a much more comprehensive record of the spill at the time of the JIV which is made available through existing regulator and company oil spill reporting websites and systems.

¹² See Annex 8 for links to examples of photos taken at JIVs

RECORDING OF CLEANUP ACTIVITIES AND REMEDIATION APPEARS OF SECONDARY CONCERN (OUT OF SCOPE)

Although beyond the scope of this study, the lack of either the delivery of Form C by oil companies or the failure to record the arrival of Form C by NOSDRA in 88% of cases suggests that oil spill cleanup and remediation is not given the priority that might be expected by both parties.

Other statistics available also point large gaps in the recording of cleanup and remediation activities. NOSDRA's data currently reports that of the 6333 oil spills between January 2010 and August 2015:

- 99.9% are reported as not having had a post-impact assessment
- 88% are reported as not having had a post-cleanup inspection
- 92% are reported as having had no samples taken post-cleanup
- 88% spills have no form C recorded as submitted (Cleanup and Remediation Assessment Report)
- 79% spills have no records in all of the following fields: Form C date; Cleanup date; Cleanup completed date; post-cleanup inspection date; post-impact assessment date; and cleanup methods recorded.

This correlates with a widely held belief amongst Civil Society and community actors that cleanup and remediation of oil spills in the Niger Delta is rarely carried out, and is often done to a very poor standard. This should be of major reputational concern to both NOSDRA and the oil companies in relation to the perceived effectiveness of their operational oversight of oil spill cleanup and remediation and the overall attitude towards the effect of oil spills on local people and environment.

This data may indicate that there should be a more obvious way of closing-out oil spill reporting in the case of the large number of spills that have minimal impact so that attention can be paid to those of higher impact and concern.

HOW A REVISED JIV PROCESS AND FORMS COULD WORK

INITIAL NOTIFICATION

Form A could be replaced with an initial spill report that can be submitted by any party including company representatives, members of the public, CSOs and NGOs or NOSDRA officers depending on who discovers a spill first. NOSDRA officers could then immediately create an initial record of the spill and assign a unique ID to it in the Oil Spill Monitor system, and the person submitting the report can provide NOSDRA with initial core details such as dates, times, facility, location and initial estimated scale of impact.

Trying to ascertain more than this within 24 hours after a spill is unlikely to be helpful, as the main priority at this stage should be to stop and contain the spillage immediately.

This initial spill record could be recorded in a type of ticketing system which would automatically send a new incident report with a unique ID by email to the company, the DPR, the State Ministry of Environment and to a number of coordinating NGOs in the region. This would allow NOSDRA to immediately take control of managing all the data related to the spill.

This email notification could include: Unique Spill ID, link to the record in the Oil Spill Monitor, plus notification of responsibilities and next step obligations by all parties including obligations to carry out a JIV, reimburse NOSDRA for any time spent in the course of its duties, and constructively engage in the production of a detailed impact assessment and make this public.

Through the creation of this single digital repository for all documents related to each oil spill incident efficiency will be improved. This could be done very simply in the interim by using hyperlinks to easily cross-reference public data available on company websites with records in NOSDRA's Oil Spill Monitor.

As more details of the spill and its immediate stopping and impact emerge over the course of days following a spill, this initial spill report can be filled in and amended by a NOSDRA case officer with information provided from the company and other parties and then verified during the JIV visit.

This initial record should also include a written narrative report to accompany the data taking into consideration and recording observations from all parties.

RECORDING A COMPREHENSIVE PICTURE OF THE SPILL DURING AND AFTER THE JIV

Form B could be abolished in its current form. In a majority of incidents it simply does not get filled in and is seen by oil company operators as a duplicate of the JIV form. Also, the Warri office of NOSDRA appears to not record any Form B data. Form B, due to its lack of transparency and cursory nature, gathers no extra data, not gathered on other forms, that is likely to be of any real use to someone trying to understand circumstances surrounding an oil spill or its impact. As there is no independent corroboration of data on Form B, it can not be considered subjected to proper checks and balances leaving any information on it easily questionable.

Aspects of the information on Form B could be merged or de-duplicated with Form A and both incorporated into a revised JIV and impact form and process which aims to document a complete and thorough picture of the life-cycle of an oil spill in a transparent and robust manner.

The three JIV forms studied (and any others used by other companies or agencies) could be merged together and expanded to allow for a much better picture of the impact of a spill to be gathered during an extended JIV process. As a unique combined oil spill record its single reference number would be a housing for all data and narrative reports related to each oil spill from various parties and at various stages. It should be a rolling document and have extra information filled into it as further details of an oil spill comes to light during the various stages of oil spill response.

The form and its digital record equivalent could contain much more detail of impact, spread, measurements, tests, impacted individuals and communities plus a detailed remediation plan and ongoing record of remediation activities where needed. In the case of most small oil spills these records and cases could be closed-out quickly, removing them from immediate view in the Oil Spill Monitor.

