BAD INFORMATION

OIL SPILL INVESTIGATIONS IN THE NIGER DELTA

AMNESTY INTERNATIONAL

Amnesty International Publications

First published in 2013 by
Amnesty International Publications
International Secretariat
Peter Benenson House
1 Easton Street
London WC1X 0DW
United Kingdom
www.amnesty.org

Index: AFR 44/028/2013
Original Language: English
Printed by Amnesty International, International Secretariat, United Kingdom

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SUMMARY

Hundreds of oil spills occur in Nigeria every year, causing significant harm to the environment, destroying local livelihoods and placing human health at serious risk.[1] These spills are caused by corrosion, poor maintenance of oil infrastructure, equipment failure, sabotage and theft of oil. For the last decade oil companies in Nigeria – in particular Shell – have defended the scale of pollution by claiming that the vast majority of oil spills are caused by sabotage and theft of oil.[2]

There is no legitimate basis for this claim. It relies on the outcome of an oil spill investigation process - commonly known as the Joint Investigation Visit or JIV process - in which the companies themselves are the primary investigators. This report exposes several serious deficiencies and abuses within the JIV process that render it wholly unreliable as a basis for making claims about the cause of oil spills, the volume of oil spilt or the area impacted.

The report is based on an examination of the JIV process and – critically – of how data are recorded during the process. It draws on expert analysis obtained from a US pipeline specialist who reviewed JIV investigation documents and data provided by oil companies and regulators to researchers in the course of investigations.

The report presents evidence not only of serious and systemic flaws in the oil spill investigation process, but also specific examples of instances where the cause of an oil spill appears to have been wrongly attributed to sabotage. The evidence includes a secretly filmed video of an oil spill investigation. In addition, the report exposes serious problems with how the volume of oil spilt is assessed and recorded; it is likely that the volume of oil recorded as spilt in many cases is incorrect.

The human rights impacts are serious – both the cause of a spill and the volume spilt affect the compensation a community receives. If the spill is recorded as caused by sabotage or theft, the affected community gets no compensation, regardless of the damage done to their farms and fisheries.[3] This is based on a provision in Nigeria's oil legislation which Amnesty International and the Centre for Environment, Human Rights and Development believe needs to be amended. Oil companies should be held responsible for a spill that is due to sabotage or theft if they have failed to take sufficient measures to prevent tampering with their infrastructure.

The majority of the report's findings relate to the Shell Petroleum Development Company, which is the major onshore operator in the Niger Delta. The report acknowledges improvements in Shell's JIV process since 2011, when the company began to publish JIV reports on its website. Other companies have yet to do this.[4]

However, serious flaws remain within Shell's post-2011 oil spill investigation process. These include weaknesses in the underlying evidence used to attribute spills to sabotage and the fact that the JIV reports are filled out by Shell after the joint investigation process – not as part of the joint investigation process.[5] There is, consequently, a lack of transparency and oversight in terms of what is recorded on the new JIV reports.

The report also reviews Shell's pre-2011 JIV process. Although Shell has made some improvements in its process since 2011, findings related to the pre-2011 process are important for two reasons: firstly, numerous pre-2011 oil spills are the subject of ongoing disputes between Shell and communities over the data recorded on JIV reports. Secondly, Shell uses pre-2011 data to make claims to investors and the media about the cause and volume of oil spilt in the Niger Delta in the last five years.[6]

Despite its frequent references to sabotage and theft, Shell has failed to take effective measures to protect its infrastructure from tampering.[7] Vulnerable infrastructure has been left exposed to vandalism and theft.[8] In addition, evidence has recently emerged to suggest that Shell's own contractors may be involved in oil theft.[9]

The report also makes a number of findings in relation to the Nigerian Agip Oil Company, a subsidiary of the Italian company, ENI. Although Agip operates over a smaller area than Shell, there have been almost twice as many spills reported from its operations in recent years. In 2012, there were a staggering 474 spills from Agip's operations, compared with 207 from Shell.[10] Agip attributes the vast majority of spills to sabotage but provides absolutely no information to support this allegation. Furthermore, such a high number of spills, from whatever cause, is indefensible for a responsible operator.

Sabotage and theft of oil are serious problems in the Niger Delta. However, international oil companies are overstating the case in an effort to deflect attention away from the many oil spills that are due to corrosion and equipment failure. Moreover, securing oil infrastructure against such acts is – to a substantial extent – the responsibility of the operator.[11]

While many of the issues covered in this report relate to actions and failures of oil companies, it is clear that the government of Nigeria is failing in its duty to control the oil industry and prevent environmental damage and human rights abuses. Regulatory oversight of the oil industry in the Niger Delta is extremely weak. The report confirms what others, including UN agencies, have found in relation to a lack of capacity and conflicts of interest affecting the main regulators. It is clear that regulatory certification of companies' oil spill processes is not credible.

The report also notes that almost everyone involved in oil spill investigations is male. In general the oil companies and Nigerian oil regulators only deal with chiefs and other elite male members of spill-affected communities, reinforcing gender stereotypes and economic disadvantage in the Niger Delta.

While oil spills are a significant problem in themselves, the impact on human rights is exacerbated by the failure to clean up and remediate the affected areas properly and swiftly. The final chapter of the report looks specifically at Shell and the company's claims about clean up of oil spills, following a damning report by the United Nations Environment Programme in 2011. Shell has repeatedly claimed that it cleans up all oil spills, regardless of the cause. The report questions Shell's statements and data on clean up and remediation. It concludes that Shell's public claims do not stand up to scrutiny and are inconsistent with existing evidence.

The report concludes that the JIV process lacks credibility and cannot be relied upon to provide either accurate information on individual spills or as a basis for wider claims about the proportion of oil spilt due to sabotage, theft, corrosion or any other cause. Based on the available evidence corrosion and operational failures remain a significant cause of oil spills, and more oil has been spilt due to operational failures in the past six years than Shell has claimed.[12]

This report also concludes that data from Shell operations in Nigeria – whether on the cause of oil spills or the nature of clean up – cannot be the basis for any meaningful assessment of the company's impacts because of the serious flaws in how the data is compiled. The report therefore strongly questions how media and investors can rely on Shell's claims about the company's environmental impacts in Nigeria.

Finally, the report makes recommendations to further improve JIVs and to address past injustices that have been the result of inadequacies in the JIV process. This includes taking all feasible steps to ensure oil spill investigations can be independently verified, ensuring that women are not excluded from the process, and ensuring that all members of the affected communities have full access to all relevant information in an accessible format.

Oil companies have challenged the findings contained in this report and their responses and reflected in the text.

STRUCTURE OF THE REPORT

Chapter 1 looks at the human rights issues at stake.

Chapter 2 examines the oil spill investigation process used by onshore operators.

Chapter 3 focuses on the case study of Bodo, where a massive spill occurred from a Shell pipeline in August 2008. This case study exposes numerous flaws in the oil spill investigation - including serious under-recording of the spill volume – as well as Shell's failure to clean up the pollution.

Chapter 4 looks at the responsibility of the oil companies for sabotage and theft.

Chapter 5 examines claims made about certification of clean-up and remediation.

ACCUFACTS – OIL PIPELINE EXPERTS

Accufacts, Inc. is a consulting firm that provides oil and gas pipeline expertise for government agencies, the industry and other parties. It is based in Washington, USA. Richard Kuprewicz, President of Accufacts Inc., is an engineer and pipeline safety expert who has assessed oil spill plan development, and oil spills and pipeline failure investigations for various parties.

Accufacts reviewed data for this report and the company's analysis is quoted extensively throughout.

METHODOLOGY

This report is based on research into the workings of the oil industry conducted by Amnesty International and the Centre for Environment, Human Rights and Development (CEHRD), since 2008. In-depth desk and field research on the oil spill investigation process was undertaken between April and September 2013. This included an Amnesty International research mission to the Niger Delta in April and May 2013. Over the period of April to September researchers interviewed:

- Community members (all male) who had been involved in or witnessed the Joint Investigation Visit (JIV) process –interviews took place in April/May 2013 in Rivers and Bayelsa states.

- Representatives of local NGOs working on women's issues and women's groups in oil-affected communities – interviews took place in April/May 2013 in Rivers and Bayelsa states.

- The National Oil Spill Detection and Response Agency, Rivers State Zonal office in Port Harcourt on 7 May 2013

- The Rivers State Ministry of Environment, Port Harcourt on 7 May 2013.

- A team from Total Nigeria, including the Managing Director, in Port Harcourt on 9 May 2013.

- The Managing Director of the Shell Petroleum Development Company of Nigeria Limited, in Shell's London offices on 7 June 2013.

In addition, researchers put questions in writing to the Nigerian Agip Oil Company (Agip) via the Milan headquarters of its parent company, ENI, and received a response on 26 June 2013.

Researchers reviewed a number of relevant documents including JIV documents. Only Shell makes these documents publicly available, and Shell has only done so since 2011. There are substantial differences between pre-2011 and post-2011 JIV reports. Amnesty International and CEHRD have obtained pre-2011 forms primarily from community members. The following documents were reviewed:

- 11 pre-2011 Shell JIV forms[13]

- 6 NAOC JIV forms

- 1 Total JIV form given to Amnesty International by Total

- 536 post-2011 JIVs on Shell's corporate website

- Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN)

As several of the issues under investigation required specialist knowledge Amnesty International asked US oil pipeline specialist Accufacts to review the following:

- Examples of pre-and post-2011 Shell JIVs
- Samples of Agip JIVs
- The responses of all three oil companies and NOSDRA to questions about how the cause of oil spills and volume are determined.

In advance of publication the relevant findings of this report were shared with Shell, Agip and Total for comment. Responses were received from all three companies and are reflected in this report.

The report also draws on expert analysis by Professor Richard Steiner, who has examined oil spills in the US and Nigeria. In addition, the investigation of individual cases in this report has been done in collaboration with colleagues from Shareholders Alliance for Corporate Accountability (SACA), Environmental Rights Action (ERA), Gas Alert for Sustainable Initiative (GASIN) and members of the Nigerian National Coalition on Gas Flaring and Oil Spills (NACGOND).

CHAPTER 1: INTRODUCTION

1.1. THE NUMBER OF OIL SPILLS: ONSHORE OPERATORS

Year	Agip on NOSDRA database	Shell on NOSDRA database	Shell on Shell's website	Total E&P NOSDRA database	Overall
2007	180	171	320*	3	354/503
2008	235	95	210*	3	333/448
2009	258	118	190*	2	378/450
2010	323	188	170*	1	512/494
2011	400	207	207*	1	608
2012	474	207	192*	7	688/673
2013 to end Sep	471**	138*	138*	-	
Overall	2,341	1,124	1,427	17	

Source: National Oil Spill Detection and Response Agency database[14] and figures reported by Shell* and Agip**. The NOSDRA database lists Joint Investigations done from 2007. Shell's data and NOSDRA's data are not consistent and both figures are given. See page 12 for further details.

The number and frequency of oil spills in the Niger Delta is staggering. Hundreds of spills occur every year and this has gone on for decades. The table above shows a substantial increase in the number of spills occurring in the last five years. It should be noted that all oil spill reporting in Nigeria is likely to suffer from limitations and (as will be noted below) the NOSDRA data may not reflect all oil spills. Shell has reported different figures.

The spills recorded are for the three main oil companies operating on land in Nigeria – all of which are subsidiaries of European oil multi-nationals:

- The **Shell Petroleum Development Company** is a subsidiary of the Anglo-Dutch oil giant, Royal Dutch Shell;
- **Total Nigeria** is a subsidiary of the French company, Total;
- The **Nigerian Agip Oil Company** is a subsidiary of the Italian company, Eni.

The most dramatic increase in spills is recorded for Agip, with the number of spills more than doubling in five years. Amnesty International shared the NOSDRA data with Agip and the company, in responding to Amnesty International's information, did not dispute the number of spills. Agip's operations in the Niger Delta are significantly smaller than Shell's. Agip attributes almost all of these spills to sabotage and theft – however, as discussed in detail later in this report, this claim is not credible and even if the spills were due to sabotage and theft, the fact that Agip is unable to control its operating area is a serious failure on the part of the company.

While by far the greatest number of spills overall, and for 2013, is from Agip's operations, Agip reports lower volumes spilt than Shell. Agip has reported a total of 471 oil spills due to sabotage and theft between January and the end of September 2013, with the total estimated quantity of oil spilt being 4,014 barrels.[15] Shell has recorded 138 spills for the same period (less than half the number reported by Agip), but with total volume spilt of just over 16,000 barrels.[16] As will be noted later, volume reporting in the Niger Delta is very unreliable; the different scenarios reflected in Shell and Agip oil spill data merit further investigation.

The range of spills given for Shell in the table above reflects the fact that Shell's data and that of NOSDRA do not correspond. However, Shell's own reported data also reflect differences, as summarised in the table below.

Sources of information	Number of oil spills from Shell facilities per year, from different sources					
	2007	2008	2009	2010	2011	2012
Royal Dutch Shell Sustainability reports	249	157	132	144	182	173
Statistics on Shell's Nigeria web pages*	320	210	190	170	207	192
NOSDRA	171	95	118	188	207	207

**The statistics on Shell's Nigeria web pages are given in bar graphs*

NOSDRA's figures appear to be substantially lower for 2007 and 2008 than those reported by Shell. The figures begin to correlate in 2011. Amnesty International was not able to discover the reason for the discrepancy; nor is it clear why the figures in Shell Sustainability Reports are different to those presented on Shell's website.

Far fewer oil spills have occurred in the Total E& P operating area, which is relatively small, and no Total E&P cases are discussed in this report. However, Total E&P's statements about how oil spill investigation systems work are reflected.

The report does not cover off-shore oil operations in Nigeria. Nor does it look at national oil companies operating in the Niger Delta – this issue will be covered in later reports.

Historical data on oil spills by company are not available, except for Shell. Between 1989 and 1994 the company reported an average of 221 spills per year. According to Shell, during this time period 50 percent of the oil spilt by volume was due to corrosion, 21 percent due to operational problems and 28 percent due to sabotage.[17] None was attributed to theft of oil. Today Shell now claims that 75 percent or more of the oil spilt from its facilities in the Niger Delta is due to sabotage and theft.[18]

Several attempts have been made to estimate the number of spills and volume of oil spilt onshore and offshore in Nigeria since the oil industry began operations in the late 1950s. Estimates vary but put the number at over 10,000 spills.[19] Drawing on available data, a group of independent environmental and oil experts visiting the Niger Delta in 2006 put the figure for oil spilt, onshore and offshore, at 9 to 13 million barrels of oil over the past 50 years.[20] Many commentators believe both the number of oil spills and volume of oil spilt are under-reported.

1.2. HUMAN RIGHTS IMPACT OF OIL POLLUTION[21]

In 2001, in relation to a case on the impact of the oil industry in the Ogoniland area of the Niger Delta, the African Commission on Human and Peoples' Rights stated: "pollution and environmental degradation to a level humanly unacceptable has made living in Ogoni land a nightmare."[22] In a landmark decision, the African Commission found Nigeria to be in violation of a number of rights guaranteed under the African Charter on Human and Peoples' Rights, and stated that:

"[D]espite its obligation to protect persons against interferences in the enjoyment of their rights, the Government of Nigeria facilitated the destruction of the Ogoniland. Contrary to its Charter obligations and despite such internationally established principles, the Nigerian Government has given the green light to private actors, and the oil Companies in particular, to devastatingly affect the well-being of the Ogonis."

African Commission on Human and Peoples' Rights[23]

The decision of the African Commission clearly recognized the link between environmental destruction and human rights, and the responsibility of the government to protect people from such damage by non-state actors such as companies. The Commission called on the government, amongst other things, to protect the environment, health and livelihood of the people of Ogoniland; to ensure adequate compensation to victims of the human rights violations; and to undertake a comprehensive clean-up of lands and rivers damaged by oil. The government has not implemented any of these recommendations.

Similar pollution and environmental degradation is experienced across much of the oil producing areas of the Niger Delta.[24] This pollution – which has affected the area for decades - is occurring in a context where the livelihoods, health and access to food and clean water of hundreds of thousands of people is closely linked to the land and environmental quality. Oil spills damage both the soil and water system.[25]

Women, men and children living in the Niger Delta have to drink, cook with, and wash in polluted water; they eat fish contaminated with oil and other toxins - if they are lucky enough to still be able to find fish; the land they use for farming has been contaminated; after oil spills the air they breathe reeks of oil, gas and other pollutants; they complain of breathing problems, skin lesions and other health problems, but their concerns are not taken seriously and they have almost no information on the impacts of pollution.

The main human rights impacts documented by Amnesty International and CEHRD[26] are:

- Violations of the right to an adequate standard of living, including the right to food – as a consequence of the impact of oil-related pollution and environmental damage on agriculture and fisheries, which are the main sources of food for many people in the Niger Delta.

- Violations of the right to gain a living through work – also as a consequence of widespread damage to agriculture and fisheries, because these are also the main sources of livelihood for many people in the Niger Delta.

- Violations of the right to water – which occur when oil spills pollute water used for drinking and other domestic purposes.

- Violations of the right to health – which arise from failure to secure the underlying determinants of health, including a healthy environment, and failure to enforce laws to protect the environment and prevent pollution.

- Failure to ensure access to effective remedy for people whose human rights have been violated.

These violations and abuses affect people differently; the different impacts on women and men, children and the elderly, and people with particular vulnerabilities, are rarely identified or discussed. Research for this report found that women are frequently excluded from all aspects of post-oil spill processes, and this can leave women in particularly difficult situations with respect to damage done to their livelihoods.

The abuses and violations are, primarily, the result of the operations of the oil companies and the almost complete failure of the Nigerian government to regulate the oil industry and protect the rights of the people of the Niger Delta.

ECOWAS CASE

In July 2009 the Nigerian NGO, Socio-Economic Rights and Accountability Project (SERAP), filed a case against the Federal Government of Nigeria and six oil companies over alleged violations of human rights associated with oil pollution in the Niger Delta. The complaint alleged "Violations of the right to an adequate standard of living, including the right to food, to work, to health, to water, to life and human dignity, to a clean and healthy environment, and to economic and social development – as a consequence of: the impact of oil-related pollution and environmental damage on agriculture and fisheries."[27]

While the Court declined jurisdiction over the oil companies, the case proceeded against the government. On 17 December 2012, in a groundbreaking judgment, the Court found Nigeria responsible for the abuses of the oil companies and made clear that the government must hold the companies to account.

The court made several orders ---firstly, that the government must take effective measures within the shortest time to address the issues of oil pollution and devastation in the Niger Delta; secondly, that the government must take immediate steps to bring perpetrators of the violations in Niger Delta to account; thirdly, that the government must take effective measures to prevent further occurrence of the violations of the rights. The government of Nigeria has failed, to date, to act on any of the court's orders.

1.3. THE OIL SPILL INVESTIGATION PROCESS

When an oil spill occurs in the Niger Delta, a joint investigation team should be mobilized to visit the site. The joint investigation team includes representatives of regulatory agencies, the oil company, the affected community – almost always men – and the security forces.

Several regulatory agencies participate in the JIV process. They are:

- The **National Oil Spill Detection and Response Agency (NOSDRA);** this is a specialised department of the Federal Ministry of Environment. It was established in 2006 to address oil spill issues, including implementation of a national oil spill contingency plan, prevention of future oil spills and remediation of past oil spill damage.

- The **Department of Petroleum Resources** has a broad regulatory remit in relation to the oil industry, including promotional, but its mandate in relation to oil spills – since the creation of NOSDRA - is unclear.

- Representatives of **State Ministries of Environment** often participate in JIV processes.

The joint investigation team investigates the cause of the oil spill and is supposed to jointly agree and sign a report that confirms the cause and includes other key information such as the volume of oil spilt and the area affected. The process is heavily dependent on the oil companies: they decide when the investigation will take place; they usually provide transport to the site of the spill; and they provide technical expertise, which the regulatory bodies lack.

1.4 THE JIV FORMS

The information recorded on the oil spill investigation form, known as a Joint Investigation Visit (JIV) report[28], is extremely important as it is the basis for deciding whether communities receive compensation for damage to their homes, fields and fisheries. If a spill is found to be due to sabotage or third party interference then the community gets no compensation from the oil company, regardless of the damage caused. This is based on a provision in Nigeria's 1990 Oil Pipelines Act, which states:

"The holder of a licence shall pay compensation … to any person suffering damage (other than on account of his own default or on account of the malicious act of a third person) as a consequence of any breakage of or leakage from the pipeline or an ancillary installation, for any such damage not otherwise made good." [29]

The data recorded on JIV forms about the volume of oil spilt and area affected can also affect how much compensation people receive, and may affect the extent and quality of clean up.[30]

This report looks at both the JIV process and the data captured on JIV forms. Sample forms are contained in the appendices. The forms record the date on which a spill is believed to have started, the date of the investigation, the cause of the spill (often with various choices already printed on the form to be ticked as appropriate), the volume spilt and the area affected. JIV forms are generally short documents of two pages. In 2011 Shell began to publish its JIV forms on its website; these forms are longer and more detailed than Shell's pre-2011 JIV forms.

CHAPTER 2: FLAWS IN THE OIL SPILL INVESTIGATION SYSTEM

Amnesty International and CEHRD examined the oil spill investigation process. The organizations looked at the following issues:

- The extent of regulatory oversight of the JIV process;
- How the start date of an oil spill is established– which can be important for understanding the duration of the spill and for some calculations of volume spilt;
- How the cause of the spill is established and recorded;
- How the volume of oil spilt is determined and recorded;
- How the affected area is established and recorded;
- The role of the men and women from affected communities in the process.

2.1. INVESTIGATIONS – LACKING INDEPENDENCE AND OVERSIGHT

Oil spill investigations are organized and led by oil company personnel. Despite its title, the National Oil Spill Detection and Response Agency (NOSDRA) does not initiate oil spill investigations. It is usually dependent on the company both to take NOSDRA staff to oil spill sites and to supply technical data about spills.

During an interview with Amnesty International on 7 May 2013 the Director for NOSDRA's Rivers State office received a text message from the Nigerian Agip Oil Company (Agip) informing him of a spill. The text message stated when the JIV would take place (a date several days later) and notified the Director that his staff members should be ready to join the team at a given time. The Director confirmed that this is the usual procedure for a JIV. NOSDRA is told when it will be done by the oil companies – either by text or a letter.

JIVs are frequently carried out days – and in some cases weeks – after an oil spill occurs.[31] This is inconsistent with the requirements of Nigerian regulations. According to the *Environmental Guidelines and Standards for the Petroleum Industry in Nigeria* clean-up of an oil spill should commence within 24 hours of the occurrence of the spill.[32] As a JIV precedes clean-up, it is impossible to comply with the 24 hour deadline when JIVs are scheduled several days after the spill is reported. Companies usually blame access restrictions for delays in carrying out investigations and clean up; while access is restricted in some cases, there is evidence the oil companies' claims are not always correct and that delays are routine. NOSDRA appears to have little control over the timeframe for investigations. This issue is taken up again in Chapter 4.

The technical capacity of regulatory bodies is also a matter of concern. In a 2011

environmental assessment of Ogoniland, the United Nations Environment Programme (UNEP) found:

"Both [the Department of Petroleum Resources] and NOSDRA suffer from a shortage of senior and experienced staff who understand the oil industry and can exercise effective technical oversight. The main reason for this is that individuals with technical knowledge in the field of petroleum engineering or science find substantially more rewarding opportunities in the oil industry."[33]

The research done by Amnesty International and CEHRD for this report also raises questions about the technical capacity of the regulators. For example, NOSDRA cited a discredited process for determining the cause of an oil spill – the Zonal Director in Rivers State told researchers that the location of a hole on a pipeline was a key determinant of cause; yet this view was not only disputed by an independent expert but by some of the international oil companies.[34] This issue is covered in greater detail in section 2.3.

Amnesty International and CEHRD found other evidence of weaknesses in the way oil regulators operate; in one oil spill case a student on work experience (know as industrial training) was the sole regulatory representative sent by Rivers State Ministry of Environment for the JIV.[35] In another, the Batan oil spill (see page 20), a regulatory representative attempts to have the cause of a spill recorded as 'sabotage' despite evidence of equipment failure.[36]

While evidence about regulatory capacity is somewhat anecdotal, it is supported by assessments made by United Nations agencies and the World Bank[37], as well as non-governmental organizations (NGOs). In 2006, the UN Development Programme noted that:

"The oil companies, particularly Shell Petroleum, have operated for over 30 years without appreciable control or environmental regulation to guide their activities."[38]
United Nations Development Programme, 2006

Most recently, in August 2011, the United Environment Programme (UNEP) concluded that:

Government agencies are at the mercy of oil companies when it comes to conducting site inspections".[39]
United Nations Environment Programme, 2011

The Department of Petroleum Resources has long been considered to suffer from a conflict of interests. A recent UNEP report stated that:

"There is clearly a conflict of interest in a ministry which, on one hand, has to maximize revenue by increasing production and, on the other, ensure environmental compliance."[40]
United Nations Environment Programme, 2011

The weakness of the regulatory agencies means that, in effect, the company (which is the potentially liable party) has substantial control over a process that sets many of the parameters for liability. These include the cause of the spill, the volume of oil spilt, the area

affected and the scale and extent of the resulting impact. The company's dominant role in the investigation process represents a deeply troubling conflict of interest.

2.2. ESTABLISHING THE START DATE OF AN OIL SPILL

Establishing the start date of an oil spill is important in relation to both timely action to address the spill and calculations about the amount of oil spilt. There are two ways in which oil companies in the Niger Delta establish a spill has occurred: one is when companies detect a drop in pressure in the pipelines; the other is physical surveillance by staff or contractors.[41] Over five years of investigating oil spills in the Niger Delta Amnesty International found that most spills are reported by surveillance contractors who live in the community or by members of the community.[42]

Both of the methods of establishing that a leak is occurring have limitations in terms of how the start date of a leak is established, and pressure loss in itself would not alert companies to all leaks.

Shell Nigeria's Managing Director, Mutiu Sunmonu, explained in an interview with Amnesty International on 7 June 2013, that for "big" spills a drop in pressure [in the pipeline system] would be noted, and this would alert the company that there was a leak somewhere in the system.[43] However, he refused to explain how "big" a leak had to be before it was detected by this system.

Amnesty International asked US firm Accufacts, an oil pipeline specialist, for their view. Accufacts stated: "One of the greatest misconceptions related to remotely identifying a possible oil release is that such releases will quickly be indicated by pressure loss. There are many variables related to operation of production flowlines and liquid transmission pipelines that render pressure loss indication highly unreliable in determining a pipeline release."[44]

Accufacts also noted, that "even for high rate rupture releases, depending on the system and its operation, pressure loss may not occur for quite some time" and that "Surveillance of the right of way [the land area around pipes and other infrastructure], whether by local/public contract, or company personnel are most likely to visually identify an oil release before any other release detection methods."[45]

As noted above, surveillance is the method used in the Niger Delta. While surveillance is more reliable for identifying spills, it can be difficult to establish the start date of some spills with certainty - it depends on where the spill starts. If the area is very close to a community it may be noticed immediately and the start date established relatively clearly. However, if the spill point is not close to a community, or if it is in water or swamp, then a spill can flow for days before being noticed.[46] Once noticed, there can also be a gap in time before oil companies are alerted.

NOSDRA admits it is not always possible to know when a spill starts. According to the Rivers State Zonal Director, a spill can be seen as starting from the time it is noticed, so people estimate and agree in the field.[47] To a certain extent, establishing the start date of an oil spill in the Niger Delta therefore relies on information from the community.

The start date has ramifications for calculation of the volume spilt under some of the formulas used by oil companies which are based on the rate of a leak over a period of time.

At a major oil spill at Bodo in 2008 (see Chapter 3) there has been a serious dispute about the date on which the spill started; the community and two separate regulatory agencies give the start date as 28 August 2008[48], while Shell recorded 5 October 2008 on its JIV forms. Despite repeated queries from Amnesty International and CEHRD, Shell has not provided an explanation for the start date it recorded. However, the company appears to be using that date to assert that a much lower volume of oil was spilt at Bodo than other evidence suggests.

Communities in areas where Agip, a subsidiary of Italian oil company ENI, operate have also raised concerns about how the start date of a spill is recorded on JIV forms. For example, in a spill on a flowline at the Osiama field, Bayelsa State, the start date of the spill is given on the JIV form as 15 June 2010; however, a community representative who was present when the spill occurred, claims it stared on 10 June.[49] He says "we observed the spill earlier than the date recorded. The date is when they received the report." In this case the quantity of oil spilt is given as two barrels at the time of the JIV visit at 16.20 on 16 June 2010. The oil company cannot have noted a drop in pressure for such a low volume, so the oil spill can only have been detected by physical surveillance. Amnesty International asked Agip about this issue but the company did not respond.

SHELL'S UPDATED JIV PROCESSES

In 2011 Shell began publishing its oil spill investigations on its corporate website. Amnesty International welcomed this move. However, Amnesty International also notes that some systemic challenges, which compromise the accuracy and transparency of the process, remain.

Firstly, the company still takes the lead in a process that is about investigating – amongst other things - its own liability. In view of the lack of capacity and independence of the regulators this remains a serious shortcoming, allowing errors and abuses to occur; this is not a theoretical concern – a review of post-2011 JIVs, described in sections 2.3 and 2.4, reveals problems with specific cases.

Secondly, the forms that Shell puts on its website are not the forms that are completed and signed in the field. Shell was initially reluctant to admit this was the case; however, the forms[50] are extremely neat and include multiple calculations and drawings that would be very difficult to carry out in field conditions in the Niger Delta. After pressing Shell Nigeria's Managing Director, Mr. Mutiu Sunmonu, on this issue, he confirmed that there are two forms, and stated that "the most important data is filled in in the field."[51] The reason for two forms is to ensure the one put on the website is legible. Amnesty International asked Shell if we could see the JIV forms that communities sign in the field but Shell refuses to share these forms.

Finally, there is a substantial difference between the data captured in pre-2011 forms and post-2011 forms. The new reports are longer and include considerably more data – for example, numerous GPS coordinates, detailed drawings and photographs of the leak point. Amnesty International asked Shell about the specific changes made in the JIV process, and the extent to which they reflect weaknesses in the earlier process. Mr. Sunmonu responded: "I am not going to spend time comparing past and present."[52]

2.3. ESTABLISHING THE CAUSE OF AN OIL SPILL

As discussed earlier, oil spills in the Niger Delta are caused by corrosion, poor maintenance of oil infrastructure, equipment failure, sabotage and theft of oil. Establishing the cause of an oil spill has long been the main focus of the JIV process. However, the means by which the cause of an oil spill is decided during the JIV are deeply flawed. This section examines the approaches of the different oil companies to establishing the cause of a spill, considering both what companies claim they do, and what is seen on JIV forms. It includes information on specific cases in which the cause of an oil spill has been misstated.

CALLING OPERATIONAL SPILLS SABOTAGE

In 2009 Amnesty International raised questions with Shell about the practice of changing the cause of an oil spill from 'operational' to 'sabotage' after an oil spill investigation had occurred, where this was done without any supporting evidence and outside of any recognised process. Amnesty International's concerns were based both on a specific case –the Batan oil spill, described below – and the finding in a court case.

CASE 1: THE BATAN OIL SPILL, 2002

On 20 October 2002 an oil spill from an underground pipe occurred at Batan in Delta State. On 23 October, Shell wrote to the Governor of Delta State informing him that the oil spill was caused by sabotage. This letter was dated two days *before* the joint investigation visit took place. Moreover, it named seven people as the likely culprits. On 25 October - five days after the spill began - a joint investigation team arrived at the site. The team included armed police and army officers, representatives of the Department of Petroleum Resources (DPR) and of Shell, as well as members of the community. The team also included a professional diver, as the pipe was 12 feet under water. A member of the community captured the investigation on video. Although the diver found that bolts and nuts of the pipeline were loose and the cause of the spill, in the video a Shell representative (apparently leader of the investigation team) is heard trying to persuade the other members of the investigation team not to write the cause of the spill on the investigation form. This position appears to be supported by the representative of the DPR. However, eventually the spill was recorded as "equipment failure" and the joint investigation team members signed the investigation report.

The following day, 26 October 2002, the Batan community received a message from Shell stating:

Our representatives have narrated to us the gruesome ordeal, duress and manhandling to which they were subjected by people of your community, including some members of its executive committee, in the process of carrying out the Joint Investigation and writing the Joint Investigation Report…Consequently, Shell hereby repudiates the purported Joint Investigation Report … in which our representatives were coerced into taking the cause of the incident as being production equipment failure, instead of an act of third party interference, sabotage, which it clearly was. The inspection report of the diver who inspected the leak point leaves no reasonable person in doubt that the leakage occurred due to unauthorized tampering, by unknown persons, with two nuts and bolts on the flange of the manifold. In fact, we have reasonable ground to suspect that some members of your community might be the culprits, and this suspicion has been reported to the appropriate authorities for the necessary action. We trust that you will prevail on the members of your community to respect the rule of law in order to prevent further strains on our usually cordial relationship.

Letter from Shell to Batan Community[53]

The allegations made by Shell in this letter are contrary to the video evidence of the event, which includes

footage of the armed public security personnel guarding the Shell representatives.

The community passed the video of the oil spill investigation to a local organisation, the Centre for Social and Corporate Responsibility (CSCR) which took up the case with Shell. CSCR's investigation and follow-up on the Batan case highlights the level of control that Shell has over the joint investigation process. Even though the community was able to insist on the cause of the spill being designated as production equipment failure, Shell later denied this. In subsequent meetings with CSCR, Shell staff provided confusing and sometimes contradictory information on the equipment and the nature of the problem, but continued to insist that the nuts and bolts had been tampered with, providing no evidence other than their own interpretation of the investigation. Even when a CSCR expert pointed out that a faulty gasket could cause the nuts and bolts to come loose, and that the gasket was indeed faulty at the point of the Batan leak (according to a work order the gasket was replaced), Shell continued to maintain the spill was caused by sabotage.

Shell subsequently offered the community a development package worth approximately US$100,000, without conceding that the spill was due to production equipment failure. The community accepted this deal.[54]

Amnesty International passed the video footage of the Batan oil spill to Shell to ask for their comments on the events recorded. Shell declined to provide any comment. Amnesty International also asked Shell to comment on the naming of seven individuals, and on what evidence they based the allegations in the letter to the authorities. Shell has never responded to these questions. As far as Amnesty International could discover, the men were never arrested.

The Batan oil spill is not the only one in which Shell characterized the cause of a spill as sabotage despite evidence that equipment failure or human error was to blame. According to G.J. Frynas, who has studied and written extensively on oil litigation in Nigeria, "There are indeed strong indications that oil companies in Nigeria have used false claims of sabotage to avoid compensation payments..."[55] Court actions in Nigeria such as Shell v Isaiah (1997) have reached similar conclusions.

CASE 2: COURT ACTION - SHELL V ISAIAH, 1997

In this case, the plaintiffs went to court seeking compensation because, during a repair operation on a Shell pipe, which was dented when a tree fell on it, oil leaked on to farmland and into fishponds. Shell claimed the leak was caused by sabotage. The Appeal Court judge stated: "The issue of sabotage raised by the defendant is neither here nor there…I am, having regard to the facts and circumstances of this case, convinced that the defence of sabotage was an afterthought. The three defence witnesses were agreed on one thing, that is that an old tree fell on and dented the shell pipe…How could this have metamorphosed into an act of cutting the pipe by an unknown person? What is more, there is no evidence whatsoever in proof that the pipeline was 'cut by a hacksaw.'"[56]

COMPANIES ESTABLISH THE CAUSE AFTER THE JOINT INVESTIGATION

In addition to evidence that oil companies have changed the officially recorded cause of an oil spill after the investigation, there are also cases where companies determined the cause after the JIV investigation, and without oversight. In some cases, for reasons that are not always clear, the cause is not or cannot be determined in the field, but is established later by the company. Amnesty International has not found any case where the regulators do post-JIV investigations.

For example, Amnesty International reviewed the JIV form for an oil spill at Ikarama in Bayelsa State in 2007. Although the JIV report states that a leaking valve was the cause of the oil spill, the report also states that the "cause of the spill will be established in Shell office". Amnesty International asked Shell to explain what process was used in their office to complete this investigation. No answer was received.

While there may be legitimate reasons why the cause cannot be determined in the field, the fact that it is the company that carries out further investigation is deeply problematic. The outcome of such processes cannot be considered credible in light of evidence of other bad practice by oil companies, in relation to oil spill investigations such as Batan.

SYSTEMIC PROBLEMS WITH ESTABLISHING THE CAUSE

The cases referred to above could be dismissed as isolated examples. However, an investigation into the process by which the cause of an oil spill is determined reveal systemic flaws that leave the system open to abuse.

In 2013, Amnesty International asked the main oil companies and NOSDRA how they determine the cause of an oil spill. The answers are given below.

According to NOSDRA's Zonal Director in Port Harcourt, the cause of a spill is determined by brainstorming and by such diagnostic tools as the location of the hole or leak point on the pipe. The Director stated that: "if spills are at 12 o'clock it is sabotage, it is almost always sabotage. Even at nine, ten, eleven or three, two or one o'clock, it is mostly sabotage, but if it is 6 o'clock it is corrosion." [57] The Director explained that the reason corrosion occurs at the bottom of the pipe (6 o'clock) is because there is a mixture of water and oil in the oil pipes; water is at the bottom and crude on top, and because there is sand in the water the bottom of the pipe is more likely to corrode.

Responding to the same question Agip stated:

"The cause of spill is confirmed through visual observation, Ultrasonic Thickness Measurements (UTM) results and evaluation of the circumstances surrounding the spill. Visual observation involves an inspection of the nature of the aperture, hole or breach. From such inspection, it is possible to determine whether a spill is due to hacksaw cut, drilled hole (which will give a consistent/regular circular appearance), corrosion (which shows pitting and irregularity at the edges of the aperture) or use of explosive devises (which shows indentations and gashes on the facility). UTM provides results on the thickness of the pipe which enables you to determine whether the thickness of the pipe is still within the corrosion allowance as specified for the pipeline.

For equipment failure, it is possible to determine impairment in the integrity of concerned facility, for instance a pin hole in the welded joint of a choke box or failure of seal in a clamp. Spill incidents caused by oil theft for instance are verified from the observation of the valves installed for the oil theft activity. The outcome of these findings is discussed among the members of the JIV team and a decision is reached to confirm the findings."[58]

Both Shell and Total stated that the cause of an oil spill is established using visual indicators including the nature of the hole/leak point and whether there has been prior disturbance of

soil or, as Total mentioned, evidence of acid spilled on the soil to seep in and erode the pipes.[59] Shell also told us that when there is a dispute Shell can take the piece of pipe away and do forensic tests on it. However, we could not find out if this actually happens in practice.

Amnesty International asked Accufacts to review these responses, as well as a number of JIV forms, including pre- and post-2011 JIVs, and to provide an assessment of the way cause is determined on JIVs. On many JIV forms the cause of an oil spill is recorded by ticking a pre-set list of options – most of which are based on visual observation of the affected part of the oil pipe or wellhead and the surrounding area. Newer JIVs forms include drawings, photographs and – often – additional observations made in writing.

PRE-2011 JIVS: NO VERIFIABLE INFORMATION

Accufacts noted that the most common method of cause determination was visual inspection of the site. However, on many of the pre-2011 JIV forms that Amnesty International has seen and shared with Accufacts there is little or no data on what was visually observed at the spill site. On several JIV forms a cause is simply stated with no other information given.[60] No photographs are provided. The failure to provide photographs is significant – as photographs of the spill point would be the most reliable data on the cause of a spill. The oil companies do take photographs when conducting JIVs but none of the companies makes these public (Shell has done so since 2011 but refuses to do so for pre-2011 JIVs). Consequently the cause stated on a JIV report can rarely be interrogated or verified independently. As noted previously, the fact that regulatory bodies are present at the investigation does not mean there is independent assessment of the cause of an oil spill.

For years communities in the Niger Delta, supported by local environmental groups, have alleged that oil companies blame oil spills on sabotage when the caused is corrosion or operational failure. Such claims are generally ignored, passed off by oil companies as communities seeking compensation. However, as the cases referenced above demonstrate, community concerns have been shown to have some basis. The failure of oil companies to provide – or to disclose – the most basic evidence of the cause of an oil spill completely undermines the JIV process.

Despite the fact that pre-2011 JIV forms give limited or no basis for the recorded cause of an oil spill, these forms have been used to deny communities a remedy. Several communities continue to try to challenge oil companies' claims but there is no process of appeal, no means for any independent party to check the facts and no obligation for the companies to back up their claims.

POST-2011 SHELL JIVS: MISDIAGNOSES AND LACK OF EVIDENCE

Since 2011 Shell has published photographs for all JIVs, although the company refuses to provide pictures for spills prior to 2011 even though these exist. Accufacts reviewed more than 40 of these records. While some photographs did allow for verification of the cause of the spill, others did not.

Accufacts noted: *"There are numerous photos from Shell's website that do not permit a close-up review of the actual failure site to permit an independent forensic analysis. [This is] very odd, as such clear photo evidence would protect the pipeline operator from spurious claims. When photos are provided too many appear to have been taken with the objective of not being used as forensic evidence in [Accufact's] opinion."*[61]

In addition, Accufacts noted some cases where the photograph evidence did not appear to support the claim of sabotage. For example, an oil spill took place on the Trans Niger Pipeline (TNP) at Mogho on 5 May 2012. The JIV was done on 6 May and concluded the cause was sabotage due to a hacksaw cut.[62] Accufacts reviewed the JIV report and the associated photographic evidence (above) on Shell's website, and noted: "[the] close-up photo on 24" TNP does not indicate hacksaw cut, more likely weld seam or crack leak failure such as at a weld. The photo does not appear to show a straight cut that would more likely be indicative of a claimed hacksaw cut. More likely the poor photo suggests some form of pipeline failure from cracking."[63] Accufacts also noted that the "photo does not sync with drawings in JIV report." Amnesty International asked Shell to comment on this. The company did not respond.