Measurements of depth of oil soakage through soil or the spread of oil on water could be taken and the coordinates of the point the measurements were taken recorded and backed up by geolocated photographic evidence.

With detailed geolocated images, readings and measurements already gathered at spill sites and readily available, it would be possible to build up a much more detailed close-up interactive map or shapefile of the impacted area of the spill with images, readings and measurements all easily viewable to anyone studying the spill case.

The availability and ease of use of digital mapping equipment and software should be well within the realms of NOSDRA's and the oil companies' GIS departments to do. Regardless of how this is done, it is recommended that such digital evidence, mapping and readings should become part of statutory oil spill response documentation in the public domain. In its simplest form and as an intermediary solution, printing off Google maps of the area of the spill prior to leaving for the spill site and marking the spill area on this map during the JIV could give a much clearer indication of the impacted area.

In order to reduce the administrative burden digital maps could be required only for spills over a certain volume or those with wider impacts.

RECORDING DETAILS OF CLEANUP AND REMEDIATION (OUT OF SCOPE)

Although out of scope of this study, in relation to the JIV itself, if a single rolling record of oil spill life-cycle is created then cleanup and remediation details could also be included in it.¹³

For the purposes of integrity and acceptability, independent observation of the data entered in form C by all appropriate stakeholders would be preferable. At the very least, NOSDRA and Environment Ministry staff should be in place for all spills over a certain size to monitor the cleanup and remediation process, and this oversight role would be well documented and recorded. Preferably it would also be attended by legitimate community representatives at every stage.

Including cursory details of compensation settlements made on form C appears futile due to the nature and complexity of compensation settlements. Settlements should be made based on impact assessments and damage assessments that are then valued by professional valuation experts. It is suggested that any damage assessments and compensation details related to a spill are separated from the environmental management of the spill and dealt with as entirely separate, using the unique reference number and detailed picture of impact build up at the JIV as a single point of reference.¹⁴

Likewise rehabilitation plans for impacted population should be separated from this form and would be based upon the findings of the detailed impact and damage assessment and the needs of the people affected. Again this is not an area that sits comfortably within the role of an environmental regulator.

It would be unreasonable to expect the oil company reporting officer involved in recording the kinds of data currently captured on form C to have knowledge of the disciplines of environmental science, site cleanup, remediation, toxicity sampling, compensation settlements and a complete overview of costs incurred because of this oil spill.

This role would ideally be given to a regulatory overseer or case officer who would pull together all data relating to a spill from various experts and compile this into one comprehensive record.

¹³ Form C should always be filled in but only in a basic way if it is not practical or appropriate to warrant further cleanup and remediation in the case of a majority of small spills. Regardless of how, there should be an obvious way of closing-out oil spill reporting in the case of the large number of spills that have minimal impact so that attention can be paid to those of higher impact and concern.

¹⁴ For more information see SDN's report *Towards a New Oil Spill Compensation Scheme in Nigeria*

NEXT STEPS FOR IMPROVING THE JIV FORMS AND RELATED ASPECTS OF THE JIV PROCESS

1. **Bring oil spill response teams and their management together with NOSDRA and Civil Society to revise, standardise, refine and improve the Joint Investigative Visits and its associated forms through an inclusive and participatory process.**
2. **Collectively agree on a new understanding of the roles and responsibilities of each party at the JIV and for oil spill response generally.**
 - Agree to work towards the formation of neutral, regional community environmental committees (lawyers, environmentalists, CSOs) who operate over large areas and can liaise with communities and act on their behalf, lessening the burden of sometimes difficult community liaison and communication around the JIV, and therefore making the JIV process smoother with more professional community representation and engagement.
 - Ensure that oil companies are aware of their obligations to properly document and deal with oil spills and to act upon any requests NOSDRA makes regarding environmental protection.
3. **Work towards creating a single 'case-files' for each spill that will document the entire life-cycle of all oil spills and make all documentation easier to handle.**

This file should be made publicly available. Also agree to assign specific and dedicated case-workers to spills over a certain size and impact who will ensure a spill's case-file is kept complete and up to date. (This could be done with minor improvements and revisions to NOSDRA's Oil Spill Monitor.)
4. **Work towards merging, combining, standardising and expanding all forms (NOSDRA, NAOC and SPDC JIV form, and also NOSDRA forms A, B) used to gather data on oil spills leading up to and during the Joint Investigation Visit in order to enable a single comprehensive record for each oil spill to be held in one location.**

(In the interim this could simply contain all documentation available from various parties or enable this to be easily cross-referenced from ENI/Shell/NOSDRA websites with links and reference numbers)

This combined JIV form could:

- Act as single point of reference for all oil spills and their progress
- Be filled in and added to continuously in stages: initial report > JIV and impact assessment > damage assessment > cleanup plan > remediation > test results > certification etc.
- Include digital maps, cleanup plans and reports, test results and remediation actions, verified by all parties at various stages
- Include certification of cleanup where appropriate and necessary

5. Work towards a more detailed record of impact and damage at the time of the JIV or soon afterwards that is ratified by all parties and can act as a single permanent and detailed point of reference as to the impact of a spill.