In another case, a spill occurred at Ikarama in Bayelsa state on 24 May 2013. The JIV, which took place on 30 May, six days later, found the spill was due to a hacksaw cut.[64] However, the photograph (reproduced above, taken from Shell's website) does not show a hacksaw cut. According to Accufacts: "Most likely this photo suggests that the seal on a previous clamp repair has failed for various reasons, such as poor installation." [65]

While some of the spills attributed to sabotage appear to have been wrongly classified, in other cases the photographs do not allow for reliable verification of any cause. For example, the photographs taken during a JIV at Rumuekpe on 12 July 2013 states that the spill, which apparently stared on 9 July, was due to a 25 mm drill hole at the top of the pipe. However, the close up photographs, reproduced below (from Shell's website), do not show a drill hole. They show a spurting leak point covered in mud, and then a cleaned-up segment of pipe with a wooden plug. Accufacts commented that the plugged hole did not appear to be a drill hole. Amnesty International asked Shell to explain why the drill hole was not photographed clearly. The company did not respond.

Shell's publication of photographs of oil spill sites is a positive development, and one which other companies should follow. However, the recording of information remains problematic in some cases.

PROBLEMS WITH OTHER METHODOLOGIES FOR ESTABLISHING CAUSE

While visual inspection of the oil spill site and leak point is the main method of establishing the cause of an oil spill, both the oil companies and NOSDRA referred to other diagnostic tools. Accufacts noted limitations with some of the other methods which the companies referred to:

"For example, ultrasonic readings (UT) measurements do not eliminate the failure of a pipeline from corrosion such as pitting that is more likely to be missed from UT readings. How and where the UT measurements are taken can cause UT measurements to miss even general corrosion.

The shape of a "hole" can also be misevaluated, though the shape is important to report. Accufacts' extensive pipeline experience would verify that a round hole observation does not eliminate corrosion as a possible failure cause, as certain types of corrosion can and often represent themselves as round hole releases (e.g., pitting). Pitting corrosion is a special form of selective corrosion that is harder to determine than general corrosion wall loss."[66]

Amnesty International shared this view with Agip who clarified that: "The UT measurements are only meant to exclude those corrosion mechanisms (i.e.: extended internal corrosion) not assessable by visual inspection."[67]

Accufacts was particularly concerned by NOSDRA's suggestion that the o'clock position was a useful diagnostic methodology.

"…the location of a failure on a pipe does not eliminate other possible causes currently being used to subjectively determine failure causes on the JIV Report. Cause determinations relying on o'clock position on a pipeline represents very poor science."[68]

This view was supported by Total, who rejected the o'clock position as a diagnostic indicator[69] and by data on Shell's website, which shows several oil spills are attributed to sabotage when the leak point is at the 6 o'clock position and conversely numerous corrosion spills are recorded as having occurred at the 12 o'clock position.

However, Amnesty International and CEHRD are concerned that the" o'clock position" influences the JIV process in the field. In June 2012, the organizations questioned Shell when statements were made during a JIV processes at Bodo in Rivers State (see Case 3, below) that the oil spill was sabotage because the hole was at 12 o'clock.

CASE 3: BODO OIL SPILL, JUNE 2012

On or close to 21 June 2012 an oil spill was discovered in the Bodo creek area of the Niger Delta. The pipeline at Bodo is the responsibility of Shell. The joint investigation was initiated on 30 June. Local people observing the JIV became concerned when the regulators and Shell stated that the spill was probably due to sabotage because the hole in the pipe was at the 12 o'clock position.[70]

The JIV continued on 3 July and Shell told the community to bring an expert who could assess whether the pipe was corroded. The community asked an engineer, Osita Kenneth, to accompany them to the site. He requested further information from Shell, but said that, based on his experience gained over more than 10 years in the pipeline industry, there was evidence of a corrosion failure.[71]

As the JIV was proceeding people took photographs of the affected area of the pipe (see below). Amnesty International shared the photographs with Accufacts, who also saw evidence of corrosion. Accufacts stated: "This is apparently due to external corrosion. Notice the layered loss of metal on the outside of the pipe around the "stick" from pipe wall loss (thinning) due to external corrosion. It is a very familiar pattern that we have seen many times on other pipelines."[72]

Photograph of the spill point at Bodo, © CEHRD

Amnesty International immediately sent this assessment to Shell. The company stated that it had not claimed that the cause of the spill was sabotage and the joint investigation had not been completed.[73] However, Shell could not explain the statements made to the community that the cause appeared to be sabotage because of the position of the hole in the pipe at "12 o clock". Nor was Shell willing to make any comment about the visible corrosion of the pipe.[74]

Instead Shell told Amnesty International that they would take the affected length of pipe to a Shell facility for testing. The community - as well as Amnesty International and CEHRD - expressed concern that this process, which would be under the control of Shell, would not be transparent. Responding to these concerns Shell stated: "SPDC has and will continue to involve the community throughout the joint investigation process as is standard practise, and hopes to satisfactorily conclude the process in a timely way."[75]

As of September 2013 – more than one year after the leak - Shell had yet to remove the affected area of the pipe and the JIV was not complete. Shell explained the delay to Amnesty International saying that the work "requires specialist support as the line at Bodo is at a low point, and long lead times are needed to do this work in such a way as to prevent any further spill during the cut-out."[76]

In cases of sabotage, oil companies often claim that there are signs of prior excavation of the area (suggesting that someone has tampered with the pipe). Video footage, which clearly shows the pipe had to be excavated by Shell using a mechanical shovel, does not appear to show any signs of prior excavation.

This is the only occasion where Amnesty International and CEHRD have been able to intervene in a JIV as it was occurring. There was evidence of bad practice – citing the o'clock position as verification of sabotage. The two organizations were able to secure expert input to the process, which may have prevented the cause being recorded as 'sabotage'. This is, as far as Amnesty International could discover, the only JIV that has remained incomplete for such a long period.

This case underscores both the weaknesses in the field process and the lack of capacity of the regulators to follow up on the JIV; the process is dependent on the oil companies despite the clear conflict of interest. In this case, evidence that would point to a corrosion failure has been ignored and Shell appears to have complete control over the investigation process and the timeline for completion.

CONCLUSION ON CAUSE OF OIL SPILLS

It is in the interest of oil companies like Shell to have oil spills in the Niger Delta attributed to sabotage and theft – not only do they not have to pay compensation, they can deflect attention away from the condition of their pipes and infrastructure and, as they have done extensively in the past five years, use sabotage to deflect criticism from shareholders and the media. Given the way Shell in particular has referenced sabotage in response to criticism of its environmental impact in Nigeria, there should be far greater scrutiny of the basis on which Shell makes these claims and the implication of inaccurate reporting.

Shell's more recent transparency around the investigative process is welcome but there appear to be ongoing problems with how sabotage is evidenced. In a context where regulators have limited capacity, the system remains open to abuse, and there is evidence that it has been abused.

In relation to the way cause is established during the JIV process, Accufacts concluded that:

"The JIV reports do not provide sufficient information to verify or properly support the indicated determination of cause. Preconceptions (such as evidence of loose soil at the release site, location of the pipe failure site - top of pipe is sabotage, while bottom of pipe is corrosion, or hole appearance) introduce prejudiced and highly probable false conclusions as to the real cause of the pipe's failure. Based on an Accufacts review of photographic evidence of some of the claimed Niger Delta pipe failures, cause determinations based on the information entered on current JIV reports can be very subjective, misleading, and downright false."[77]

2.4. ESTABLISHING THE VOLUME

Accurate measurement of the volume of oil spilt is important for two reasons: firstly, it can affect assessment of damage done and therefore compensation people receive and the nature of the clean up undertaken; secondly, it is the basis for the overall figures that companies put into the public domain on volume of oil spilt due to operational failures versus sabotage and theft.

During the JIV process at oil spill sites the volume of oil spilt is recorded. According to almost all sources interviewed the method used to calculate volume involves a visual estimation of the area over which oil has spread multiplied by the depth of the spill, with some consideration of issues such as the porosity of the soil.

In an interview with the Rivers State Zonal Director of NOSDRA in May 2013, he confirmed that the volume is established by "estimation".[78]He said that the JIV team do not use equipment, but do sometimes use a rod to dip in water to test the depth of the oil. This approach (using a rod to gauge depth of oil) is not used on land, he said, "as land is uneven". However, several individuals who had seen or participated in JIV processes said they had seen oil company personnel and regulators dip a stick or a finger in oil spilt on land and that this appeared to be the basis for estimating depth.[79]

In June 2013, Amnesty International asked the Managing Director of Shell how the volume of oil spilt was calculated. He explained that establishing volume is about the size of leak point and the pressure of oil flowing through the [pipe]line (oil per minute or second). [80] However, Amnesty International noted that this methodology is not used in the field. Therefore it is not the basis for whatever figure is recorded on JIVs and signed by the regulator and community.

When Amnesty International pressed Shell on this issue, the company confirmed that this method was used after field investigations. Amnesty International has asked Shell: If the volume is calculated in this way (size of leak point x pressure in pipeline x duration of spill) then what is the relationship between this figure and the one recorded in the field? Based on Shell's JIV forms, the field calculation would appear to be an assessment of area x depth. Shell did not provide any clear explanation of the status of the figure obtained using the calculation method its Managing Director in Nigeria claimed was the method Shell uses to calculate volume of oil spilt.

Agip and Total confirmed that their approach to calculating oil spill volume in the field was based on the surface area spread of oil multiplied by depth, with assumptions regarding porosity of soil and oil on water.

All three companies noted that this method provided an estimate only, and was not exact. Agip stated "In any case, the estimated volume is agreed among the JIV team members."[81]

However, Total went on to explain that the volume estimated in the field is updated with a more technical detailed value in a report known as a "Form B". There is no mention of Form B or an alternative method for establishing volume spilt on the JIV reports. Form B is not shared with the communities. This issue is addressed in more detail below.

There are other serious challenges with the volume data recorded on the JIV forms, particularly those that are pre-2011. These include the following:

JIV forms without basic data: Despite the explanations given by the oil companies, several pre-2011 JIV forms seen by Amnesty International did not include data on area, depth or soil porosity – they merely give a total amount of oil spilt, which is not explained. In some cases no volume is recorded and no explanation for non-recording is provided.

For example, in 2009, the community at Edagberi (also known as Joinkrama 4 or JK4) was asked to sign a JIV form on which most of the data were not filled in. Amnesty International has obtained the JIV form which shows that key data had not been recorded. The volume of oil spilt is recorded but none of the data for the calculation has been completed.

The absence of basic data used to calculate the amount spilt raises questions about exact processes in the field and the extent to which regulators and community representatives are aware of and can challenge what is written down. For community members involved in JIVs the focus of the process is often the cause of the spill, which people know affects whether they get any compensation. As far as Amnesty International and CEHRD could discover, community representatives may not pay attention to other information recorded on the form, not realising the importance of the volume data. The regulators should be fully aware of the importance of completing all data fields, yet regulators have signed off on JIVs with missing data.

No disclaimer about estimate: Some of the forms, depending on the company, indicate the spilled oil determination is a preliminary estimate. In other JIV reports reviewed, no such important disclaimer is provided and this lack of clarity can lead to much confusion, especially if there is disagreement or if litigation is pursued as the JIV report may be cited as evidence.

No measurement of oil that moves downstream: There appears to be no means of establishing – during the JIV field visit - the volume of oil that may have moved far downstream of the original spill. This is a very important issue in the Niger Delta, given the number of creeks, streams and rivers affected by oil spills.

Overall limitations of field observation: According to Accufacts, based on a review of JIVs and company responses:

"Estimating the amount of oil spilled from a pipeline from field observations utilizing surface area methods can be very poor at accurately arriving at a true final number for oil actually released because of such factors as: 1) evaporation effects, 2) migration (both surface and subsurface), as well as 3) errors/uncertainties in measurement/assumption. Surface area approaches might be adequate for small rate (small hole/opening or crack releases of a short duration) affecting a small area, but will most likely significantly underestimate oil released for larger opening/much higher rate, longer duration releases, especially pipeline ruptures over a widely dispersed area.[82] *Accufacts' experience would indicate that, especially for large oil spills, such as those associated with pipeline ruptures, the surface area approach can seriously underestimate the volume of oil spilled. Surface area approaches can particularly miscalculate spilled quantity if local environments can permit the rapid migration of oil in land (hills) or water (such as moving water)."*[83]

The case of a 2008 oil spill at Bodo (described in detail in Chapter 3) underlines the problem of field estimation in a context where there is no meaningful oversight. In this case Shell recorded that 1,640 barrels of oil were spilt in total. However, when Accufacts reviewed a video of the leak, they found that between one and three barrels of oil were leaking per minute – this amounted to between 1,440 and 4,320 barrels of oil flooding the Bodo area each day. As the spill went on for some time, Accufacts estimate - based on the

size of the leak point and the rate of flow observed in the video - discredits Shell's estimate.

UNDER-RECORDING OF VOLUMES: SHELL

In reviewing JIVs and discussing these documents with affected communities Amnesty International and CEHRD found numerous spill volumes that appeared improbably low, in light of other evidence such as the area affected, the time period of the leak, and community descriptions of what they witnessed at the time of the leak.

For example, Shell recorded an oil spill at Nembe Creek at Kenkiamabogo in Bayelsa state. The start date of the spill is recorded as 29 August 2012. The JIV was done on 30 August and 12 and 13 September. The JIV states that the first two attempts to ascertain cause were inconclusive, and they could not ascertain the impacted area due to high tides (see above image, which is taken from Shell's website). When the JIV was completed on 13 September the spill was found to be due to a 40 millimetre corrosion tear. The volume of oil spilt is recorded as one barrel. Accufacts reviewed the data and found that the recorded release of one barrel of oil from a large "corrosion tear" failure on a 4 inch flow line was "an unrealistically low volume release estimate for such a massive failure (40 mm long), raising serious questions as to the appropriateness of the calculation method performed to estimate oil spill volume for this release."[84]

Amnesty International reviewed 536 JIV records on Shell's website and noted numerous spills attributed to sabotage and corrosion where the spill volumes were very low – less than five barrels. Very low volumes for spills recorded as sabotage and corrosion raise questions, particularly where there is a gap of several days between the reported start date and the date of the investigation. One question is how the leak was noticed (as such small leaks would not show up on pressure monitors); another is whether the flow of oil was turned off and the line de-pressured, and how much could have leaked before this was done.

Amnesty International asked Accufacts to review a number of Shell JIVs where the volume recorded as spilt appeared low compared with other data available on the spill.

For example, an oil spill at Ikarama reportedly began on 21 August 2011. The JIV was conducted on 27 August. The cause is stated as a hacksaw cut and, according to calculations given on the JIV, 77 barrels of oil were spilt. The only photograph attached to the JIV is above. It does not show the wider area affected and therefore provides no clarity on volume. It does show oil still flowing from the pipe on 27 August, six days after the spill is reported to have started. Shell later recovered 84 barrels of oil and recalculated the volume at 120 barrels.

In the case above the photograph is inadequate to verify the claim of hacksaw cut, and the spill volume cannot be verified. In other cases photographs cast doubt on the claims made in the JIV report with respect to volume.

The photograph of an oil spill at Ogale in Rivers State, above, for example is of concern. The spill reportedly began on 21 November 2011 and the JIV was conducted on 23 November. In

the photograph the oil is seen to be still flowing. Accufacts noted that the reported volume of 6.8 barrels was "unlikely, given spray pattern shown on 6 inch pipe."[85]

A spill at Edagberi Betterland reportedly began on 12 February 2012. The JIV took place on 19 February, seven days later, and was completed on 9 March. According to Shell the initial JIV on 19 February could not assess the spill point. A conclusive JIV was held on 9 March,

almost two months later. No explanation is given for the long gap between JIVs. The cause of the spill is given as corrosion.

A photograph (see below, photograph from Shell's website) taken on 9 March 2012 shows oil spilling from the site. According to Shell the initial clean up was completed on 14 March and site remediation was completed by August 2012. Amnesty International and CEHRD question how a leak so small as to result in 0.3 barrels of oil spilt was detected, why oil appears to still be leaking two months later and, if the spill was so small, why it required remediation. Accufacts reviewed the data and concluded that the reported volume released from a 12 inch pipeline rupture was "most unlikely" to be accurate as such large opening failures release oil at substantially higher flow rates, much greater that smaller hole leaks. Accufacts noted that it is "More likely a 95 cm manufacturing seam rupture on 12-inch because of the flow pattern at the release site. The volume of oil spilt is reported as just 0.3 barrels, which is a ridiculously low spill volume, given the length of the pipe split, and its photographed flow pattern on a 12 inch pipeline."[86]

An operational spill at Egbema in Imo state is reported to have started on 14 September 2012. A JIV was attempted on 20 September, six days later but community members reportedly prevented the assessment, demanding compensation for past spills. The JIV was conducted on 29 September. The photographs, taken by Shell on 29 September (see below, photograph from Shell's website), show that oil is leaking from the site two weeks after the spill is believed to have started. The volume of oil spilt is recorded as 155 barrels. Accufacts stated: "Photo indicates typical pipe seam weld failure on 16 inch. 155 barrels reported release is most likely under reported given the flow pattern of the release and the high rate of release usually associated with such much larger opening seam failures."[87]

Another spill took place at Ikarama on 24 May 2013. The JIV was done six days later on 30 May. Again, photos taken at the time show oil still flowing from the leak point on the date the JIV was conducted (see photo on page 25). The cause of the spill was given as sabotage because a hacksaw cut was seen on the pipe. The volume was given as 10 barrels. Accufacts reviewed the photographs and found that they did not indicate a hacksaw cut. In addition, based on the photographic evidence of the flow release, the volume of 10 barrels reported as spilt is understated given the size of the opening and the expected pressure of the pipeline at the time of failure.[88]

CASE 4: 2004 JIV FOR GOI[89]

In September 2004, a leak occurred along the Trans-Niger pipeline, at a village called Goi. The pipe is the responsibility of Shell.

Oil reportedly spurted into the air from the damaged pipe and flooded the land and creeks. Some of the oil caught fire causing further damage. As with so many other spills, people lost fishponds and crops. The JIV, which is just one page long, was conducted on 12 and 13 October. It found the spill was due to sabotage. This JIV report was the basis of Shell's defence in a court action in the Netherlands, which concluded in January 2013 in defeat for the Nigerian farmer who brought the case with support from Friends of the Earth. The case is under appeal.[90]

The reliance placed on the JIV report in the Dutch court case is a matter of some concern, both in light of the general weaknesses in pre-2011 JIVs and in light of the weaknesses observable in the specific JIV report itself.

The JIV also concluded that 150 barrels of oil had been spilt; however, there is no explanation of how this figure was arrived at. Moreover, the JIV states that the spill point was an 18" cut. Descriptions of the spill however indicate that far more oil was spilt at Goi than recorded on the Shell JIV. No community representative signed the JIV form. Despite this the JIV form for Goi has been used as part of Shell's defence in a court action in the Netherlands.

During the court action Shell produced a video of the JIV which the company has not made public. The court records show that doubt was cast on the claim that the spill was due to sabotage; however, this doubt was considered insufficient to outweigh the JIV claims.[91] The volume spilt did not receive particular attention during the case, and no assessment of the volume was made.

The plaintiffs are appealing the outcome of the Goi case.

UNDER-RECORDING OF VOLUMES: AGIP

During a research visit to Bayelsa state in April/ May 2013, Amnesty International was given five NAOC JIV reports about which community representatives had questions, including about the volume recorded. The JIVs are short documents (1 -2 pages) and the volume recorded as spilt is given as a figure with no explanation as to how the figure was calculated. Amnesty International shared these with Accufacts, as well as later JIVs provided by Agip. Below is a summary of Accufacts' assessment of these documents.

NAOC Spill (reported Date of Spill 12 July 2008)
The JIV report is one page long (see Annex). The location of the spill is identified as on the 14-inch Ogboinbiki/Tebidaba Pipeline at Ondewari 4. The failure is identified as a structural failure at a clamp of a previous repair point. The quantity of oil spilled is recorded as 20 barrels. The start date of the spill is given as 12 July 2008, ten days prior to the JIV, which took place on 22 July 2008. No detail is provided as to how the start date or the quantity spilled was determined. According to the JIV photographs were taken, but the photographs are not included with the JIV report reviewed. No mention is made as to whether or when the 14-inch pipeline may have been shut down or isolated to effect the repair.

Accufacts concludes that, absent additional evidence, 20 barrels appears to be a very low estimate for the volume spilt given expectations about pipeline pressure, the nature of the expected clamp failure on a 14-inch pipeline, and the time duration of over a week before the JIV field investigation. Residual pressure within a pipeline can release oil at very high rates, even through very small openings, during the time of pipe failure and its ultimate shutoff and de-inventorying.

NAOC Spill (reported Date of Spill 13 October, 2009)[92]
The JIV report is a one-page form signed by various parties on 26 October 2009, the date of the JIV assessment. The report gives the start date of the spill as 13 October 2009, but again no reason is given for how this date was established. The location of the spill is on the 14-inch Ogboinbari/ Tebidaba pipeline at Azuzus Kokokorosei. The quantity spilled is indicated as 100 barrels. No information is provided to support this reported spill volume. The form goes on to indicate that an irregular hole was observed in the 3 o'clock position. The cause of the spill is identified as "others" but not specified even though the form calls for that selection to be specified. The oil spilled off the company's Right of Way and into an adjoining creek and vegetation. Although the JIV indicates that photographs were taken during the assessment, these were not included with the JIV Report.

Accufacts concluded that "additional information, such as the size of the hole, the pressure on the pipeline, and the extended time between the reported date of the spill and the JIV, lead to the conclusion that the 100 barrel estimate is in all probability too low given Accufact's investigative experience in dealing with pipeline failures and their release.

NAOC Spill (reported Date of Spill 15 June 2010)[93]
The JIV report is a one-page form signed by various parties on 16 June 2010. The form indicates the Date of Spill as 15 June 2010 though no reason is identified for this date determination. The failure is identified as a pinhole leak at the welded flange joint from sand erosion on an Osiama 1s/s flowline at the Osiama field. The quantity of oil spilled is identified as two barrels at the time of the visit at 1620 hours on 16 June 2010. No detail is provided as to how the two barrel spilled quantity was determined.

Without further evidence, such as sufficient photographs, Accufacts places an extremely high probability that the oil release was much greater than the two barrels indicated on the JIV form. Given the expected pressures, two barrels of oil can be released in an extremely short period of time, even for very small openings in a pipeline and/or wellhead. Important parameters that should be utilized to place a boundary condition on this release volume would be the approximate wellhead pressure at the flange leak site, the type/gravity of the

crude, and an estimated area of the erosion hole.

NAOC Spill (reported Date of Incident 26 March 2013)[94]
This JIV report is three pages long and apparently a newer form format. This event was reported as a gaseous emission release occurring on 26 March 2013 on the Taylor Creek 2L flowline in the Ikarama community that was reported on 26 March 2013, with a JIV date of 27 March 2013. The incident was identified as caused by "Third Party Interference" and reported as a hacksaw cut about 100 mm long, observed at the 9 – 3 o'clock position on the flowline. The quantity of oil spilled is identified as nil. Comments indicate that at the time of the JIV, while there was no crude oil spilled, there was an observed impact of oil stain on vegetation within the right of way. Accufacts cannot find an operating scenario that would explain the determination of a "nil" barrel release in a flow line, unless the line was shut down and de-pressured. Further information is needed both on the line operation/pressure at the time of the JIV report as well as cited photographs.

NAOC Spill (reported Date of Incident 3 April 2013)[95]
This JIV report reflects an expanded three page form format. This event was reported as a crude oil spill occurring on 3 April 2013 on the 6-inch Taylor Creek 2L flowline in the Ikarama community reported on 4 April 2013, with a JIV date of 5 April 2013. A surface area approach has been utilized in this JIV report to determine an estimated quantity spilled as 25 barrels. The math is incorrect for the numbers indicated, as the spill should have been calculated as 31 barrels. The report indicates this particular spill on land was caused by sabotage from a release out of a regular hole geometry at the 9 o'clock position. Additional description is provided that the release occurred because a shut-in well was reopened by an unknown person after a JIV of a previous spill (Reference # 2013/LAR/059/114). There are additional comments that there was evidence of a hacksaw cut on the flowline that is inconsistent with the visual inspection as indicated under "Type of Incident" on this JIV Report. It is worth noting that the report mentioned that photographs were taken during the JIV. Proper photos should easily demonstrate what the failure cause actually was. Coordinates of the spill point are also indicated.

Depending on the specific cause of the release, a 25-barrel estimate appears to be unusually low for a spill, even a narrow hacksaw release or a hole, whatever the real cause of pipe failure. Given the expected pressures even small hole openings can release considerable volumes of oil over an extended period of time. Further investigation is warranted including the critical photos, and identification of operating pressure at the release site during the dates of concern.

Amnesty International shared Accufacts' assessments with Agip who stated: "We do not wish to respond to the AI oil pipeline specialist statements at this time, however we don't believe such statements are appropriate." [96]

PROBLEMS WITH THE POST-JIV PROCESS FOR CALCULATING VOLUME

Although both Shell and Total told Amnesty International that they used a more technical approach to calculate the volume of oil spilt, neither company clarified how this data is recorded.

The fact that oil companies employ a more technical approach to calculate oil spill volumes

raises serious questions about the status of the volume recorded on JIV forms. None of the communities to whom Amnesty International spoke were aware of another method of calculating oil spill volumes. Even when there is a dispute about the volume recorded on a JIV – such as at Bodo in the case of a spill in August 2008, described in Chapter 3 – oil companies have not, as far as Amnesty International could discover, presented an updated figure on a Form B.[97]

When Amnesty International asked Total for further information on this issue the company said: "The spill volume estimate agreed by all parties during the JIV is inputted in Form B, and submitted to the regulators as statutorily required."[98] This information is not consistent with the information given by Total during an interview with Amnesty International in Port Harcourt on 9 May 2013 when the company stated that a more technical calculation was done and put on Form B. Amnesty International asked Total to explain where the more technical data to which they had referred were recorded; the company had not responded at the time of printing.

Total sent Amnesty International a copy of a Form B. The form goes to the Director of the Department of Petroleum Resouces in Lagos, and not to NOSDRA. The volume is recorded as "2 barrels based on the JIV report".[99]

Agip, responding to Amnesty International queries on the same issue, also stated that the volume recorded on Form B is "exactly the same quantity determined during the JIV."[100] Shell did not clarify where the more technical calculation of oil volume was recorded or reported, although the company made clear it used a different method to the one used during JIV field investigations.

A critical element of this approach to establishing volume is the duration of the spill. As noted earlier, the way the start date is established for some oil spills is based on when the leak is reported rather than when it started. Only Total provided a direct response on how the duration was established. The company said that in "estimating the duration of an oil spill, we take the worst-case of scenarios from a review of all available data from process monitoring, surveillance reports, witness statements and physical assessment of the spill sites." [101]

REBALANCING THE SYSTEM "INVENTORY"

Accufacts also noted that post-JIV volume calculation could involve an effort to determine oil released by rebalancing the system "inventory" when such measurement detail is available, once the pipeline system is restored and returned to service after the repair. Amnesty International asked the oil companies about this approach but none responded. Accufacts made the following observation on this approach, and why it might not be useful in the Niger Delta.

"Where balancing may be utilized to measure oil within the system such as tank gauging and/or metering, such as transmission pipelines or sometimes flowlines, oil released can best be determined from various methods that attempt to establish the amount of oil to restore the inventory balance (including adjustments for pumping time corrections) to pre-failure conditions. The balance approach should be considered a more technical correction method requiring much more system information about the specific pipeline's design, tankage,

placement, operation, and monitoring, than that provided during a JIV field investigation. This rebalance or oil inventory approach will not work especially well for pipeline systems experiencing large imbalances over long periods of time, or for more complex network systems."[102]

However, "large imbalances over long periods" appears to be a serious issue in Nigeria. A report by the UK think tank, Chatham House, released in September 2013, looked at large-scale oil theft in the Niger Delta. It noted:

"To steal oil, thieves tap into pipelines and other infrastructure in the Niger Delta. They then pump the oil onto waiting barges and boats… There are also allegations that oil vanishes from at least some of the country's roughly two dozen export terminals.

This narrative, while mostly correct, is oversimplified. Lines between legal and illegal supplies of Nigerian oil can be blurry. The government's system for selling its own oil attracts many shadowy middlemen, creating a confusing, high-risk marketplace. Nigeria's oil industry is also one of the world's least transparent in terms of hydrocarbon flows, sales and associated revenues.

Estimates of how much oil Nigeria loses to thieves vary widely. Fundamentally different pictures of the trade emerge depending on which figures one accepts. The best available data suggest that an average of 100,000 barrels per day vanished from facilities on land, in swamps and in shallow water in the first quarter of 2013. This number does not include what may happen at export points. It also assumes the integrity of some industry data. Factors that confuse the issue include poor measurement practices; confusion over how much oil is stolen as opposed to being spilled, and exported as opposed to being refined."[103] *(emphasis added)*

What the Chatham House report makes clear is that a lot of oil leaves the system in the Niger Delta that is not spilt but stolen, and accurate and transparent measurement of oil within the system apparently does not exist.

THEFT AND SABOTAGE

Oil companies claim that the majority of oil spilt in the Niger Delta is due to sabotage and theft. These two terms are often used interchangeably; however, they are two different phenomena and the way they are referenced can be very misleading.

Sabotage is a phenomenon that has been reported in the Niger Delta since at least the 1990s. In general this involves damage to pipes or other oil infrastructure in order to cause leaks. In the 1990s, when Shell stated that 28% of oil spills were due to sabotage[104], sabotage was seen as a way to extract money from the oil company, either directly as compensation or in the form of clean-up contracts. In the mid 2000s, certain acts of sabotage were carried out by militant groups and these could be larger in scale involving explosives. Such attacks on the pipes have reduced since the government established an amnesty for militants.

Theft of oil is a different phenomenon. Much of the theft reported in the Niger Delta is carried out by organized groups with the equipment necessary to tap pipes and transport oil on boats to sell outside Nigeria. Shell claims that most spills are caused by well-organized gangs who illegally tap into the pipelines to steal large quantities of crude oil. Agip also refers to large-scale oil theft as a problem, stating: "In the Delta area there

are real structured organizations and armed groups dedicated to theft of oil from pipelines…". [105]

As Accufacts has noted, the aim of such oil theft operations is not to disrupt the pipeline operation in a manner that can draw undue attention to the theft. While some oil is undoubtedly spilt during theft operations – due for example to problems with the way the taps are welded to the pipes – thieves are unlikely to want to draw the pipeline operator's attention to such illegal activities, and theft of oil does not automatically lead to spills.

If much of the theft of oil is organized large-scale theft this raises questions about the extent of oil spills attributed to theft. In the case of Shell, a key question is why the theft-related spills it records have on average higher recorded volumes of oil spilt than either corrosion or sabotage. A major issue here is volume – and the extent to which the volume of oil spilt due to various causes (corrosion, sabotage, theft, accidents, etc) – is accurate. At present, the system for measuring volume appears unlikely to give correct estimates and is open to abuse.

On 1 November 2013 Shell provided the following response to Amnesty International on this issue: "Your document states that the Shell joint venture in Nigeria, SPDC, is exaggerating the impacts of crude oil theft and sabotage so as to distract attention from its operational performance. We firmly reject this unsubstantiated assertion. The Federal Government of Nigeria, respected think tanks and some NGOs are increasingly pointing to the scale of theft and its human and financial consequences. Estimates of the magnitude of criminal activity suggest that it is costing the nation billions of dollars of lost revenue. In addition to the human and financial consequences, this external environment places understandable strain on our staff. As we have outlined to you previously, two contractors were killed by armed individuals last year while inspecting a site for remediation."[106]

Amnesty International has responded to Shell as follows:

The allegations that Shell is exaggerating the impact of theft and sabotage as causes of oil spills, far from being unsubstantiated, are backed by evidence that the process for deciding on the cause and – critically – the volume of oil spilt is deeply flawed and results in estimates that are incorrect. In addition, Amnesty International has presented, on numerous occasions, to Shell the following: video footage of Batan oil spill during which Shell clearly manipulates the process to record the spill as sabotage; the evidence of serious under-recording of the volume of oil spilt at Bodo in 2008 when an accurate recording would increase the operational volume for that year, and would therefore increase the percentage of oil spilt due to operational problems in 2008; and most recently the evidence provided by Accufacts' review of Shell's post-2011 data. Shell has provided no data to refute any of these cases.

Amnesty International accepts that theft of oil is a serious problem in Nigeria; addressing it requires much greater transparency from Shell.

SUMMARY CONCLUSION OF VOLUME

The evidence and analysis above demonstrates that, prior to 2011, the recording of volume of oil spilt during a JIV process was deeply flawed. Calculations were based on rough estimates of area and depth which often were not explained. The level of oversight was poor, and there is evidence that some JIV data was not recorded in the field. Although two companies referred to more technical methods of calculating the volume of oil spilt, neither has been able to clarify where these data are recorded and why they are not available for

comparison with field records. Moreover, the basis for such calculations cannot be assessed because the parameters are not made public. Individual JIVs that have been reviewed by Accufacts appear to include improbably low figures for volume spilt.

TURNING OFF THE PIPES: NO TRANSPARENCY

Over the past year Shell has claimed that it turns off oil flow during oil spills, thereby reducing the volume of oil spilt. According to Shell Nigeria's Managing Director:

"for a big spill it will show on pressure regime. There is an inbuilt shutdown if the pressure is over a particular threshold. We have a production control centre where this is all logged. The pressure profile will not be affected by small spills."[107]

However, Shell would not clarify how large a spill had to be before the inbuilt shutdown was activated. Amnesty International asked Shell how long this system has been in force and was told that the system "has always been in place" but "the threshold for shutdown was tightened" in 2009.

Statements on Shell's website refer to the issue somewhat differently. According to the website:

"SPDC's operators continuously monitor for leaks and respond to anomalies. In addition, any reports, either by community surveillance teams under contract to SPDC or by the public, are responded to immediately. SPDC first shuts down the flow of oil to the leak before steps are taken to verify other details about the incident in preparation for the response, which starts with containment. By immediately shutting down pipelines or flowlines that are damaged and containing the spills, we minimize the damage to the environment."

This statement does not mention automatic shutdown of flow, but does say Shell always shuts down pipes when the company is made aware of a spill.

Clearly shutting off oil flow or isolating part of the system when a leak occurs will help to reduce the impact. However, the extent to which this is done systematically (or always) is unclear.

First, there is Shell's unwillingness to state what the threshold is to activate automatic shutdown measures. There is no legitimate reason for this lack of transparency.

Second, it is not clear why, over decades of criticism by environmental and human rights groups about oil spills, Shell's responses have not said it "*immediately"* shuts down pipelines or flowlines to *"minimize the damage to the environment".*

Third, oil affected communities have reported how oil flows have continued until Shell came to clamp the leak point. Up to now Shell has not contradicted these accounts. However, it is important to note that even if the oil flow is turned off, oil can leak for some time afterwards because of the oil remaining in the pipes. Nonetheless, it is not clear why communities would not be told that the flow was turned off.

Finally, Shell's reticence on the subject appears to have extended to UNEP, despite the fact that Shell was funding the UN agency's study of oil pollution in Ogoniland. The 2011 UNEP report noted that:

"One observation made consistently through the entire survey was that there was always a time-lag between the spillage being observed and dealt with…It was not possible to ascertain whether the source of the spill

had been shut off or was continuing to leak oil…." [108]

Amnesty International asked Shell why the UN was unable to establish whether the oil flow had been turned off, if – as Shell claims – this is always done. Shell did not respond.

Agip also stated that it isolates or shuts the facilities involved when there is an oil spill. However, as with Shell, there is no publically available, verifiable evidence to back up this claim. Shell and Agip's claims that they isolate facilities or turn of the flow of oil should be independently verifiable, including by a review of videos taken during JIVs; however these are not made available.

2.5. THE IMPACTED AREA

JIV forms also record the area impacted by an oil spill. This data can affect both the extent of clean up and the amount of compensation communities received (assuming the cause is operational).

Again, the methodology used to identify and record the impacted area is extremely weak. According to NOSDRA, this is also "estimated and agreed" amongst the parties. However, JIVs consistently fail to capture photos clearly displaying the real extent of the oil spill impact areas. This is a serious concern as there is no record of the impact to challenge what is recorded. Moreover, while "estimation" may capture the most obviously affected areas it will likely fail to identify impacts not visible including the impacts on water systems and on down-stream communities.

A review of how the impacted area is recorded on JIVs reveals serious weaknesses when compared with other available data. For example, at Bodo Creek two spills in 2008 resulted in widespread damage to the water system, mangroves and land. Amnesty International and CEHRD recorded this damage, using pre- and post-spill environmental studies, video footage and satellite images analysed by the American Association for the Advancement of Science.[109] These data contrast sharply with the very limited indications of impact on the JIV report; on the JIV documents boxes are ticked to indicate that land, swamp and water have been affected, but on pre-2011 documents, no details are provided on the scale or scope of impact.

2.6. COMMUNITY INVOLVEMENT IN JIVS

Oil companies claim that the involvement of community members in the JIV process is intended to improve the credibility of the process. However, the lack of transparency in the process means that, in practice, this involvement is relatively limited and tokenistic. Moreover, very few member of the community are able to participate in the process; the oil companies generally deal with chiefs – or those they designate - and youth leaders, who are almost invariably male.

As noted earlier, community representatives have been asked to sign incomplete forms; in such cases it is not clear if data is filled in later or not at all. Communities are frequently denied a copy of the JIV form, even after signing it. At Bodo, the community was denied the JIV form for the first oil spill and only got a copy when an influential member of the community withheld the second spill JIV, insisting that he would not release the second JIV report until the first JIV was given to them.[110]

Amnesty International asked NOSDRA about this issue. According to the Zonal Director, communities always get a copy of the JIV report in the field. When questioned about how this was possible, he said carbon paper was used. However, community members involved in JIVs said they had never seen carbon paper used. Amnesty International found evidence that sometimes carbon is used to make copies of JIVs. Researchers also found clear evidence that carbon copies are not made and that JIV documents are taken away and a photocopy of the JIV is later given to the community representatives (if they receive a copy, which some do not). All of the JIVs that Amnesty International and CEHRD have collected over a period of six years have been photocopies and not carbons (or copies of carbons).

There is also anecdotal evidence of bad practice in securing community signatures. In one case reported to Amnesty International, individuals were paid to sign a JIV. In another case, a company contractor is alleged to have signed a JIV, even though he was not from the community.

IMPLICATIONS OF EXCLUSION FROM KEY PROCESSES FOR WOMEN IN THE AFFECTED COMMUNITIES

In 2013, Amnesty International spoke to women in affected communities in Rivers and Bayelsa states about the oil investigation and clean up processes. These interviews were conducted in groups, as well as individually. All of the women we spoke to expressed their frustration about the lack of information on the JIV process and their exclusion, which they felt was perpetuated by the approach of the oil companies. In a focus group session at Ikarama, one woman put it succinctly:

"We don't need a mediator. We want them to talk directly to us as we are the ones who have to bear the pain of making sure that there is enough food for the family as our land has got polluted after the oil spills and is no longer productive, and there is no more fish left in our rivers to feed."[111]

In the Niger Delta prevalent cultural norms reinforce patriarchal structures of power and present men as primary decision-makers in family and community affairs. Women are generally excluded from critical meetings with representatives of oil companies operating in the area. Despite their exclusion from the key processes, women in the Niger Delta have often been at the forefront of protest actions about the impacts of pollution.

A WALK IN IKARAMA

In Ikarama a group of women walked with Amnesty International researchers around the pollution-affected areas and described the impact of the oil spills on their lives. They described in detail how the polluted creeks and rivers were no longer usable and that they had difficulty sourcing clean water. Many of them were farmers who despaired about the reduced yields from the oil-contaminated soil. Some women spoke of how they used to collect shellfish to sell but the water is now polluted and there is no longer enough fish to sell and make a living. These women believe the oil industry has made them poorer – while their livelihoods and the basis for family food have been damaged or destroyed, they almost never get access to compensation paid by companies.

Gender disaggregated data on the impacts of pollution does not exist in the Niger Delta. However, as various systems are improved – as companies promise - it is vital that the different ways that oil processes affect women and men are understood better, and that women are able to participate in key processes.

The exclusion of women from the JIV process not only means they lack information – it can affect the extent to which impacts of oil spills on women's lives are recorded and addressed. When a community is affected by an oil spill, compensation is often negotiated with male community representatives, as an overall "package". The damage done to individuals can be lost in the course of these negotiations, and more powerful members of the community may benefit while others, including women, lose out. While communal negotiation may be the choice of a community, full and effective reparations should include measures to address the damage both to the community and to the individuals within it.

Companies frequently fail to conduct a full assessment of the damage caused to individual property, and the overall "'package" agreed by the community leaders is often not enough to repair all individual properties. Moreover, the negotiation process with the community leaders is open to abuse. This includes reports of benefit capture by those negotiating with the company, which can leave many people affected by oil pollution without any effective remedy.

The informal compensation system can place women at a particular disadvantage. Most "negotiations" are carried out by chiefs and youths, who are almost always male, even when women's activities in agriculture and fisheries are affected by oil industry damage.

CASE 5: THE JOINT INVESTIGATION AT ORUMA

In June 2005 an oil spill occurred at Oruma in Bayelsa State. In May 2013 Amnesty International interviewed community leaders and a man who has sued Shell over the impact of the spill. Amnesty International has also reviewed the JIV report for this spill. The JIV was done on 7 July 2005. The JIV report is just one page long.

The start date: The spill was discovered by surveillance contractors some time in June; they reported it to Shell.[112] According to the JIV report the spill was reported on 26 June 2005. The JIV does not give a start date for the spill. However, during a court action in the Netherlands the start date of the spill was given as 26 June.[113]

The volume: The spill was some distance from the main village; according to one man interviewed by Amnesty International, who went with Shell to the spill site, a huge amount of oil had leaked and the leak point was not visible. The volume of oil spilt is recorded on the JIV as 400 barrels. However, no explanation is given for this number.