- To contain a detailed impact assessment of the oil spill as necessary
- To be made into a digital map in the case of all spills over a certain size and impact
- To contain clearer and more comprehensive notes of nearby human activity in terms of farming and fishing grounds, proximity to human settlements and the likelihood of damage. (To potentially contain a detailed damage assessment also)
- Public disclosure of all community representatives at the JIV should be made so that their legitimacy amongst the community can be cross-checked

6. Work towards including a site remediation plan as an intrinsic part of the JIV.

Ensure that such a plan is followed up by the regulators and later checked and measured in terms of its completeness and effectiveness. Make this publicly available in the single case-file for that spill.

7. Prioritise and focus most resources on the 10% of oil spills that do the most environmental damage in the Niger Delta, thus reducing the administrative and operational burden on regulatory agencies and oil companies.

NOTES ON STRENGTHENING THE POWER OF ENVIRONMENTAL REGULATORS AND RESETTING THE RELATIONSHIPS

Roles and responsibilities of all parties at the JIV should be clarified, with NOSDRA moving towards becoming the drivers of the JIV. NOSDRA would ensure companies are acting, complying, gathering and reporting correct data in a timely manner and following up on all aspects of companies cleanup and remediation activities.

NOSDRA should have the power to impose and collect fines for non-compliance or late and inadequate submission of data from oil companies, which would greatly improve its current revenue generation.

It should be the priority of any environmental regulator to make sure that a clear, careful and complete record of the environmental impact of any pollution is carried out, and to then efficiently guide, manage and monitor all cleanup, compensation and remediation processes that are deemed necessary.

Should the regulator not have the capacity to undertake these operations themselves, they should then try to ensure through close scrutiny and sustained engagement that the polluter carries out and funds all the necessary aspects of oil spill response, cleanup and remediation to the highest standards, and to provide evidence to this effect in the public domain.

NOSDRA (or a similar agency under the remit of the Ministry of Environment) should be given sole power over all hydrocarbon relation pollution incidents in Nigeria, and be able to stipulate how these are dealt with. NOSDRA should be willing and able to clearly and authoritatively direct and oversee any oil company's spill response in remediating an oil spill area and dictate how this should be done in order to bring the environment back to its original state.

SOURCES OF OIL SPILL INFORMATION AND FURTHER READING

Shell/SPDC monthly oil spill data and JIV forms-available online:

<http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills/data-2015/monthly-data.html>, September 2015

Agip/ENI/NOAC monthly oil spill data and JIV forms-available online:

http://www.eni.com/en_NG/sustainability/environment/response-to-oil-spills/spill-incident-data/spill-incident-data.shtml, September 2015

NOSDRA Oil Spill Monitor data and JIV forms-available online:

<https://oilspillmonitor.ng>, September 2015

Scan of NOSDRA Form A:

<https://drive.google.com/file/d/0B67jYFtpKI9XWDhKb0FfdU9TVWc/view?usp=sharing>

Scan of NOSDRA Form B-available online:

<https://drive.google.com/file/d/0B67jYFtpKI9Xbnb0Nk5aa0Q1ZFU/view?usp=sharing>

<https://drive.google.com/file/d/0B67jYFtpKI9XY0xLcHdYOEtEZVU/view?usp=sharing>

Akpofure Rim-Rukeh, Oil Spill Management in Nigeria: SWOT Analysis of the Joint Investigation Visit (JIV) Process, 2015-available online:

<http://www.scirp.org/journal/PaperDownload.aspx?paperID=55130>

Adole Tracy, Ibaba Samuel Ibaba, Laurence Dube, JIV Policy Brief, 2014-available online:

<http://www.stakeholderdemocracy.org/stockholm/wp-content/uploads/2015/04/NACGOND-JIV-REPORT-PDF3.pdf>

Chris Cragg, Inemo Samiama, Joseph Croft, Environmental Regulation and Pollution Control in the Global Oil Industry in Relation to Reform in Nigeria, 2012-available online:

http://www.stakeholderdemocracy.org/stockholm/wp-content/uploads/2015/04/SDN_ENVIRONMENTAL-REPORT_PDF.pdf

Rory Hodgson, Towards Improving the Joint Investigation Visit following oil spills in Nigeria, 2015-available online:

<http://www.stakeholderdemocracy.org/wp-content/uploads/2015/05/JIV.pdf>

Amnesty International, Bad Information: Oil Spill Investigations in the Niger Delta, 2013-available online:

<https://www.amnesty.org/download/Documents/12000/afr440282013en.pdf>

United Nations, Environmental Assessment of Ogoniland, 2011-available online:

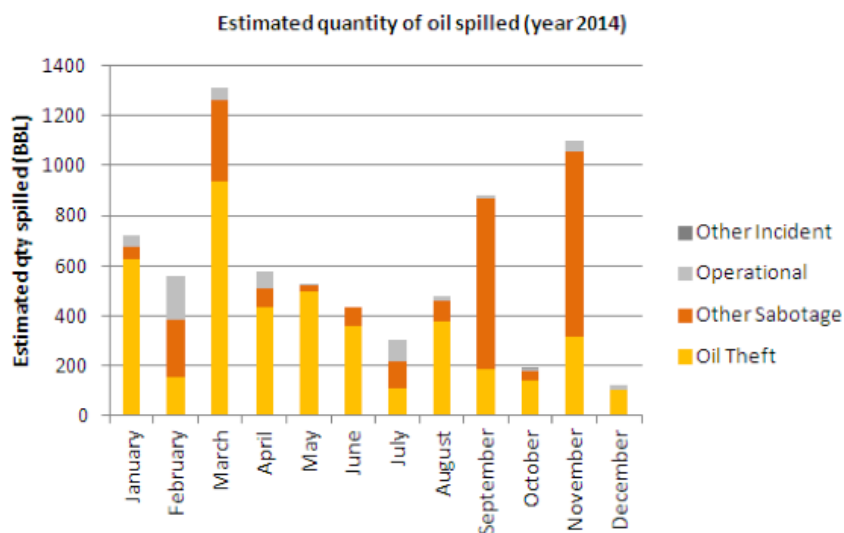
http://postconflict.unep.ch/publications/OEA/UNEP_OEA.pdf

Stakeholder Democracy Network, Towards a New Oil Spill Compensation Scheme in Nigeria, July 2014

ANNEXES

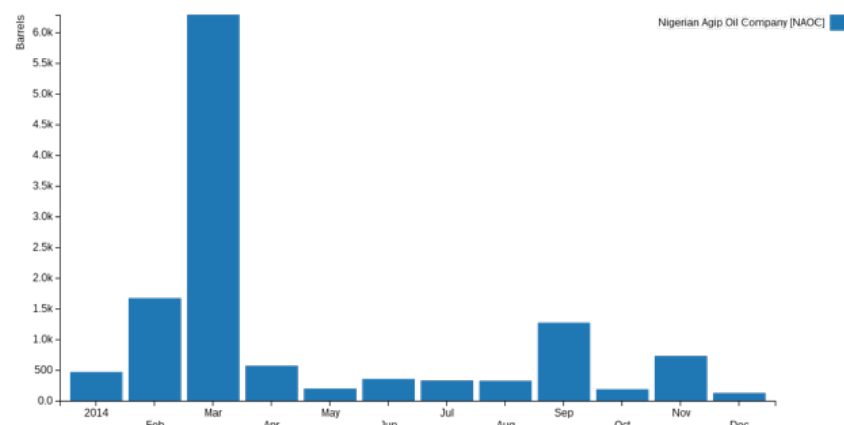
ANNEX 1 - NOSDRA AND NAOC BARRELS SPILLED COMPARED

ENI/NAOC - Volume spilled reported by ENI/NAOC/AGIP for 2014



http://www.eni.com/en_NG/sustainability/environment/response-to-oil-spills/spill-incident-statistics/spill-incident-statistics.shtml

ENI/NAOC - Number of spills recorded by NOSDRA for 2014

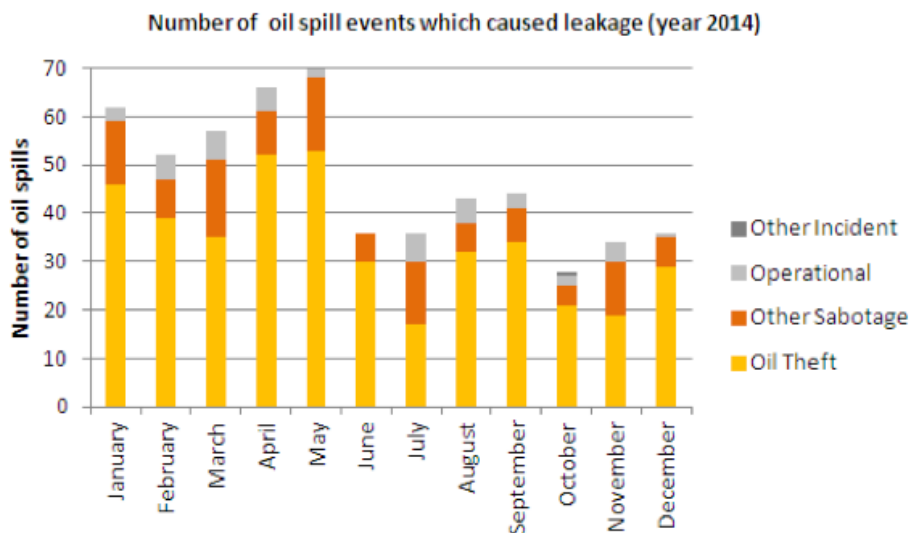


<https://oilspillmonitor.ng/>

There is an extremely wide disparity between volumes reportedly spilled by ENI/NAOC in 2014 and those recorded by NOSDRA in the same period.