The cause: The JIV claims there was evidence of a drill hole and tool marks on the pipe. However, no cause was established in the field; Shell reportedly said that they wanted to do computer analysis. It was never made clear what the computer analysis would look at. Shell reportedly said the results of the analysis would be ready a week later. No details of any computer analysis appear on the JIV document. Nor does the JIV explain why computer analysis was required.

Who signed? The JIV form is signed by Shell and the regulators, but not by the community.

The JIV described above was used by Shell as the factual basis for the company's defence in a court action in the Netherlands when members of the Oruma community attempted to sue for compensation for the impact of the Oruma spill, which, they claim, was never properly cleaned up. The court accepted the JIV document, and was also shown a video made during the JIV, which has not been made public. Accufacts provided an opinion

on the video footage for the court case, raising doubts about the stated cause of the spill. However, the court found this created only "general doubt" and was not specific enough to refute Shell's claims.[114]

The use of incomplete, brief documents, compiled after a questionable process, in court actions is a matter of some concern. Affected individuals and communities are at a distinct disadvantage if the JIV process is assumed to be correct unless they can prove otherwise. In Amnesty International's view JIVs should not be relied upon by courts, and associated data, such as photographs and video footage, should be subjected to independent scrutiny, without an a priori assumption that such evidence shows what the JIV report claims it shows.

2.7. CONCLUSIONS ON JIV PROCESS

The foregoing sections of this report have examined the JIV process and reports that have been – until very recently – the only known basis for establishing the cause of oil spills, the volume spilt and area affected. These forms are used in court cases, and Shell has publically used the documents in defending its oil spill record.

However, the JIV process itself is deeply flawed, and Shell has claimed spills are due to sabotage, without evidence, when they are not. The process is open to manipulation, and has been manipulated.

Accufacts summed up its assessment:

"It should be obvious that simple one or two page JIV forms appear to be serving another alternative agenda, more driven by politics and related pressures than pipeline forensic science. The JIV report forms are incomplete, appear to be subjective, not factual in nature, and fail to clearly identify that field observations serve only as preliminary observations. Clear technical, observable factual information that can be defended and proven repeatedly to any party who may challenge the finding needs to be incorporated into the JIV report form. While recent updated, longer JIV report forms are an improvement, even these forms are technically incomplete.

Cause determinations based on location on the pipe, or identification of previous possible excavation, should play a highly limited role in cause determinations. Cause of failure determinations are best supported by close up colour photos of failure sites that should be included in the JIV Report."[115]

Responding to the assessment of the JIV process Shell's only response was: "the process is a federal process that SPDC cannot unilaterally change."[116]

SHELL'S BUREAU VERITAS PROCESS

Following criticism of the oil spill investigation process in the Niger Delta, Shell announced in 2011 that it had hired a company called Bureau Veritas to verify the oil spill investigation system.[117] Despite repeated requests by Amnesty International and others for information on what exactly Bureau Veritas has verified or will verify, and whether Bureau Veritas will be allowed to consider evidence provided by communities and NGOs, Shell has refused to respond.

The value of the Bureau Veritas process, and the extent to which it addresses any of the long-standing problems with the oil spill investigation process, will depend on the parameters of its verification methodology. In the absence of a transparent process, there is serious concern that the Bureau Veritas initiative is a public relations response to mounting criticism of Shell's impact in the Niger Delta.

During a research visit to the Niger Delta in May 2013, Amnesty International interviewed a man who had been party to a JIV process where Bureau Veritas had been present. The man [name withheld] was later invited to a debriefing session at Shell's offices in Port Harcourt, during which, he reports, Bureau Veritas raised some concerns about Shell's JIV process, and specifically the process for calculating the volume spilt.

In June 2013 Amnesty International asked Shell Nigeria's Managing Director about the Bureau Veritas process, specifically about any feedback Bureau Veritas had given to Shell on the JIV process. Mr. Sunmonu responded; "I have not seen any comment of materiality from Bureau Veritas". Amnesty International asked what improvements have been made on the basis of Bureau Veritas recommendations. According to Mr. Sunmonu, the main improvement has been managing conflict with communities over the cause of spills.

Amnesty International asked whether Shell would publish the Bureau Veritas recommendations to Shell. They will not.

CHAPTER 3: THE AUGUST 2008 BODO OIL SPILL INVESTIGATION: MULTIPLE PROBLEMS

On 28 August 2008 a fault in the Trans-Niger pipeline caused a significant oil spill into Bodo Creek in Ogoniland. The pipeline is the responsibility of Shell. The spill, which was due to equipment failure, resulted in tens of thousands of barrels of oil polluting the land and creek surrounding Bodo, killing the fish that people depend on for food and livelihood.[118]

Amnesty International and CEHRD have investigated this spill and published several reports, including a detailed report in November 2011 (which also described a second spill at Bodo in December 2008).[119] The 2011 report included photographic and satellite evidence showing the scale of the environmental impact of the 2008 oil spills, and exposed Shell's failure to clean up the pollution, despite the requirements of Nigerian oil industry regulations.

In 2011, after years of trying to get Shell to clean up and pay compensation, the people of Bodo began a court action in the United Kingdom (UK) – this court action is ongoing.[120]

Shell has stated that current oil pollution at Bodo is not due to the two major 2008 spills, but to other oil pollution which occurred before and afterwards.[121] This claim does not stand up to scrutiny, both because of serious flaws in the oil spill investigation conducted by Shell in November 2008, and because the data on other oil spills in the area are not consistent with Shell's assertions.

3.1. DATA ERRORS ON THE AUGUST 2008 BODO OIL SPILL INVESTIGATION FORM

INCORRECT START DATE

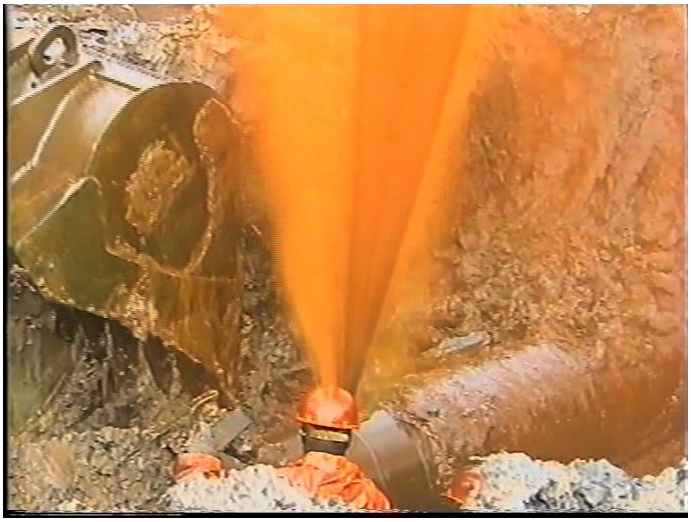
Shell claims the oil spill started on 5 October. The community state it began on 28 August. In 2011 Amnesty International contacted the National Oil Spill Detection and Response Agency (NOSDRA), and – under Nigeria's freedom of information law – the agency confirmed in writing that the spill started on 28 August 2008.[122] In May 2013 Amnesty International researchers visited the offices of NOSDRA in Port Harcourt and were given access to their oil spill database; researchers reviewed all spills listed for the Bodo area from 2007 to date. A spill was listed for 28 August with all the same parameters as the one Shell has claimed started on 5 October. There is no spill listed for 5 October, or indeed for October at all.

Amnesty International then went to a separate regulatory agency – the State Ministry of Environment. Their hand-written records also show the 28 August start date.[123] Amnesty International has asked Shell to explain why it recorded the date as 5 October. Shell has not responded.

Shell appears to have used the date they recorded they were first informed of the spill as the start date. In 2008, a BBC journalist who came across the Bodo spill case put questions to Shell, specifically about the issue of the start date and why Shell said 5 October despite the community claim of 28 August. At that time Shell stated:

*"…the information about the spill **reached us on October 5**; the official Joint Investigation Team incl people of the Bodo community found on November 7 that the reason for the spill was a weld defect. Without clear evidence about who detected the leakage, when and reported to whom it is difficult to continue this part of the discussion…"*[124] *(emphasis added)*

Despite the statement by Shell above, three separate sources record 28 August as the start date (the testimony of those living at Bodo, the NOSDRA database and the State Ministry of Environment's hand-written records); these is no evidence whatever that it began on 5 October, which Shell's email, quoted above, acknowledges when it says "information about the spill ***reached us on October 5."***



Oil gushing from the pipeline at Bodo on 7 November 2008, the day of the oil spill investigation © CEHRD

SIGNIFICANTLY UNDER-ESTIMATED VOLUME

Shell's JIV report claims only 1,640 barrels of oil were spilt in total. However, in April 2012 Amnesty International obtained an independent assessment of the rate of oil flowing from the affected area of the pipe on the date when the oil spill investigation took place, which was 7 November 2008, 72 days after it began. This assessment, by US-based firm, Accufacts, was based on video footage of oil gushing from the leak point on 7 November.[125]

Shell does not dispute the video footage or the date on which it was recorded. The Accufacts assessment found that between one and three barrels of oil were spilling *per minute* at Bodo (this means between 1,440 and 4,320 barrels of oil were flooding the Bodo area *each day)*. This assessment discredits Shell's figure of 1,640. Shell has confirmed its figure was recorded during the JIV process[126] – which means it was based on a field estimation, which, as discussed in earlier sections of this report, has significant limitations.

In late 2012 Shell stated publically that the volume was not this high because it had turned off supply to the affected pipe.[127] There are a number of problems with this claim.

1. Shell's responses to the BBC in December 2008, and Amnesty International in 2009, 2011 and 2012 make no mention of turning off the flow of oil to reduce damage

In responding to the BBC journalist who asked Shell about the delay in stopping the spill Shell stated:

"…SPDC did not get permission to pass through the K-Dere community to access the site until 7 November…" Shell went on to state: "Had SPDC been granted immediate access the volume of oil spilled and the subsequent environmental damage would have been significantly reduced. Immediate reporting and access to spill sites is an ongoing issue in the Delta - sometimes the consequence of delays is that the size of the spill increases with a resultant increase in impact and higher subsequent compensation claim."[128]

In email correspondence with the BBC in 2008, speaking directly about the issue of the time-frame of the oil spill, Shell did not mention turning off supply to the pipes. This omission is significant. Moreover, Amnesty International and CEHRD – both organizations that regularly travel from Port Harcourt (where Shell's headquarters in Niger Delta are located) to Bodo – have repeatedly noted that there is no need to pass through K-Dere. The direct route to Bodo from the Saakpenwa-Bori road is the trans-Gokana road from Kpopie junction, not through K-Dere. Amnesty International has asked Shell to explain its statement to the BBC but the company has offered no explanation.

Amnesty International has raised the case with Shell since early 2009 when the organization published a wider report on the impact of the oil industry on human rights. In none of the responses to Amnesty International did Shell mention turning off oil flow to the affected area.

Even when, in April 2012, Amnesty International published the Accufacts estimate of the volume of oil flowing at Bodo, the company response again made no mention of turning off the flow of oil. Nor did Shell, at this time, offer any explanation for the figure of 1,640 barrels.[129]

2. Shell's first public claim about turning off the pipes only comes in 2012

As far as Amnesty International is aware it was only in late 2012, after Amnesty International had exposed how much oil was flowing from the leak point at Bodo, that Shell made its claim about turning off the oil flow at Bodo.[130]

But there are other problems with Shell's claim.

3. The oil is seen as still flowing in the 7 November 2008 video

If Shell turned off the oil flow, then how it is that oil is clearly seen still flowing in video footage taken on 7 November? The fact that the oil was flowing is not disputed.

4. Shell's new claims about the spill volume rely on the discredited start date

Shell has continued to assert that only 1,640 barrels of oil were spilt at Bodo. The company now claims, without explanation, that the oil flowed for just three or seven days (Shell has said that for the two Bodo spills, the one in August referred to here, and another in December 2008, the oil flowed for just three and seven days but it is not clear to which of the spills these figures –three and seven - apply). The assertion about volume is still based on a start date of 5 October, which – as noted above – is discredited by the data held by both State and Federal regulatory agencies and the community itself, and for which Shell has (to date) provided no explanation.

Moreover, even if Shell did turn off flow on the affected area of the Trans Niger Pipeline, for some period of time, as its October 2012 statements appears to suggest, the pressure in the line would mean oil would continue to flow for some time. Accufacts, in assessing the 7 November video footage, noted "once the leak started, the leak rate would not decrease for some time, until the operator discovered the release and substantially evacuated the pipeline to reduce the pressure with the pipeline at the leak site."[131]

Even accepting Shell's statement that it turned off the flow of oil at Bodo, the total volume of oil spilt from 28 August to 5 October (the logical assumption being Shell cannot have turned off flow before it claims – wrongly - the spills started) would be substantially greater than 1,640 barrels.[132]

Finally, Amnesty International has looked for contemporaneous evidence to support Shell's claim it stopped the flow of oil at Bodo, but found none. In order to match Shell's claim that oil flowed at Bodo for only three or seven days between 5 October and 7 November (first spill) and 7 December and 21 February 2009 (second spill), this would mean some part of one of the two Trans-Niger Pipelines (there are two: a 24" and a 28") would have been shut off or isolated for approximately three months in a five month period. However, as far as Amnesty International could discover, Shell did not make any public disclosure about this at the time.

In summary, an oil spill began on 28 August 2008 and there is irrefutable evidence it was flowing on 7 November 2008. If Shell turned off the flow the company needs to explain when it did so and why it turned it back on again before the spill site was made safe. The company must also acknowledge that even if its - thus far unsubstantiated - claims about the number of days oil flow was turned off are correct, considerably more than 1,640 barrels of oil leaked from the pipes at Bodo.

LACK OF TRANSPARENCY

Communities are supposed to be involved in the JIV investigation. However, people in Bodo claim that when Shell eventually arrived on 7 November to clamp the leak and conduct the JIV the company did not engage with them. The community claim they only participated in the joint investigation because they saw that it was taking place. "When they came, they did not inform the king, the chiefs or the youth," the President of the Bodo Youth Council told Amnesty International in 2011. "That first day, the spill was so serious that they could not stop it. The next day they came again, with NOSDRA."[133]

The Bodo community was initially denied a copy of the JIV report for the August 2008 spill. According to community members, Shell claimed the JIV report was company property and that the community was not entitled to a copy. Shell declined to comment on this allegation. They only obtained the JIV after a second spill occurred (in December 2008), at which point the community demanded a copy of the first JIV report before they would sign the second one. Shell met this demand in February 2009.

FAILURE TO CLEAN UP

Shell has claimed it cleaned up at Bodo. An investigation by Amnesty International and CEHRD, published in 2011, found Shell had not cleaned up. This investigation was based on a review of existing and new evidence, including satellite images, video and photographic evidence and community testimony.[134]

Shell's statements about clean up at Bodo and access to Bodo are inconsistent and raise serious questions. Below, in date order, are statements Shell is known to have made about clean up at Bodo.

In an email to the BBC on 15 December 2008, Shell stated that "Clean up and recovery of oil is on-going."

However, Shell later claimed that it did not have access to the area to stop a second oil spill at Bodo that began on 7 December 2008.[135]

When Shell's Chief Executive Officer (CEO), Peter Voser, claimed, during the 2012 Shareholder meeting, that Bodo had been cleaned up, Amnesty International pressed the company to say when this alleged clean-up occurred. Shell responded that: "Initial clean up (which term includes containment and recovery) started about 30 October 2008 and was completed in December 2009."[136]

This extremely broad timeframe - for a process that should be done in a matter of days or weeks - is not credible. It suggests that a clean up began before the JIV was conducted. It also raises questions about why Shell is unable – or unwilling - to be more precise. In addition, as noted below, it is inconsistent with at least two other pieces of information. Amnesty International asked Shell to clarify the dates but had not received a response at the time of printing.

Shell has claimed publically that it did not have access to Bodo to conduct investigations into a second major spill which began on 7 December 2008 – the JIV was done on 21 February 2009. Yet Shell told the BBC on 15 December 2008 that "Clean up and recovery of oil is on-going." The company cannot claim to be cleaning up since October 2008 (to Amnesty International) and during December 2008 (to the BBC) and yet not to have had access to do the second JIV until February 2009.

Moreover, a series of letters from the regulator NOSDRA to Shell, which CEHRD and Amnesty International obtained copies of, also raise questions about Shell's claims. NOSDRA wrote to Shell on 12 May and 9 June 2009, after meeting Shell on 23 April 2009. The letters asked the company to "accelerate your plans for further consultation on the interpretation of section 19(1) of the NOSDRA Act and inform it soonest so that the above damage assessment could

commence". Section 19(1) refers to assessing "any damage caused by an oil spillage". NOSDRA further stated that "the Agency considers as unacceptable the continuous delay in the conduct of the damage assessment". NOSDRA noted that this situation had resulted in "the continuous devastation of the environment". There is no reference in these letters to issues of other spills or of denial of access. It is reasonable to assume that letters from the regulator to Shell, based on meetings with Shell, would acknowledge legitimate difficulties faced by Shell in accessing the site, if such difficulties existed.

The claims Shell has made about the timeframe in which it alleges it did a clean up and the lack of access to do JIVs raise serious questions about the extent to which the company is simply giving itself sufficient space to make – and adjust - its claims about the Bodo case.

The clean up that Shell claims occurred at Bodo has not been certified by the regulators. Notwithstanding the fact that regulatory certification of clean up in the Niger Delta is a completely discredited process, with regulators certifying polluted sites as clean (see next section), Shell's failure to secure the relevant document also raises questions.

In a letter to Amnesty International activists in 2012 Shell stated that: "recovery of free phase oil and primary cleanup, which involves removal of impacted vegetation and gentle flushing of the impacted mangrove forest, was completed by community nominated contractors in December 2009. However, this was not certified by the authorities because the site was re-impacted by non-operational spills, including those from sources other than SPDC pipelines."[137]

Shell is therefore claiming that it did a clean up some time in 2009 but that before the clean up could be certified there were other spills. However, the spills recorded for Bodo on the NOSDRA database contradict this statement: there is only one spill recorded for Bodo for 2009 and that was in April, and only 13 barrels are recorded as spilt. This small spill occurred during the period Shell claims it cleaned up, so logically, it would have been addressed as part of the wider clean up. The next spill listed for Bodo is in 5 May 2010, five months *after* Shell claims it cleaned up Bodo. If Shell cleaned up Bodo between October 2008 and December 2009, there were no spills – operational or otherwise – in the records that occurred or could cause the site to be re-impacted before regulatory certification was obtained, as Shell claims.

In a letter to the UK Financial Times on 22 March 2012, the Managing Director of Shell in Nigeria stated: "In the case of Bodo it is deeply regrettable that both before and since those two operational spills occurred much more oil has been spilt as a result of illegal activity – sabotage, illegal refining and theft – which blights the Delta generally."[138]

As with other claims Shell has made about clean up, these statements are not supported by any evidence; on the contrary, the evidence that exists contradicts the assertions made by Shell Nigeria's Managing Director.

1. Ecological studies of the area before 2008 spills

Ecological studies were carried out in the area from 2005 to 2008 by a number of Nigerian and international scientists.[139] These studies show that the Bodo area was not polluted prior

to the two 2008 spills; on the contrary the area was considered pristine.

2. Satellite images of the area in 2006, 2009 and 2011

In 2011 Amnesty International and CEHRD worked with the American Association for the Advancement of Science (AAAS) to obtain and analyse satellite images of the Bodo area.[140] An image taken on 4 December 2006 shows Bodo town and the intertidal zone and adjacent waterways. In this false-colour image, healthy vegetation appears bright red. This image confirms what the ecological studies show – that the area was healthy.

A similar false-colour satellite image was taken on 26 January 2009 and contrasted with the 2006 image. It shows how large swathes of vegetation near Bodo's riverbanks have turned from bright red to black, the latter colour indicating plant death. A third image was taken on 8 January 2011. The areas with dead vegetation still appear black, with little visible recovery.

Satellite images of Bodo and the intertidal zone (top right) and adjacent waterways, Nigeria, taken on 4 December 2006 (left) and 26 January 2009 (right), © 2011 DigitalGlobe, Inc, produced by the American Association for the Advancement of Science (AAAS).

3. The evidence contained in the National Oil Spill Database

The satellite images confirm the extent of damage in early 2009, following the August (and December) 2008 spills at Bodo. If Shell's claim that the area was cleaned up between October 2008 and December 2009 is accurate, then there would have to be an explanation for the very visible oil damage in the same area on 8 January 2011 satellite image (and later in 2011 videoed and photographed by Amnesty International). Shell claims this is from other oil spills. Although Shell made this claim to Amnesty International in 2011, the company would not provide JIVs or any other data to support its statement.