ANNEX 2 - NOSDRA AND NAOC NO. INCIDENTS COMPARED

ENI/NAOC - Number of spills reported by ENI/NAOC/AGIP for 2014



http://www.eni.com/en_NG/sustainability/environment/response-to-oil-spills/spill-incident-statistics/spill-incident-statistics.shtml

ENI/NAOC - Number of spills recorded by NOSDRA for 2014

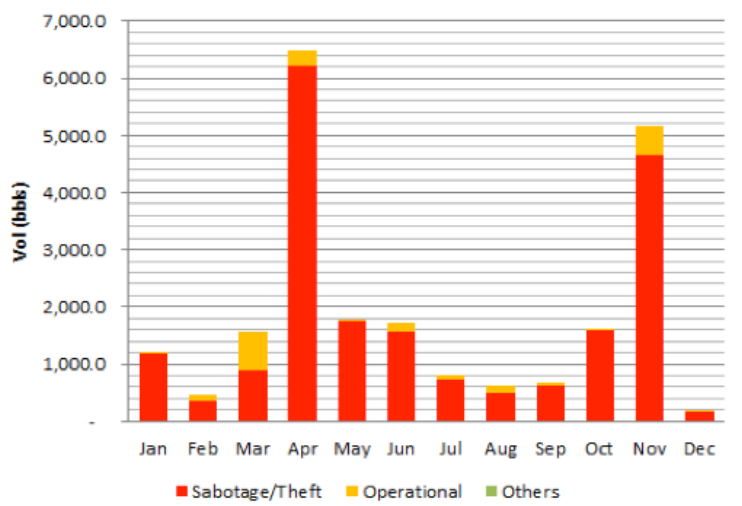
| 2014-01 | | | 2014-02 | | | 2014-03 | | | | | |
|-----------|------------------|-----------------------|-----------|------------------|-----------------------|-----------|------------------|-----------------------|--------|---------|--------|
| Incidents | Barrels reported | Missing quantity data | Incidents | Barrels reported | Missing quantity data | Incidents | Barrels reported | Missing quantity data | | | |
| NAOC | 116 | 468.07 | 11.72% | 91 | 1673.89 | 39.56% | 80 | 6292.64 | 30.00% | | |
| " | 116 | 468.07 | 11.72% | " | 91 | 1673.89 | 39.56% | " | 80 | 6292.64 | 30.00% |
| 2014-04 | | | 2014-05 | | | 2014-06 | | | | | |
| NAOC | 99 | 585.14 | 37.37% | 97 | 197.38 | 39.18% | 58 | 354.00 | 32.73% | | |
| " | 99 | 585.14 | 37.37% | " | 97 | 197.38 | 39.18% | " | 58 | 354.00 | 32.73% |
| 2014-07 | | | 2014-08 | | | 2014-09 | | | | | |
| NAOC | 34 | 328.99 | 55.19% | 56 | 324.17 | 26.79% | 63 | 1273.25 | 30.16% | | |
| " | 34 | 328.99 | 55.19% | " | 56 | 324.17 | 26.79% | " | 63 | 1273.25 | 30.16% |
| 2014-10 | | | 2014-11 | | | 2014-12 | | | | | |
| NAOC | 38 | 186.26 | 34.21% | 38 | 728.23 | 21.05% | 51 | 124.61 | 21.57% | | |
| " | 38 | 186.26 | 34.21% | " | 38 | 728.23 | 21.05% | " | 51 | 124.61 | 21.57% |

<https://oilspillmonitor.ng/>

There is a disparity seen here in numbers of oil spills reported by ENI/NAOC in 2014 and those recorded by NOSDRA in the same period.

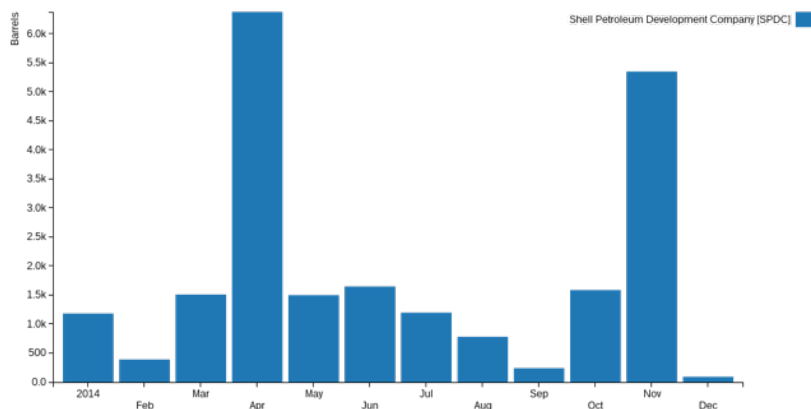
ANNEX 3 - NOSDRA AND SPDC BARRELS SPILLED COMPARED

SPDC/Shell - Volume spilled reported by Shell for 2014



http://www.eni.com/en_NG/sustainability/environment/response-to-oil-spills/spill-incident-statistics/spill-incident-statistics.shtml

SPDC/Shell - Volume spilled recorded by NOSDRA for 2014

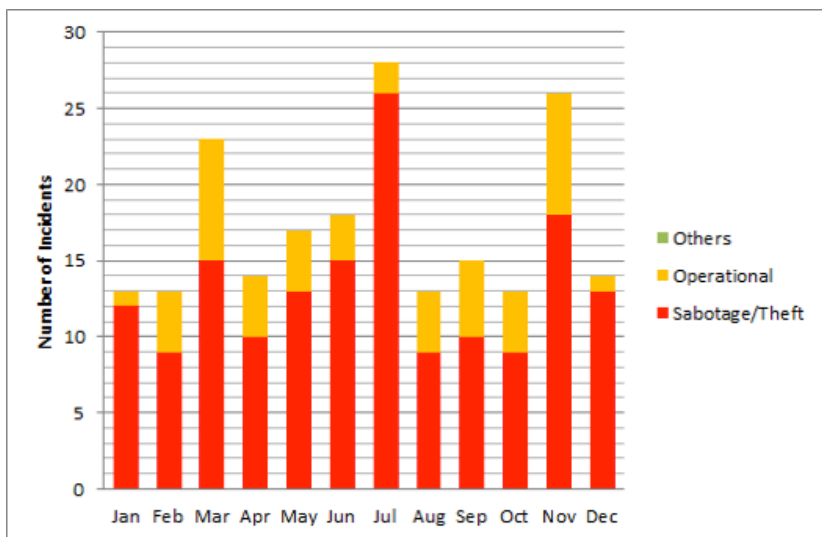


<https://oilspillmonitor.ng/>

There is a remarkably close correlation between volumes reportedly spilled by SPDC in 2014 and those recorded by NOSDRA in the same period.

ANNEX 4 - NOSDRA AND SPDC NO. INCIDENTS COMPARED

SPDC/Shell - Number of incidents reported by Shell for 2014



<http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills.html>

SPDC/Shell - Number of incidents reported by Shell for 2014

| 2014-01 | | | 2014-02 | | | 2014-03 | | |
|-----------|------------------|-----------------------|-----------|------------------|-----------------------|-----------|------------------|-----------------------|
| Incidents | Barrels reported | Missing quantity data | Incidents | Barrels reported | Missing quantity data | Incidents | Barrels reported | Missing quantity data |
| SPDC: 27 | 1180.11 | 49.74% | SPDC: 29 | 389.10 | 33.17% | SPDC: 31 | 1987.61 | 32.29% |
| = 27 | 1180.11 | 40.74% | = 29 | 389.10 | 55.17% | = 31 | 1507.61 | 32.24% |
| 2014-04 | | | 2014-05 | | | 2014-06 | | |
| SPDC: 19 | 6373.00 | 36.84% | SPDC: 18 | 1498.30 | 33.33% | SPDC: 25 | 1648.33 | 44.00% |
| = 19 | 6373.00 | 36.84% | = 18 | 1498.30 | 33.33% | = 25 | 1648.33 | 44.00% |
| 2014-07 | | | 2014-08 | | | 2014-09 | | |
| SPDC: 32 | 1195.71 | 12.50% | SPDC: 18 | 780.20 | 22.22% | SPDC: 18 | 238.13 | 6.67% |
| = 32 | 1195.71 | 12.50% | = 18 | 780.20 | 22.22% | = 18 | 238.13 | 6.67% |
| 2014-10 | | | 2014-11 | | | 2014-12 | | |
| SPDC: 14 | 1585.68 | 43.75% | SPDC: 39 | 5347.68 | 17.95% | SPDC: 12 | 92.58 | 16.67% |
| = 16 | 1585.00 | 43.75% | = 39 | 5347.00 | 17.93% | = 12 | 92.58 | 16.67% |

<https://oilspillmonitor.ng/>

There is a disparity seen here in numbers of oil spills reported by SPDC in 2014 and those recorded by NOSDRA in the same period.

ANNEX 5 - OFFICIAL NOSDRA REPORTING ON OIL SPILLS BETWEEN JANUARY 2010 AND AUGUST 2015

NOSDRA's data currently reports that between January 2010 and August 2015:

- There were 6333 oil spills reported
- 4286 (67%) reportedly caused by sabotage or theft
- 2047 (33%) reportedly caused by other than sabotage (601 equipment failure, 100 operational error, 355 corrosion, 289 yet to determine, 479 unknown)
- 294,352 barrels of oil has been reported spilled
- 286,895 barrels were reported spilled during 1157 oil spills with an estimated quantity of more than 10 barrels (97% of oil spilled in 18% of the incidents)
- 270,490 barrels were reported spilled during 515 oil spills of more than 50 barrels (91% of oil spilled in 8% of the incidents)
- 2100 (33%) of reported spills since 2010 have no estimated quantity
- 6239 (99.9%) are reported as not having had a post-impact assessment
- 5532 (88%) are reported as not having had a post cleanup inspection
- 5854 (92%) are reported as having had no samples taken post cleanup
- 1456 (22%) are reported as having no record of a JIV being carried out
- 5599 (88%) spills have no form C recorded as submitted (Cleanup/Remediation Assessment Report)
- 5210 (82%) have no estimation of spill area recorded
- 4556 (71%) have no description of impact recorded
- 5300 (83%) have no spill stop date recorded
- 5050 (79%) spills have no records in all of the following fields: Form C date; Cleanup date; Cleanup completed date; post cleanup inspection date; post impact assessment date; and cleanup methods recorded.

Data from Oil Spill Monitor: Accessed August 3 2015

ANNEX 6 - READING BETWEEN THE LINES - REASONS FOR DATA ANOMALIES AND BEING CAREFUL TO JUMP TO CONCLUSIONS

Although the data used in this report comes from NOSDRA's digital mapping database, paper forms are still the main means of recording and storing data at the agency's various Zonal Offices.

Funding constraints, poor internet connectivity and a lack of necessary equipment at NOSDRA offices can also make simple administrative tasks like data entry difficult.

Due to these communications, funding and operational constraints, coordination and standardisation of processes and protocol between the various offices of NOSDRA may differ. This may lead to some geographic and operational areas having different capacity, practices and protocols than others, which might reflect on the data recorded by different Zonal offices.

NAOC for example operate mostly in Bayelsa State where, up until late 2015, there has been no NOSDRA Zonal Office and where many oil spills occur in difficult to access swamp areas.

Mobil Petroleum Nigeria have a number of offshore oil wells many tens of kilometres offshore. When spills occur on these oil wells, reports are sent to NOSDRA however Joint Investigative Visits are almost never carried out at these facilities.

As such this data should be seen as indicative and not necessarily comprehensive representation of NOSDRA's data held on paper forms, or of oil spill response and management in general. The data is however very useful in that it helps to quantify and the information gathered at the Joint Investigation Visits that did take place (which has been held digitally by NOSDRA since 2006) and explore trends within these.

ANNEX 7 - NOSDRA ACT 2006 AND POTENTIAL FOR INTERNAL REVENUE GENERATION

Provisions in NOSDRA Act 2006 relating to revenue generation by the Agency.

2: 500,000 (₦1600) naira for every day late a spill is reported

4: 1,000,000 (₦3200) naira for every spill deemed not remediated

11b: Loans and grants-in-aid from national, bilateral and multinational agencies

11e: Rents, fees and revenues from services provided by the agency

15.1: Accept gifts of land, money or property

229 oil spill sites are recorded as having undergone remediation between January 2010 and August 2015. This leaves 6152 oil spills where no remediation of the affected oil spill site is recorded as having been carried out during this time. If we remove any spills after 2014 from this number (to allow up to 1.5 years for site remediation to be carried out) we have 5652 oil spills where no remediation of the site has been recorded. If we are further generous and assume that only spills recorded as over 5 barrels of oil would result in remediation of an area being needed, we can reduce this number to 1449.

Using this figure of 1449 unremediated larger oil spills, over the four years between 2010 to 2014 NOSDRA could have collected cN1.449 billion Naira or £4.63 Million pounds from oil companies in fines.

Although more difficult to quantify using data available fines levied on late reported spills could also be an avenue of revenue generation for NOSDRA.

ANNEX 8 - EXAMPLES OF PHOTOGRAPHS TAKEN DURING JOINT INVESTIGATION VISITS

AGIP/NAOC/ENI images related to JIV - More at

http://www.eni.com/en_NG/sustainability/environment/response-to-oil-spills/response-to-oil-spills.shtml

- http://www.eni.com/en_NG/attachments/sustainability/environment/response-to-oil-spills/spill-incident-data/2015/april/2015_SAR_098_138/JIV-Report-SAR-098-138-img.pdf
- http://www.eni.com/en_NG/attachments/sustainability/environment/response-to-oil-spills/spill-incident-data/2015/april/2015_LAR_038_130/JIV-Report-LAR-038-130-img.pdf
- http://www.eni.com/en_NG/attachments/sustainability/environment/response-to-oil-spills/spill-incident-data/2015/april/2015_SAR_089_126/JIV-Report-SAR-089-126-img.pdf
- http://www.eni.com/en_NG/attachments/sustainability/environment/response-to-oil-spills/spill-incident-data/2014/august/2014_LAR_177_660/JIV-Report-LAR-177-660-img.pdf