In May 2013 Amnesty International reviewed all oil spills recorded in the NOSDRA database for Bodo. The volume of oil recorded as spilt during 2010 cannot explain the scale of pollution visible at Bodo and recorded on photos, video and satellite images. According to the NOSDRA database, the total oil spilt from 1 January 2010 (after clean up, according to Shell) to 8 January 2011 (the date of the satellite image) is 178 barrels. The scale of

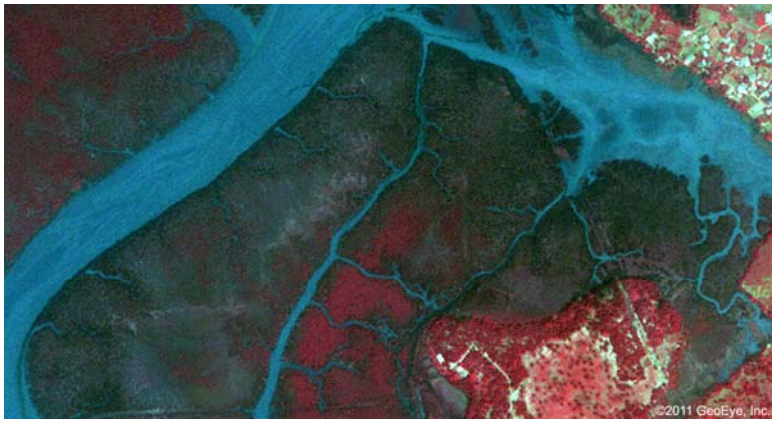
pollution shown on the January 2011 satellite image cannot therefore come from later oil spills at Bodo (regardless of the cause of the spills), as all later spills combined cannot account for the pollution that has been documented through satellite (and later video) evidence in 2011.

The claim that the area was polluted before the spills is contradicted by a combination of the 2006 satellite image (showing a pristine area) and the various ecological studies, which confirms the area was unpolluted.

The claim that the pollution that is still visible at Bodo is due to later spills is also inconsistent with the data. The pollution visible in 2011 (recorded by satellite and, in April/May 2011, by Amnesty International on video and in photographs) cannot be due to oil spills that happened after 2009 as the total volume recorded by NOSDRA cannot account for the scale of the pollution; 178 barrels of oil is a relatively small amount.

Therefore there is a significant gap between Shell's claim about other sources of pollution and the actual data. The site has not been re-impacted by spills due to sabotage or theft in any timeframe that is consistent with the physical evidence. That leaves only illegal refining. However, any claims by Shell that the pollution recorded consistently since 2008, including by satellite images, could be due in part to illegal refining must be backed up by independently verifiable evidence to break Shell's pattern of unsubstantiated statements about Bodo.

The physical evidence referred to above is not the only evidence that contradicts Shell's claims. Between 20 and 29 April 2011, Shell sent a team to Bodo to produce a "Pre-cleanup and Field Assessment Report". Amnesty International obtained a copy of this report. The assessment of the damages to the local environment was very vague. For example, its general observations included that "numerous" mangroves were "withered/burnt, oil stained". It concluded that a clean-up was required. Shell has never explained why it would send a team to the area to do pre-clean up and compensation assessment when the area was, according to other statements made by the company, already cleaned up.



False-colour image of waterways southwest of Bodo, Nigeria, 8 January 2011, © 2011 DigitalGlobe, Inc, produced by AAAS.

3.2. CONCLUSION ON BODO JIV

The JIV conducted for the August 2008 spill at Bodo is deeply flawed. A disputed start date is recorded for which no substantiating evidence is provided. The volume of oil spilt likewise does not correspond with any other available data and is also not backed up by an explanation. The failures of the JIV were followed by failure to clean up the area, despite claims to have done so. Bodo remains highly polluted; the company has provided no evidence that any clean up ever occurred and its claims about other pollution do not square with the evidence.

Claims that the company was denied access to Bodo are also inconsistent both with available evidence and with Shell's various statements. Firstly, Shell said to the BBC that it was cleaning up on 15 December 2008 – either this statement was incorrect or the company had access. Therefore why could Shell not conduct the JIV for a 7 December spill before February 2009?

Shell had access to the site in February 2009 to do another JIV and in May 2009 when they sent a small package of relief materials to the community. The letters from the regulator NOSDRA - described above - also raise questions about Shell's claims. There is no suggestion in these letters to Shell that the company had reported to NOSDRA its difficulty accessing the area.

CHAPTER 4: OIL COMPANIES' RESPONSIBILITY FOR SABOTAGE

4.1. THE CASE OF SHELL

The data in the previous Chapter discredits the system which Shell relies upon to make claims about the proportion of oil spilt as a result of sabotage and theft. However, there is another problem with the company's approach to these matters. While Shell is quick to point to sabotage and theft, the company has failed to take effective action to prevent such interference with its infrastructure. However, international oil industry standards require oil companies do just this; moreover additional protective requirements should apply in Niger Delta.

Nigerian law requires oil companies to ensure "good oil field practice" and to comply with internationally recognized American Petroleum Institute (API) and American Society of Mechanical Engineering (ASME) standards.[141]

Much of the oil infrastructure in the Niger Delta runs close to homes, farms and water sources of the Niger Delta communities. More than 60 per cent of the Niger Delta's population has a significant dependence on the environment for food, water and income.[142] According to Professor Richard Steiner, who has examined oil pollution in the United States of America (US) and Nigeria, the Niger Delta can be regarded as a High Consequence Area (HCA) for oil spills. HCAs are defined by a set of criteria under the US regulations on Pipeline Integrity Management in High Consequence Areas (49 CFR 195.425), which can be considered a global standard for pipeline safety and integrity. The criteria include it being a populated area, drinking water area or productive ecosystem – all of which apply to the Niger Delta. As an HCA, the Niger Delta should require additional risk reduction measures from oil companies in line with US Integrity Management standards. These standards are codified by API, and consequently considered international 'good oil field practice,' and are thus required of operators by Nigerian law.[143] According to Professor Steiner, acting on these standards should include implementing damage prevention best practices and use of the best available technology.

In addition to being a HCA, the Niger Delta is an area susceptible to damage from third parties (sabotage, illegal bunkering). The API has developed guidelines to protect operators from the risk of terror attacks and vandalism. These additional sabotage prevention measures should include such things as more robust Design Factors including sabotage resistant pipe specifications, thicker walled pipe, reduced D/t ratio (pipe diameter / pipe wall thickness), higher grade steel, pipe-in-a-pipe or pipe-bundle technology, amongst other things measures; alternate choices for routing pipelines away from high-risk areas; deeper burial of underground pipeline segments; concrete casements around pipe; more rigorous and frequent inspection protocols; enhanced Leak Detection Systems with greater sensitivity; better community engagement; and other traditional security techniques. A review of the available evidence (some of which is contained in next section) shows that Shell is not operating to these international standards.

Evidence of Shell's failure to properly secure its infrastructure was included in the 2011 UNEP report on oil pollution in Ogoniland, Rivers State.[144] Although no oil production has taken place in Ogoniland since 1993, oil pipelines carrying oil produced in other parts of Nigeria still pass through the area. When Shell left Ogoniland it did not properly decommission its facilities, leaving them open to interference, and communities exposed to the associated risks. This is completely contrary to international oil industry standards as well as international standards on business and human rights, both of which require that Shell exercise adequate due diligence in relation to prevention of sabotage, theft and the associated human rights and environmental risks.

UNEP made the following observations:

"UNEP's reconnaissance routinely came across oilfield resources which had evidently been abandoned in an uncontrolled fashion. This varied from pipelines left open and lying in trenches (possibly deserted midway through pipe laying operations), to oil facilities left standing but without subsequent maintenance. The bottom line is that the current state of the abandoned facilities of oil field structure in Ogoniland do not meet with international best practices."[145]

UNEP went on to note the implications in relation to interference by third parties:

"The control and maintenance of oilfield infrastructure in Ogoniland is clearly inadequate. Industry best practice and SPDC's own documented procedures have not been applied and as a result, local communities are vulnerable to the dangers posed by unsafe oilfield installations. The oil facilities themselves are vulnerable to accidental or deliberate tampering. Such a situation can lead to accidents, with potentially disastrous environmental consequences."[146]

The report expressed particular concern about one area:

"Visits to a number of facilities confirmed this understanding. Most alarming was the situation at Bomu flow Station in K-Dere. When the UNEP team first visited this location, the fences (since fixed) were broken and oil contamination was visible within the site. Given that the area around this facility is densely populated, this is a very serious situation from the point of view of both community safety and security of the facility. Conditions such as these at oilfield facilities indicate a lack of control on the part of the operators. In a properly maintained facility, a flow station should be secure, with no oil on the ground and minimal fugitive emissions."[147]

In responding to the UNEP report, Shell has claimed that the reason that it never properly decommissioned its Ogoniland facilities and made them safe over the last 18 years was lack of access. This is not the case. Shell has had access to Ogoniland over the last 18 years, including to carry out the highly inadequate clean-ups that UNEP documented. Shell's access to Ogoniland is undoubtedly restricted at times, but Shell cannot defend its failure to properly decommission facilities in Ogoniland over 18 years by reference to problems of access.

Although international standards and best practice require Shell to do more to protect its

infrastructure for interference, the company has not been held to account for its failures in Nigeria.

As victims of environmental abuse increasingly look to foreign courts, however, there is increasing potential for civil litigation over oil companies' failure to prevent sabotage. In January 2013 a Dutch court found in favour of a Nigerian farmer who has sued Shell over damage to his property. Shell claimed the spill was due to sabotage. The Court found that Shell Nigeria had breached its duty of care in that case by failing to take reasonable action to prevent third parties tampering with oil wells and causing oil spills.

This ruling should have wider ramifications for Shell's Nigeria operations. The extent to which the company has acted to prevent sabotage must now be closely monitored, with particular scrutiny given when oil spills are attributed to sabotage. Shell has appealed the decision.

4.2. THE CASE OF AGIP

Agip's claims about sabotage have received less scrutiny than those of Shell. This is in part because Shell is the main on-land operator and therefore a greater number of communities are affected and, by extension, more people raise concerns. However, the huge number of spills recorded for Agip within its relatively smaller area of operation merit further investigation. Agip claims that the vast majority are due to sabotage and theft. This claim is unsubstantiated. Moreover, even if true it would be completely indefensible. In 2013 Agip stated that it planned to spend "another 200 million USD…in the period 2013-15, including the implementation of advanced anti-bunkering technologies."[148] The company also stated that "Innovative techniques are being tested by ENI, aimed at enhancing the early detection of leakages along the lines (use of fibre optics, hydrophones) and discouraging oil theft activity (use of chemicals/mechanical barriers)."[149]

While Agip's commitment to take more action to address sabotage and theft is welcome, it is a matter of some concern that a company that has had almost 500 leaks in the last nine months – and more than 1,500 since 2010 – has not take the proposed action much sooner.

LAW ON SABOTAGE MUST CHANGE

There is an urgent need for amendments to Nigeria's legislation in respect of sabotage and other third party interference with oil infrastructure. Presently the operating oil companies have almost no legal obligations to make their facilities safe; and they do not do so. They do not have to pay compensation to affected people, regardless of how negligent they may have been in terms of preventing the release of hazardous material from their operations.

The current legal situation in Nigeria is inconsistent with the country's human rights obligations and with international oil industry standards. Although Nigerian law requires companies to uphold international standards, the way the law has been interpreted fails to consider whether the oil companies have taken reasonable precautions, in line with industry standards, to avoid sabotage and theft. This leaves the victims of oil spills that are attributed to sabotage and theft without access to an effective remedy when their rights to food, water and livelihood are abused.

The apparent reason for this legal provision is that if compensation were paid for oil spills due to sabotage this would encourage sabotage. This logic is flawed because it fails to require operators to make their infrastructure safe from sabotage. In reality Nigerian law has created a permissive environment for oil company negligence.

4.3. CONDITION OF PIPES NOT DISCLOSED: WHY NOT?

Although numerous spills are due to corrosion of the oil infrastructure in the Niger Delta, Shell refused to make public the age or condition of its oil pipeline. Agip has made some information available (discussed below).

In the mid-1990s Shell appeared to recognize that its own operations were contributing to at least part of the oil pollution problems in the Niger Delta, stating: "The company recognises the gap between its intentions and its current performance. It is working hard to renew ageing facilities, reduce the number of oil spills in the course of operations, the amount of gas that is flared, and to reduce waste products."[150]

Shell established a programme to replace and upgrade ageing facilities and pipelines, and improve the way the company operated and maintained facilities and responded to spills.[151] However, only a limited amount of work was done to fulfil this objective, and many pipelines were not in fact replaced. Instead, between 2003 and 2005, Shell switched to a Pipeline Integrity Management System. This involves checking the condition of pipes and replacing them on the basis of condition rather than age. The results of the full asset integrity review (which examined the condition of Shell's pipelines) have never been made public.

According to Shell, during 2005 the company completed all the higher risk integrity activities identified by their asset integrity review, representing some 1,500 action items. However, some significant operational spills occurred after the asset integrity review and the initiation of the Pipeline Integrity Management System. Shell has confirmed that there were delays in carrying out its asset integrity work. In 2007, Basil Omiyi, then Country Chair for Shell companies in Nigeria, said, "We do, however, have a substantial backlog of asset integrity work to reduce spills and flaring. This backlog is caused by under-funding by partners over many years, operational problems and, more recently, the lack of safe access to the facilities."[152]

During a court action in the Netherlands it was revealed that some of the higher risk work may not have been done. In relation to one trunkline that was very vulnerable to corrosion, the court documents reveal the following assessment made in October 2004 by Shell:

"SPDC proposes to replace the 20" Trunkline with carbon steel pipeline due to corrosion. The corrosion was deemed "unmanageable" by a recent engineering study carried out on the line in 1999. The fact that the line is likely to leak before the year 2003/2004 informed the decision to replace the line with carbon steel pipes with adequate provision for frequent pigging and biocide injection. Considering the rate of corrosion observed in the old pipelines proposed for replacement, if the replacement is not carried out, then there would be a very high risk of leakage which will result in oil spill and consequent contamination."[153]

Despite the fact that the engineering study was carried out in 1999, the observations above were made in 2004, five years later and the pipe had not been replaced.

Evidence of serious problems with Shell's infrastructure has been mounting. A US diplomatic cable from 2008, recently published by wikileaks, stated that a contractor with many years' experience of laying pipelines in the Niger Delta told the US consulate in Nigeria that "73 per cent of all pipelines there are more than a decade overdue for replacement. In many

cases, pipelines with a technical life of 15 years are still in use thirty years after installation". The cable continued: "because the equipment is corroded and relatively close to the surface, making it more vulnerable to intentional and unintentional damage from natural and human causes, spills occur daily, and it often takes many hours to find the location of the spill and deploy the necessary clean-up equipment."[154]

The contractor reportedly suggested that pipelines be replaced with "new, concrete-encased pipes that are placed three to four meters underground" which would reduce spills caused by both bunkering and equipment failure. The US cable concludes that this "assessment of the current state of pipelines has been confirmed by other of our interlocutors."

Without independent assessment there is no way of confirming the scale and extent of poor pipeline maintenance and integrity in the Niger Delta. However, by Shell's own admission, the situation prior to the 1990s was poor, a pipeline replacement programme was ended before many pipes had been replaced, and the subsequent Pipeline Integrity Management System was, as of 2007, under-funded and behind schedule. Shell's own admissions from 2007 and the statements made to the US Ambassador in 2008 appear to reflect a similar picture.

Shell's failure to be transparent about the condition of its infrastructure has exacerbated community tensions around the oil spill investigation process. In the absence of transparency on the state of oil infrastructure there is concern that – at least in some parts of the Niger Delta – pipes in poor condition are the reason for the high number of oil spills.

In 2010 Friends of the Earth conducted an assessment of the oil pipelines traversing Ogoniland, one part of the oil producing areas. Based on publically available information they concluded that the 24" and 28" pipelines leading from Bomu to Bonny were laid 46 to 50 years ago. Friends of the Earth reviewed all available evidence on pipeline replacement and it would appear that the Bomu-Bonny pipelines have not been replaced since the early 1960s. There has been a replacement of the Trans-Niger pipeline in the period 1992-1994, but this replacement stretched from Rumuekpe to Bomu and did not include the Bomu-Bonny pipelines. Oil pipelines today are generally designed for a lifetime of about 40 years.[155] Pipes laid in the 60s would probably have had a lifespan of 15 years. The Bomu-Bonny pipelines, which are likely to be 46-50 years old, have been exposed to the challenging coastal environment of the Niger Delta.[156]

As noted by UNEP, the pipelines running through Ogoniland have not been "maintained adequately". The combination of these factors – old pipes, not properly maintained, and in an environment that would expose them to corrosion – raise very serious questions about Shell's due diligence in preventing harm to the environment and human rights.

Amnesty International also asked Agip about the age of its infrastructure. In response Agip referred to a table presented in the context of its 2013 shareholder meeting. Of 14 pipelines mentioned in that table, more than half date from the 1970s and four are 40 years old, dating from the early 1970s.[157]

SHELL CONTRACTORS INVOLVED IN OIL THEFT?

A major fire that forced Shell to close its Trans Niger Pipeline in June 2013 raised serious questions about the way that Shell and its contractors are operating. The fire broke out following an oil spill on 11 June in an area where Shell contractors were working on maintenance and repairs. The area was guarded by security forces, and local residents who attempted to visit the site to asses the scale of the spill were turned back. In the days leading up to the fire Nigerian security forces prevented anyone other than Shell's contractors going near the area of the spill. From the shore people saw barges being loaded with oil and taken away from the site.[158]

Shell said the fire was caused by theft of oil. Eight Shell contractors were arrested by Nigerian security services, on suspicion of involvement in activities that led to the fire. The facts, detailed above, make it difficult to see how anyone other than Shell's contractors were in the vicinity in the days leading up to the fire. Nigerian and international NGOs called for a transparent investigation into the events leading up to the fire and the role of the Shell contractors. For years, there have been allegations that individuals connected with Shell are involved in oil theft but there has never been any hard evidence to substantiate this.

A JIV was conducted and concluded the problem was theft. Shell also established a committee to investigate the spill incident.

Once again, the control that Shell has over what should be an investigation led by regulators is of serious concern. To date there are no clear answers on the role of the contractors in the events at Bodo.

Shortly after the fire at Bodo, a spokesperson for the President of Nigeria raise the issue of multinational oil companies' complicity in the increased rate of crude oil theft in the Niger Delta.[159] The Special Assistant to the President on Amnesty, Kingsley Kuku, is reported to have said that highly placed individuals and groups were sponsors of those stealing the nation's crude oil. He said the process of illegally extracting crude oil from the pipelines in the coastal areas requires highly technical and mechanical expertise which ordinary Nigerians or residents of the oil producing communities do not have. He also specifically pointed to the issue of contractors saying that almost every oil company has pipeline protection and surveillance contractors, and that the same people who are meant to be securing these pipelines participate in oil theft. He urged the oil multinationals to look at their contracting process.[160]

CHAPTER 5: CLEAN UP AND REMEDIATION

Following an oil spill - including spills that are attributed to theft or sabotage – the company is obliged to contain (limit the spread of), clean-up and remediate (return the area to its prior state) the affected area. Under Nigerian regulations, the operating oil company is responsible for the clean-up of oil spills, and clean-up is supposed to be both swift and meet good practice standards. According to the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria clean-up should commence within 24 hours of the occurrence of the spill. These government guidelines also stipulate that for all waters "there shall be no visible sheen after the first 30 days of the occurrence of the spill no matter the extent of the spill." [161]

5.1. REGULATORY CERTIFICATION IS MEANINGLESS

In 2011 the UN Environment Programme published a major scientific study on oil pollution in Ogoniland. As well as confirming that the area was heavily polluted, the study exposed numerous serious failures by Shell to clean up oil spills. The UNEP report revealed serious weaknesses in Shell's clean up and remediation processes; how the company had declared sites clean which were not; and how regulators had certified sites as cleaned up when they were still heavily polluted. Amongst the findings of fact in the UNEP report were the following:

- "It is evident from the UNEP field assessment that [the Shell Petroleum Development Company's] post-oil spill clean-up of contamination does not achieve environmental standards according with Nigerian legislation, or indeed SPDC's own standards."[162]

- "Ten out of the 15 investigated sites which SPDC records show as having completed remediation, still have pollution exceeding the SPDC (and government) remediation closure values." At eight of these sites the contamination had migrated to groundwater."[163]

- At 22 out of 33 sites along Shell's pipeline, soil contamination exceeded limits set by Nigerian law. At five of the sites hydrocarbons were detected in the drinking water of nearby communities.[164]

The clear conclusion of the UNEP report is that Shell has, for years, not cleaned up oil pollution properly. As a consequence hundreds of thousands of children, men and women have been exposed to a sustained assault on their human rights to food, water, health and work, amongst others.