Shell/SPDC images related to JIV -

More at <http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills.html>

- http://s05.static-shell.com/content/dam/shell/static/nga/downloads/pdfs/oil-spills/750226_12in_ImoRiver1-Ogale_pipeline_at_KomKom_Photos.pdf
- <http://s07.static-shell.com/content/dam/shell-new/local/country/nga/downloads/pdf/oil-spills/2015/feb/1335376-photos.pdf>
- <http://s00.static-shell.com/content/dam/shell-new/local/country/nga/downloads/pdf/oil-spills/2015/feb/1340664-photos.pdf>
- <http://s07.static-shell.com/content/dam/shell-new/local/country/nga/downloads/pdf/oil-spills/2015/feb/1342819-photos.pdf>

NOSDRA images related to JIV - More at <https://oilspillmonitor.ng>

- [https://oilspillmonitor.ng/data/attachments/t14a33ba2fc0/SPDC1287364%20\(1\).jpg](https://oilspillmonitor.ng/data/attachments/t14a33ba2fc0/SPDC1287364%20(1).jpg)
- [https://oilspillmonitor.ng/data/attachments/t145f5999e67/Krakama_Bille%20\(8\).JPG](https://oilspillmonitor.ng/data/attachments/t145f5999e67/Krakama_Bille%20(8).JPG)
- https://oilspillmonitor.ng/data/attachments/20211/IMG_20140806_131214.JPG
- <https://oilspillmonitor.ng/#/25393.2014/SAR/593>

ANNEX 9 - COMPARISON TABLE OF FORMS USED TO COLLECT INFORMATION BEFORE OR DURING THE JIV

| FIELDS/SPACE AVAILABLE FOR INFORMATION ON... | FORM A | FORM B | NOSDRA JIV | SPDC JIV | AGIP JIV |
|---|--------|--------|------------|----------|----------|
| Company Incident Reference | | | | X | X |
| Date of spill | X | X | X | X | X |
| Time of spill | X | | | | |
| Date spill reported | | X | | | |
| Time spill stopped | | | | | |
| Date of assessment/observation | X | X | X | X | X |
| Time of assessment/observation | X | | | X | X |
| Date of other investigations | | | X | | X |
| Survey team names and contacts | X | | | | |
| Duration of investigation | | | X | | |
| Location coordinates | X | X | X | X | X |
| Location name | X | X | X | X | X |
| State | | | | X | X |
| LGA | | | | X | X |
| Nearby community names | | | X | X | |
| Type of contaminant | X | | X | X | |
| Type of incident (fire, spill, gas leak) | | | X | X | X |
| Proposed cleanup method and timeframe | | X | | | |
| Name of NOSDRA/Company case officer(s) | X | X | | | |
| List of representative parties present (not signatories) | X | | | X | |

| FIELDS/SPACE AVAILABLE FOR INFORMATION ON... | FORM A | FORM B | NOSDRA JIV | SPDC JIV | AGIP JIV |
|---|--------|--------|------------|----------|----------|
| Company whose facility/ infrastructure is affected | X | X | X | X | X |
| Details of the facility | X | X | X | X | X |
| Notes on repairs carried out to infrastructure | | | X | X | |
| OML/OPL | X | X | | | |
| Cause of spill (tick boxes) | | X | X | X | X |
| Notes on the cause of the spill and circumstances | | | | X | X |
| Estimated spill quantity (volume in bbls) | X | X | X | X | X |
| Workings out for spill quantity estimates | | | | X | X |
| Estimated quantity of oil recovered from the site (anecdotal) | | X | X | X | X |
| Visual observations of containment measures (tick boxes) | X | X | X | X | X |
| Visual observations of cleanup measures (tick boxes) | | | X | X | |
| Photographic evidence of cleanup | X | X | | X | |
| Sea/Weather conditions at time of observation | | X | X | X | X |
| Type of vegetation/land/waterway affected (tick boxes) | | X | | | |
| Visual observations of slicks on water | | | | X | X |
| Measurements of slicks on water | | | | | |

| FIELDS/SPACE AVAILABLE FOR INFORMATION ON... | FORM A | FORM B | NOSDRA JIV | SPDC JIV | AGIP JIV |
|---|--------|--------|------------|----------|----------|
| Cursory impact indicators | X | X | X | X | X |
| Coordinates encasing impact of spill area | | X | | X | X |
| Basic line drawings/map/chart of impact | | | | X | X |
| Basic visual observations of impacted area (tick boxes) | | X | X | X | X |
| Notes on impacted area | X | X | X | X | X |
| Basic notes on types of impacted parties/lands/properties | X | X | X | X | |
| Numbers of impacted properties/trees/crops/nets etc | | | | X | |
| Proximity to human impact receptors | | X | | X | |
| Casualty details | | X | | | |
| Whether photos/videos were taken (tick boxes) | | | X | X | X |
| Where photos and videos are stored/located | | | | | |
| Whether samples were taken (yes/no) | | | | | |
| How the investigation was carried out (foot, boat, air) | X | | X | | |
| Notes on how the investigation and if there were problems | | X | X | X | |
| Additional comments, remarks and recommendations | | X | X | X | X |
| Notes on whether further cleanup is needed | | X | | X | |