The problem does not appear to have been addressed. In January 2013 an IUCN Panel that had been asked by Shell to review environmental issues in the Niger Delta found that, once again, regulators had signed off on a site as cleaned up that was still polluted:

"in a recently concluded remediation site in Soku, the [Chemicals of Special Concern] levels

were far higher than standards of EGASPIN (2002), even though all the authorities had signed off on the certificate for a clean bill of health for that site."[165]

The Panel concluded:

"Based on the observations by the Panel, the current remediation practices in oil impacted areas in the Niger Delta are not satisfactory. Oil spill responses and remediation are not implemented fast enough and the methods and regulatory standards for biodiversity and habitat rehabilitation have not been adequately established. Some of the issues that are not properly addressed in the current context need a different approach consistent with best practice in the industry."[166]

CASE 6: OYA LAKE

On 7 December 2008 there was a major oil spill near Oya Lake in Bayelsa state. The JIV was conducted on 15 and 16 January 2009.[167] Shell has not explained why there was such a long delay in conducting the JIV. The spill occurred on the same date as another major spill at Bodo in Rivers State – in this case Shell did not conduct the JIV until February 2009. Again, there is no explanation for the undue delay.

The cause of the spill was recorded as a "hacksaw cut" and the volume of crude oil spilled was recorded as 1,133 barrels.[168] Shell has provided no evidence to substantiate either of these statements.

Amnesty International visited the area in May 2013 with partner NGO, Shareholders Alliance for Corporate Accountability (SACA)[169], who have been working with the affected people to get Shell to conduct a clean up at Oya lake, which remained polluted more than four years later. Researchers interviewed the owner of Oya Lake, a fisherman whose livelihood was destroyed by the spill. He described how the lake was unusable since the 2008 spill, and how he had struggled to get Shell to clean up.[170]

Amnesty International asked Shell to explain why the site was not cleaned up. Shell responded that remediation work was carried out from 19 March to 4 May 2010, and that the site was certified by regulators on 31 May 2010.[171]

Researchers went to the point where the spill began, which is short walk away through swamp from Oya Lake. According to men from the community there was a very limited clean up in the immediate vicinity of the spill point, but that clean up did not reach Oya Lake, despite the fact that the oil had reached the lake. Video footage of the leak point - taken on an unknown date in January 2009 by a local environmentalist - shows the oil flow and how it is spreading away from the leak point.[172] US pipeline specialist Accufacts reviewed the footage and made the following observation: "It is hard to estimate release in flowing water but a more detailed review of a picture of the failed pipe and an estimate of the time this release was flowing would in all probability indicted a release much higher than the 1,333 barrels." [173] Amnesty International and SACA are now requesting the official video footage from Shell.

Community members say the scope of the clean up only covered the first lake in the vicinity of the spill point, called Obrun Lake. However, it appears Shell was alerted to the fact that the spill had reached well beyond this point. Neighbouring communities sent a letter to Shell's offices in Port Harcourt, dated 17 January 2009, informing them the same spill that polluted Obrun and Oya lakes had reached their swamp, called Ekpeseda.

As far as Amnesty International and SACA are aware these communities did not receive a response.

In February 2013, after pressure from SACA, Shell came to the area to assess Oya Lake for clean up. SACA reported on this as a positive development on their website. However, when Amnesty International put this to Shell, the company claimed the February 2013 assessment at Oya Lake was to assess damage caused by other oil spills. Shell did not specify which spills it meant.

Shell went to Oya Lake in August 2013 and spent a month with swamp buggies cleaning up an area impacted around the vicinity of the Lake and including the lake itself.

The case of Oya Lake raises serious questions about how clean up is managed in the Niger Delta. Amnesty International has reported previously on Shell clean-ups that covered only a limited part of the affected area.

5.2 SHELL: REDEFINING CLEAN UP?

Shell's website contains the following statements on clean-up of oil spills: "After the JIV, SPDC's spill response team makes the necessary repairs and recovers as much of the spilled oil as possible. This is called the clean-up."[174]

Amnesty International is concerned that Shell is redefining clean up to mean containment and recovery, which is only one element of clean up. Amnesty International asked Shell to explain the information now on its website but the company did not respond.

Amnesty International also asked Agip and Total to explain what they mean by clean up. Total stated: "In Total E&P Nigeria, our oil spill clean-up process involves the removal of the free-phased oil in the impacted environment, removal of the contaminated soil /vegetation, carrying out soil and water analyses to check the level of [hydrocarbon] contamination, and based on the analyses results launch remediation / treatment of the residual oil in the impacted area, to achieve the target level of [hydrocarbon] content as specified in the DPR's EGASPIN 2002 (revised) and the NOSDRA guidelines."[175]

Agip stated: "Methods of clean up include manual cleaning, use of mechanical equipment, low pressure wash, use of sorbents, vacuum skimming as well as deployment of containment booms, when needed, as safe guard measure during the clean up job. After clean up, a Post Clean Up Inspection (PCI) is carried out…"[176]

Shell's statements on clean up appear therefore to be inconsistent with those of other oil companies and would appear to suggest the company is redefining clean up to cover only minimal action. Amnesty International questioned why Shell has redefined clean up to mean containment and recover but the company did not respond on this point.

5.3. REMEDIATION – ANOMALIES IN THE DATA

In addition to the serious issues raised by UNEP, Amnesty International has also assessed Shell's claims about the number of sites certified as remediated between 1999 and 2006. This assessment, detailed below, raises serious questions with respect to Shell's claims about certification of remediation.

Between 1999 and 2006, Shell claimed to have identified 1,516 sites requiring remediation, and to have remediated 1,338. According to Shell, during 2006, 715 sites were certified as remediated by the joint certification team, comprising the Federal and State Ministries of Environment (the procedure before the National Oil Spill Detection and Response Agency was established).[177] This works out at approximately three certifications per working day, every day of the year. Amnesty International questioned the credibility of the figure presented by Shell, given the restrictions on movement in the Niger Delta and Amnesty International's own interviews with Ministry of Environment officials, during which officials repeatedly underlined their lack of resources to make site visits.

Although, during an interview at their headquarters in The Hague on 15 September 2008, Shell conceded that the figure of 715 certification visits by a joint certification team was questionable, the company declined to provide any explanation. It would appear that the figure of 715 certifications represents an administrative process, where data submitted to the regulator is "certified", and the field visits may have taken place in a previous year.

However, even if the 715 visits were made over the preceding three years (2004, 2005 and 2006), the figure is still questionable. It would mean an average of one site visit for every single working day of each of those three years. Shell has additionally reported that: "[a] joint certification team comprising the Federal and State Ministries of Environment ***inspected*** and certified 154 sites in 2005,"[178] and "[a] joint certification team comprising the Federal and State Ministries of Environment ***inspected*** and certified 231 sites in 2004."[179] Given the limitations of the regulators in the Niger Delta noted above, of which Shell is fully aware, the number of regulatory certification visits implied by the 2004, 2005 and 2006 figures (totalling 1,100 over three years) does not seem probable. Amnesty International is concerned that the certification of remediation of Shell sites may not have involved a site level inspection and scientific analysis by the regulators in all cases. If this were the case, it would further underline the major regulator gap in the Niger Delta, and would mean that communities have no way of checking or receiving assurance that oil companies adequately clean up pollution. Amnesty is concerned that some of these polluted sites have not been adequately treated.

Amnesty International also raised with Shell the apparent difference in access to pollution-affected sites, which their information on remediation implies. Shell has frequently said that they have difficulty in gaining access to oil spill sites because communities block access. However, based on their figures for 2000-2006 on sites assessed for remediation (2,699 by 2005), sites actually remediated (1,338) and sites certified (1,126), they appear to have few, if any, problems accessing sites impacted in the past. Shell did not provide any explanation for this discrepancy.[180]

CASE 7: THE 2006 SPILL AT IKARAMA

On 31 March 2008, Amnesty International visited Ikarama, to investigate reports of a 2006 oil spill near family homes that had not been cleaned up. Researchers found that the site resembled a lake of oil and water, and nearby palm trees appeared to have been badly affected. Researchers took photographs of the site (see photo). However, when Amnesty International raised the issue of the spill with Shell they said: "without any shadow of doubt … the 2006 spill was cleaned".[181]

Shell also stated that the 2006 spill had been certified by the government as such. Although Amnesty International confronted Shell with the photograph seen here the company has never explained how the site could be classified as cleaned up. This lack of clean up was of particular concern given its proximity to homes and to children playing. No efforts had been made to secure the site or prevent accidents.

The impact of a 2006 oil spill near Ikarama, taken on 31 March 2008 © Amnesty International

SPILLS AT IKARAMA

At least 100 oil spills have occurred at Ikarama in Bayelsa state since 2007 – from both Agip and Shell facilities.[182] The impact on local livelihoods is devastating. Women and men interviewed by Amnesty International in 2013 spoke about the lack of proper clean up, the damage to their livelihoods and an overall lack of transparency in how oil companies deal with communities. An NGO based in Bayelsa state has been trying to work with local communities and oil companies to improve relations. Oil companies frequently claim they are looking for solutions and dialogue on the problems in the Niger Delta. However, on the ground, local NGOs and communities can have a hard time getting access to the companies.

In 2013 SACA invited Agip to a stakeholder meeting – the company did not turn up. Amnesty International has asked Agip why it is not engaging with SACA over the oil pollution issues at Ikarama. To date Agip has not responded. The failure of companies to engage with NGOs based in the Niger Delta undermines their claims that international oil companies want to find solutions to the challenges facing the oil industry in Nigeria.

CONCLUSIONS AND SOLUTIONS

There are systemic flaws in the system for investigating oil spills in the Niger Delta. As a result, the outcome of these investigations lacks credibility. Individual cases investigated by Amnesty International and CEHRD reveal serious discrepancies between the evidence and the oil companies' claims.

Regulatory certification in relation to oil spill investigations and clean up is all but meaningless – regulators have certified sites that are polluted as clean, and have signed off on investigation reports containing incorrect or incomplete data. There is no meaningful check on the oil companies' operations.

The human rights consequences are serious: thousands of people may have been denied a just remedy for the impacts of oil spills. Moreover, the lack of transparency around the oil spill investigation process is one of the factors that contribute to heightened tensions in the Niger Delta.

With regard to Shell, reviewing all available data this report has built up a picture of a company whose claims about its environmental impact in the Niger Delta are frequently untrue. Shell has claimed that the oil spill investigations are sound when they are not, that sites are cleaned up when they are not, and that the company is transparent when, in reality, it maintains very tight control over every piece of information – deciding what to disclose and what to withhold.

This report has also raised serious concerns about the scale of oil spills from Agip's facilities, which suggest the company is not in control of its operations in the Niger Delta. No company can defend more than 400 oil spills a year by referring to sabotage and theft.

The existence of serious problems, including oil theft, in the Niger Delta is being used – primarily by Shell – to divert attention away from the pollution that is due to the aged pipes and poor maintenance.

Investors need to examine these issues more closely. They need to require verifiable evidence of the claims being made by companies. They also need to look at the long-term liability of a company's failure to take more effective action to prevent theft and sabotage.

Nigeria must amend its legislation to address the fact that oil companies face no sanctions for oil spills so long as they are attributed to sabotage or theft. This situation has permitted a range of highly damaging practices.

RECOMMENDATIONS

TO THE GOVERNMENT OF NIGERIA

Substantially strengthen the capacity of NOSDRA, including by providing an increased budget for its operations.

Amend the law to ensure that individuals and communities receive compensation for oil spills caused by third party actions in all cases where the operators have not taken effective measures to prevent such interference with their infrastructure.

Officially confirm the Niger Delta as a High Consequence Area.

Require NOSDRA to establish, as a matter of urgency, a dialogue involving all stakeholders in the JIV process, to develop a comprehensive and transparent system and uniform reporting format that takes into account the perspectives of all actors.

Implement the 2012 ECOWAS Court judgement, the recommendations of the 2011 UNEP report and the 2002 ACHPR recommendations as a matter of urgency.

Take urgent steps to address gender discrimination, including the following:

- Explicitly recognise that oil pollution affects different members of the community differently.

- Ensure NOSDRA offices in the Niger Delta are instructed to ensure that women in oil-affected communities are informed about JIV and clean up processes and enabled to participate. This will require training and support for NOSDRA field officers.

- Ensure processes to identify impacted areas take full account of who uses the land and water and for what purposes; these data should inform clean up and compensation processes.

TO THE NATIONAL ASSEMBLY

Include specific provisions on transparency of oil operations in the Petroleum Industries Bill, including the following:

- All JIVs and associated photographs and video footage to be published. Companies should be required to provide clear, close-up photographs of spill points, clear photographs of the affected area, and video footage of any oil release. In the event that the company fails to provide the required basic evidence, financial penalties should be imposed.

- All certificates of clean up and the underlying data to be published.

- All companies to publish, annually, asset integrity data and to disclose the age of infrastructure and all repairs and replacements.

- Companies to take effective action to prevent sabotage and theft with effective penalties

for failure to do so.

Ensure the Petroleum Industries Bill is amended to reflect in full the 2012 ECOWAS court judgement, the 2011 UNEP recommendations and the 2002 ACHPR recommendations.

End the Department of Petroleum Resources' involvement in all aspects of environmental oversight of the oil industry.

TO THE OIL COMPANIES

If the international oil companies are committed to finding solutions to the issues in the Niger Delta they must enable all stakeholders to engage on the issues with the same level of information. Therefore they should:

Publish all JIVs and associated photographs and video footage; ensure photographs are clear and provide verifiable evidence of the cause and impacted area; ensure video footage will enable independent verification of the rate of oil flowing at the time of the JIV where possible; and publish details of how and when oil flow is stopped or parts of the system are isolated.

Ensure that JIVs are not signed unless all data fields are filled in.

Overhaul the way the volume of oil spilt is calculated, including through the use of best available technologies and the publication of verifiable evidence.

Ensure that oil flow is always turned off and publish verifiable confirmation that this is done.

Disclose the following information:

- Age of all oil infrastructure
- Asset integrity status for all infrastructure
- All JIVs and associated photographs and video footage for spills since 2000

Significantly improve security monitoring of oil infrastructure to prevent sabotage and theft and commit to implementing best available technology to prevent spills in the Niger Delta.

As a matter of urgency publish all steps taken, or planned, to prevent sabotage and theft of oil from facilities.

ADDITIONAL RECOMMENDATIONS TO SHELL

In its response to Amnesty International on 1 November 2013, Shell stated that it "will continue to find ways to enhance communications and transparency". This commitment is welcomed and the recommendations above, and below, would greatly aid Shell in fulfilling this objective. Amnesty International and CEHRD call on Shell to:

Provide verifiable proof when citing illegal refining as a cause of pollution in any specific area or case. This can include photographs which show when and where refining was taking place and the GPS coordinates.

Publish the terms of reference for Bureau Veritas's engagement and details of what Bureau Veritas has audited, the number of JIVs it has monitored and the recommendations it has made to Shell. Make the reports that Bureau Veritas compiles when they attend oil spill investigations public or request Bureau Veritas to do this.

Make public the JIV forms signed during field investigations for comparison with the JIV forms Shell puts on its corporate website.

Conduct a thorough clean up at Bodo, which is certified by independent evaluators in agreement with the community and ensure their right to effective remedy is fully respected.

TO INVESTORS IN SHELL

Solutions to oil pollution in the Niger Delta can only be approached meaningfully if all stakeholders are operating on a level playing field. All stakeholders must have access to the same information and the ability to challenge past bad practice that undermines trust and the formulation of future solutions. Investors should ask Shell to:

Implement the recommendations above.

Agree to a joint project with Amnesty International to review all JIVs and associated video footage and photographs since 2000 with a view to:

- Increasing transparency and public trust
- Identifying and remedying any past inaccuracies and injustices
- Clarifying the underlying problems and developing solutions

TO INVESTORS IN ENI/AGIP

Ask the company to:

Act, with urgency, to address the huge number of spills from its infrastructure.

Implement the recommendations above.

Agree to a joint project with Amnesty International to review all JIVs and associated video footage and photographs since 2000 with a view to:

- Increasing transparency and public trust
- Identifying and remedying any past inaccuracies and injustices
- Clarifying the underlying problems and developing solutions

TO THE GOVERNMENTS OF THE UK, NETHERLANDS, FRANCE AND ITALY

Increase engagement with and support of the government of Nigeria to ensure independent oversight of the oil industry and better access to effective remedy for people whose rights are adversely affected by oil operations in the Niger Delta.

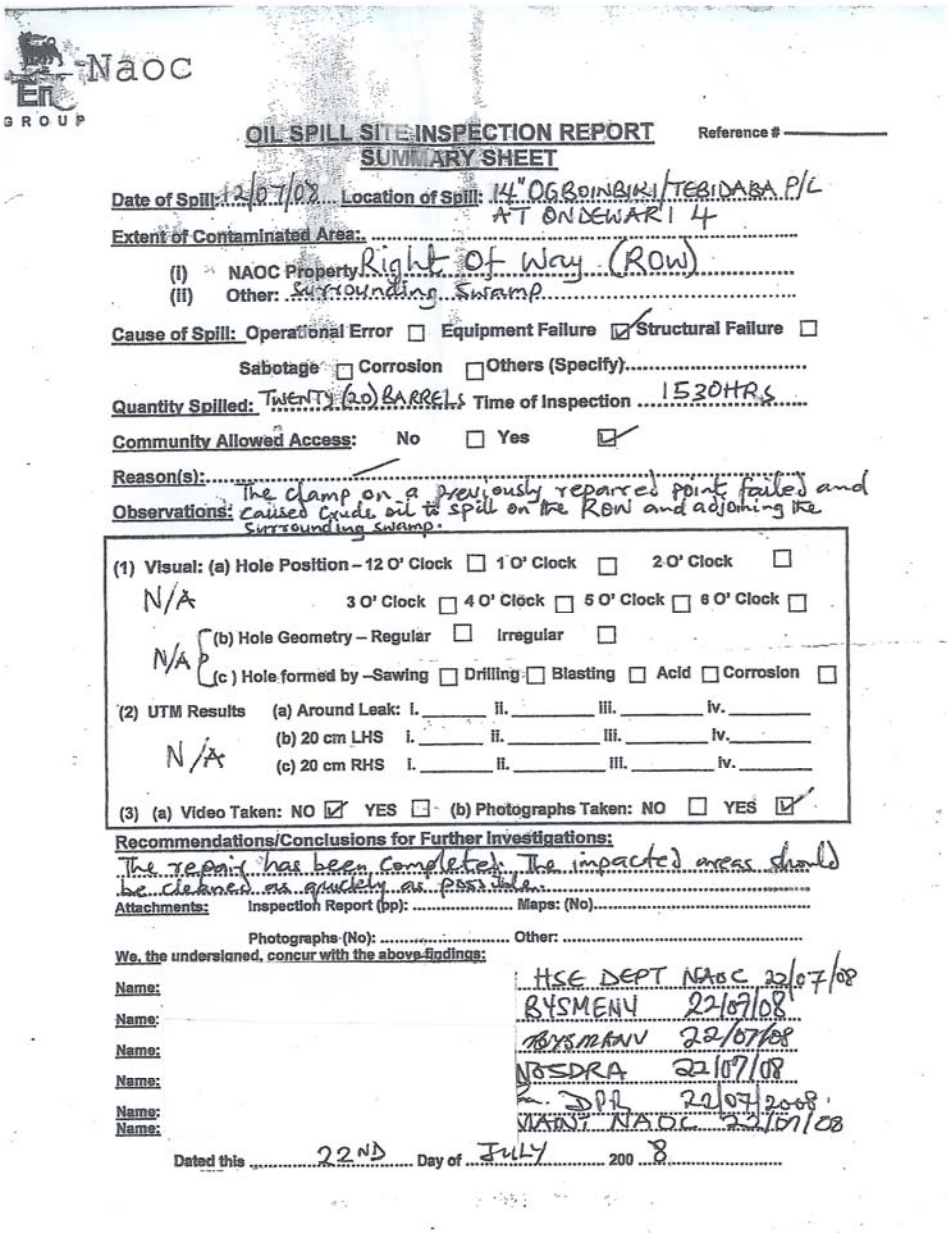
Offer to assist the government of Nigeria to implement the UNEP report recommendations. Consider international cooperation to identify and address key obstacles to the implementation of the UNEP recommendations and pro-actively engage with the government of Nigeria and oil companies to overcome these obstacles.

Require by law that extractive companies that have their headquarters or are domiciled in their country undertake human rights due diligence measures in respect of their global operations, with particular attention to high-risk areas such as the Niger Delta.

TO THE GOVERNMENTS OF THE NETHERLANDS AND ITALY

Convene a review of the operations of Shell and Agip in Nigeria, through a parliamentary or similar process, which should be public.

ANNEX: SAMPLE JIV FORM



NAOC
GROUP

OIL SPILL SITE INSPECTION REPORT
SUMMARY SHEET

Reference # _____

Date of Spill: 12/07/08 Location of Spill: 14" OGBOINBIRI/TEBIDABA P/L AT ONDEWARI 4

Extent of Contaminated Area: .....

(i) NAOC Property: Right of Way (ROW)
(ii) Other: Surrounding Swamp

Cause of Spill: Operational Error ☐ Equipment Failure ☑ Structural Failure ☐
Sabotage ☐ Corrosion ☐ Others (Specify).....

Quantity Spilled: TWENTY (20) BARRELS Time of Inspection 1530HRS

Community Allowed Access: No ☐ Yes ☑

Reason(s): .....

Observations: The clamp on a previously repaired point failed and caused Crude oil to spill on the ROW and adjoining the surrounding swamp.

(1) Visual: (a) Hole Position – 12 O' Clock ☐ 1 O' Clock ☐ 2 O' Clock ☐
N/A 3 O' Clock ☐ 4 O' Clock ☐ 5 O' Clock ☐ 6 O' Clock ☐
N/A (b) Hole Geometry – Regular ☐ Irregular ☐
(c) Hole formed by –Sawing ☐ Drilling ☐ Blasting ☐ Acid ☐ Corrosion ☐

(2) UTM Results (a) Around Leak: i. _____ ii. _____ iii. _____ iv. _____
(b) 20 cm LHS i. _____ ii. _____ iii. _____ iv. _____
N/A (c) 20 cm RHS i. _____ ii. _____ iii. _____ iv. _____

(3) (a) Video Taken: NO ☑ YES ☐ (b) Photographs Taken: NO ☐ YES ☑

Recommendations/Conclusions for Further Investigations:
The repair has been completed. The impacted areas should be cleaned as quickly as possible.

Attachments: Inspection Report (pp): ..... Maps: (No).....
Photographs (No): ..... Other: .....

We, the undersigned, concur with the above findings:

Name: _____ HSE DEPT NAOC 22/07/08
Name: _____ BYSMENY 22/07/08
Name: _____ BYSMANN 22/07/08
Name: _____ NOSDRA 22/07/08
Name: _____ DPR 22/07/2008
Name: _____ NAOC 22/07/08

Dated this 22ND Day of JULY 200 8

The report from the joint investigation into an oil spill from Agip's operations, July 2008 (the names and signatures have been removed). See page 35 for commentary on this report.

END NOTES

[1] Oil spill figures based on data obtained from the National Oil Spill Detection and Response Agency (NOSDRA) database, Port Harcourt, Nigeria; viewed by Amnesty International delegates on 7 May 2013, as well as reported data from Shell and Agip. The impact of oil spills on the environment and human rights is documented in Amnesty International's report, *Petroleum, Pollution and Poverty in the Niger Delta,* 30 June 2009, Amnesty International Index: AFR/44/017/2009.

[2] Shell claims that both the majority of oil spills and majority of oil spilt (by volume) are due to sabotage and theft. For example, Shell's 2010 Sustainability report stated: "Sabotage and theft together accounted for more than 80% of the spill volume from SPDC facilities in 2010." Shell's 2009 Sustainability report stated: "The great majority of oil spills in Nigeria are the result of sabotage or are caused when thieves drill into pipelines or damage wellhead equipment to steal oil and natural gas liquids. In 2009 the volume of such spills … was almost 14,000 tonnes, accounting for 98% of total SPDC spills volume during the year …". Shell's Sustainability Reports are available at: http://www.shell.com/global/aboutshell/investor/financial-information/annual-reports-and-publications/archive.html.

[3] Nigeria Oil Pipelines Act, 1990, Clause 11 (5); See also: The Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) Part 8 (B) 8.20.

[4] Shell's data is available at: http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills.html. The Italian company ENI, whose subsidiary the Nigerian Agip Oil Company, operates in the Niger Delta, has said it will publish investigations from 2014.

[5] An independent oil spill specialist, Accufacts, reviewed the photographic evidence attached to post-2011 JIVs and concluded there were weaknesses. This assessment is presented in Chapter 2.The fact that Shell completes the forms after the field investigation was confirmed by Shell in an interview with Amnesty International which took place on 7 June 2013 at Shell's London offices.

[6] Shell's website states: "Criminal activities including sabotage, oil theft and illegal refining are causing huge environmental damage in the Niger Delta. From 2008 to 2012, these activities accounted for around 76% of the oil that escaped from SPDC facilities." See: http://www.shell.com/global/environment-society/society/nigeria/spills.html (last accessed 29 October 2013).

[7] Steiner, R. "*Double standard: Shell practices in Nigeria compared with international standards to prevent and control pipeline oil spills and the Deepwater Horizon oil spill*", November 2010

[8] See for example: UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 99

[9] See: Stakeholder Democracy Network at:http://www.stakeholderdemocracy.org/cgblog/536/89/Are-Niger-Delta-pipelines-safe-to-operate-Press-statement-on-recent-oil-spill-and-explosion-at-Bodo.html. Also: Amnesty International and NACGON, Wider investigation into Shell's Nigeria operation needed after arrest of contractors, 26 June 2013 at: http://www.amnesty.org/en/news/wider-investigation-shells-nigeria-operation-needed-after-arrest-contractors-2013-06-26.

[10] NOSDRA database, viewed by Amnesty International researchers on 7 May 2013.

[11] Steiner, R. "*Double standard: Shell practices in Nigeria compared with international standards to prevent and control pipeline oil spills and the Deepwater Horizon oil spill*", November 2010.

[12] See Chapters 2 and 3 of this report.

[13] Amnesty International has reviewed JIVs Ikarama, July 2002, SPDC; Kolo Creek, June 2005, SPDC; Ogboinbari, October 2009, NAOC;Osiama, June 2010, NAOC; Ogboinbiki, July 2008, NAOC; Bodo, August (October) 2008, SPDC; Bodo, December 2008, SPDC; Okordia/Ikarama, June 2006, SPDC; Adibawa/Ikarama, June 2006, SPDC; Adibawa/Ikarama, July 2006, SPDC; Nkupoku/Kira, May 2007, SPDC; Mogho, October 2004, SPDC;Bomu Manifold, April 2009, SPDC; Kira Tai, 2008 SPDC, Oruma, June 2005, SPDC; Goi, September 2004, SPDC.

[14] Amnesty International researchers were allowed to view the NOSDRA database on 7 May 2013. These data are for oil spills reported and for which a joint investigation was done. The NOSDRA database also recorded 1 spill for Addax, 13 spills from Chevron, seven for NDPR and one for PPMC.

[15] Written response from Agip received on 30 October 2013.

[16] Based on data on Shell's website at: : http://www.shell.com/global/environment-society/society/nigeria/spills.html (last viewed on 28 October 2013).

[17] Shell, Nigerian Environment Brief, 1995

[18] Shell states on its website: Over the past five years, from 2008 to 2012, just under a quarter of the oil that escaped from SPDC facilities was due to operational causes such as human error or equipment failure. Criminal activities including sabotage, oil theft and illegal refining are causing huge environmental damage in the Niger Delta. From 2008 to 2012, these activities accounted for around 76% of the oil that escaped from SPDC facilities. See: http://www.shell.com/global/environment-society/society/nigeria/spills.html (last viewed on 28 October 2013)

[19] Nigeria's Department of Petroleum Resources (DPR) has reported that 4,835 oil spill incidents were recorded between 1976 and 1996, with a loss of 1.8 million barrels of oil to the environment. These data are based mainly on what companies report to the DPR. According to UNDP, more than 6,800 spills were recorded between 1976 and 2001, with a loss of approximately 3 million barrels of oil. NOSDRA has recorded almost 3,000 oil spills in the period between 2007 and 2012.

[20] Niger Delta Natural Resources Damage Assessment and Restoration Project, Phase I Scoping Report, May 2006, conducted by Nigerian Conservation Foundation, WWF UK and International Union for Conservation of Nature (IUCN), Commission on Environmental, Economic and Social Policy, with Federal Ministry of Environment (Abuja).

[21] For a full discussion on the human rights impact of oil pollution in the Niger Delta, see Amnesty International's report, *Petroleum, Pollution and Poverty in the Niger Delta*, 30 June 2009, Amnesty International Index: AFR/44/017/2009.

[22] African Commission on Human and Peoples' Rights, Decision on communication of The Social and Economic Rights Action Center and the Center for Economic and Social Rights/Nigeria (155/96), para 70. Decision made at the 30th ordinary session of the African Commission of Human and Peoples' Rights, Banjul, 13-27 October 2001, available at http://www1.umn.edu/humanrts/africa/comcases/155-96b.html

[23] African Commission on Human and Peoples' Rights, Decision on communication of The Social and

Economic Rights Action Center and the Center for Economic and Social Rights/Nigeria (155/96), decision made at the 30th ordinary session of the African Commission of Human and Peoples' Rights, Banjul, 13-27 October 2001, available at http://www1.umn.edu/humanrts/africa/comcases/155-96b.html

[24] This is documented in detail in Amnesty International's report, *Petroleum, Pollution and Poverty in the Niger Delta*, 30 June 2009, Amnesty International Index: AFR/44/017/2009.

[25] See: UNEP, Environmental Assessment of Ogoniland, 2011.

[26] See: Amnesty International, *Petroleum, Pollution and Poverty in the Niger Delta*, 30 June 2009, Amnesty International Index: AFR/44/017/2009; Amnesty International and Centre for Environment, Human Rights and Development, *The True Tragedy: Delays and Failures in Tackling Oil Spills in the Niger Delta*, November 2011, AFR/44/018/2011

[27] See: http://www.reports-and-materials.org/Complaint-to-ECOWAS-Court-re-Nigeria-oil-pollution-25-Jul-2009.doc

[28] This is sometimes referred to as the Joint Investigation Team (JIT) report.

[29] Oil Pipelines Act, 1990, Clause 11 (5). Also, the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) state: "A spiller shall be liable for damages from a spill for which he is responsible" (Part 8 (B) 8.20).

[30] The Oil Pipelines Act of 1990 provides for compensation based on negotiation between the oil company and individuals or communities affected by oil spill. This practice is extremely problematic – a fuller discussion is contained in Amnesty International's report, *Petroleum, Pollution and Poverty in the Niger Delta*, 30 June 2009, Amnesty International Index: AFR/44/017/2009

[31] Based on the dates recorded on most JIV forms seen by Amnesty International; companies often refer to delays in access to sites caused by communities. However, other evidence calls this claim into question, including the interaction witnesses by Amnesty International in the Rivers State NOSDRA office, where the text message received by the NOSDRA Director made no reference to access issues. This was also noted by UNEP in its Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 151.

[32] Department of Petroleum Resources, Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), revised edition 2002, p148, para 2.6.3.

[33] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p. 139.

[34] Interview with NOSDRA Zonal Director, Rivers State, at NOSDRA offices, 7 May 2013. In an interview with Total at their offices in Port Harcourt on 9 May 2013, company staff stated that the o'clock position was not a reliable tool.

[35] Interview with representative of Rivers State Ministry of Environment, 7 May 2013.

[36] See: https://adam.amnesty.org/asset-bank/action/viewAsset?id=82268

[37] World Bank, Defining an Environmental Development Strategy for the Niger Delta, 25 May 1995, Vol II, Industry and Energy Operations Division West Central Africa Department; UNDP Niger Delta Human Development Report, 2006; UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9.

[38] Niger Delta Human Development Report, 2006

[39] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 140.

[40] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 139.

[41] Based on interviews with Total, 9 May 2013 in Port Harcourt, Shell on 7 June 2013 in London and written responses received from NAOC on 26 June 2013.

[42] This was described by spill-affected communities, by Shell contractors interviewed by Amnesty International and by regulators. Interviews conducted in April 2008 and April/May 2013

[43] Interview with the Managing Director of Shell Petroleum Development Company of Nigeria, Shell Headquarters, London, 7 June 2013.

[44] Report prepared by Accufacts for Amnesty International, September 2013.

[45] Report prepared by Accufacts for Amnesty International, September 2013

[46] Interviews with oil-affected communities and with NGOs working on oil pollution in the Niger Delta, April 2008 and May 2013.

[47] Interview with River State Zonal Director of NOSDRA, Port Harcourt, Nigerian, 7 May 2013.

[48] Amnesty International viewed the electronic record of the Bodo spill at the NOSDRA office on 7 May 2013 and the written records at the Rivers State Ministry of Environment, also on 7 May 2013. Both give 28 August as the date the spill began. NOSDRA's database shows no spill on 5 October.

[49] Interview with man present when spill occurred; interview conducted in Yenagoa, Bayelsa, 8 May 2013.

[50] Forms can be seen at: http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills.html

[51] Interview with the Managing Director of Shell Petroleum Development Company of Nigeria, Shell Headquarters, London, 7 June 2013.

[52] Interview with the Managing Director of Shell Petroleum Development Company of Nigeria, Shell Headquarters, London, 7 June 2013.

[53] The letter is seen on the video documentary, which can be viewed at https://adam.amnesty.org/asset-bank/action/viewAsset?id=82268

[54] Interviews with Father Kevin O'Hara, who worked at that time with the Center for Social and Corporate Responsibility in Rivers State at that time, 6 and 9 April 2009.

[55] G. J. Frynas, "Legal Change in Africa, "Evidence from oil-related litigation in Nigeria", Journal of African Law, Vol 43, No. 2 (1999), p128.

[56] Shell v. Isaiah, (1997) 6 NWLR (pt. 508) 263.

[57] Interview with River State Zonal Director of NOSDRA, Port Harcourt, Nigerian, 7 May 2013.

[58] Written response from Agip to Amnesty International, received on 26 June 2013.

[59] Interviews with Total on 9 May 2013 in their offices in Port Harcourt, Rivers State, Niger Delta and with Shell on 7 June 2013 in their London offices.

[60] Ikarama, July 2002, SPDC; Kolo Creek, June 2005, SPDC; Ogboinbari, October 2009, NAOC;Osiama, June 2010, NAOC; Ogboinbiki, July 2008, NAOC; Bodo, August (October) 2008, SPDC; Bodo, December 2008, SPDC; Okordia/Ikarama, June 2006, SPDC; Adibawa/Ikarama, June 2006, SPDC; Adibawa/Ikarama, July 2006, SPDC; Nkupoku/Kira, May 2007, SPDC; Mogho, October 2004, SPDC;Bomu Manifold, April 2009, SPDC; Kira Tai, 2008 SPDC, Oruma, June 2005, SPDC; Goi, September 2004, SPDC.

[61] Accufacts review of Shell JIVs commissioned by Amnesty International, October 2013.

[62] JIV reference: 810919

[63] Accufacts review of specific post-2011 JIV documents, prepared for Amnesty International, October 2013.

[64] JIV reference: 981063

[65] Accufacts review of specific post-2011 JIV documents, prepared for Amnesty International, October 2013.

[66] Accufacts report on JIV process, prepared for Amnesty International, September 2013.

[67] Written response from Agip received on 30 October 2013.

[68] Accufacts report on JIV process, prepared for Amnesty International, September 2013.

[69] Interview with Total, Port Harcourt, Niger Delta, 9 May 2013.

[70] Reported to Amnesty International by witnesses who were at the site at the time, July 2012.

[71] See: Amnesty International and the Centre for Environment, Human Rights and Development (CEHRD), *Another Bodo Oil Spill, Another Flawed Oil Spill Investigation in the Niger Delta* (Index: AFR 44/037/2012)

[72] Email communication with Accufacts, 9 July 2012

[73] Email communication with Shell, 10 July 2012

[74] Footnote to the emails to and from Shell

[75] Email from Shell to Amnesty International, 12 August 2013.

[76] Email from Shell dated 12 August 2013.

[77] Accufacts report on JIV process, prepared for Amnesty International, September 2013.

[78] Amnesty International interview with Rivers State Zonal Director of NOSDRA, 7 May 2013, Port Harcourt.

[79] Interviews with oil-affected communities, Niger Delta between 2008 and 2013 conducted by Amnesty International and CEHRD; interviews with NGOs working with oil-affected communities, May 2013.

[80] Interview with the Managing Director of Shell Petroleum Development Company of Nigeria, Shell Headquarters, London, 7 June 2013.

[81] Written response from Agip to Amnesty International, received on 26 June 2013.

[82] Not all JIV reports provide sufficient detail as to how the volume of oil spilled was determined, both on

the surface, as well as in the ground or underwater. Depending on the surface terrain, the depth of the oil on the ground surface can be off by a very wide margin. For oil that has penetrated the soil, considerable oil can be below the surface depending on the soil average assumed porosity. For spills involving water, especially flowing water, a water emulsification factor, akin to a depth guestimate or assumption, can also cause considerable variation in quantity spilled estimates.

[83] Ruptures tend to be larger opening higher rate oil releases whose large openings (occurring in microseconds) are usually influenced by the defect size and pipe stress levels. Leaks tend to be much lower rate releases whose openings (holes or cracks) stay relatively fixed upon failure.

[84] Accufacts report prepared for Amnesty International, October 2013.

[85] Accufacts report prepared for Amnesty International, October 2013.

[86] Accufacts report prepared for Amnesty International, October 2013.

[87] Accufacts report prepared for Amnesty International, October 2013.

[88] Accufacts report prepared for Amnesty International, October 2013.

[89] This case has been reported on by Friends of the Earth Netherlands. See: http://www.milieudefensie.nl/english/shell/oil-leaks/courtcase

[90] See: http://www.milieudefensie.nl/english/shell/oil-leaks/courtcase

[91] District Court of the Hague, C/09/337058 / HA ZA 09-1581

[92] Reference # 2004/SAR/163

[93] Reference # 2010/SAR/082

[94] Reference # 2013/LAR/059/114

[95] Reference # 2013/LAR/076

[96] Written response from Agip received on 30 October 2013.

[97] Shell has confirmed that the Bodo volume is the number recorded in the field. See: Nigeria: Shell Responds to AI's Criticisms Over Niger Delta Oil Spills allafrica.com/stories/201204240911.html.

[98] Email from Total to Amnesty International, 21October 2013.

[99] From B, sample shared by Total in an email to Amnesty International on 23 May 2013.

[100] Written response from Agip received on 30 October 2013.

[101] Email from Total to Amnesty International, 21 October 2013.

[102] Accufacts report on JIV process, prepared for Amnesty International, September 2013.

[103] Katsouris, C. and Sayne, A. Nigeria's Criminal Crude: International Options to Combat the Export of Stolen Oil, Chatham House, September 2013, ISBN 978 1 86203 295 8.

[104] Shell, Nigerian Environment Brief, 1995

[105] ENI, Answers to the questions received prior to the Shareholders' Meeting, pursuant to art.127-ter of Italian Legislative Decree n. 58/1998, p. 19

[106] Email from Shell to Amnesty International, 1 November 2013.

[107] Interview with the Managing Director of Shell Petroleum Development Company of Nigeria, Shell Headquarters, London, 7 June 2013. Mr Sunmonu stated that "stations producing into the line shut down; the 'whole line' shuts. There are also "false shutdowns" due to theft – i.e., where the pressure drops because oil is being siphoned off (Crude oil thieves)."

[108] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, pp 99-100.

[109] Amnesty International and CEHRD, *The True Tragedy, Delays and Failures in Tackling Oil Spills in the Niger Delta,* November 2011. Amnesty International Index No: AFR/44/018/2011.

[110] Fuller details on this issue are contained in Amnesty International and CEHRD, *The True Tragedy, Delays and Failures in Tackling Oil Spills in the Niger Delta*, November 2011. Amnesty International Index No: AFR/44/018/2011.

[111] Interview with a group of women living in oil-impacted villages in Ikarama, Bayelsa State, 8 May 2013.

[112] Interview with Oruma community leaders, 8 May 2013.

[113] District Court of the Hague, Final Judgement C/09/337058 / HA ZA 09-1581 and C/09/365482 HA ZA 10-1665.

[114] District Court of the Hague, C/09/337058 / HA ZA 09-1581

[115] Accufacts report prepared for Amnesty International, October 2013.

[116] Email from Shell to Amnesty International, 1 November 2013.

[117] See: http://reports.shell.com/sustainability-report/2011/ouractivities/deliveringenergyresponsibly/nigeria.html (last accessed on 28 October 2013)

[118] This oil spill is described in detail in a joint report by Amnesty International and CEHRD, *The True Tragedy, Delays and Failures in Tackling Oil Spills in the Niger Delta*, November 2011. Amnesty International Index No: AFR/44/018/2011.

[119] Amnesty International and Centre for Environment, Human Rights and Development, *The True Tragedy: Delays and Failures in Tackling Oil Spills in the Niger Delta*, November 2011, AFR/44/018/2011.

[120] Leigh Day, "Litigation continues as 'deeply disappointing' Nigerian oil spill talks collapse", 13 September 2013. See: http://www.leighday.co.uk/News/2013/September-2013/Shell-Litigation-continues

[121] Letter from Managing Director of SPDC to the UK Financial Times on 22 March 2012. See: http://www.shell.com.ng/environment-society/our-response/mutius-letter.html

[122] Amnesty International wrote to DPR and NOSDRA on 14 July 2011, requesting a reaction by 30 July 2011. Two reminders were sent on 10 August and 12 September 2011. NOSDRA replied on 16 September 2011; the DPR did not reply. Under the Freedom of Information Act, a reaction should be given within seven days; if the DPR refused to give access to information or needed more time, it should have given notice.

[123] Three Amnesty International delegates reviewed the hand-written ledger at the State Ministry of Environment offices on 7 May 2013.

[124] Email communication with Sue Lloyd Roberts of the BBC who covered the case in a report on the Niger Delta in 2008.

[125] Amnesty International Press Release, *Shell's wildly inaccurate reporting of Niger Delta oil spill exposed,* 23 April 2012. See: http://www.amnesty.org/en/news/shell-s-wildly-inaccurate-reporting-niger-delta-oil-spill-exposed-2012-04-23.

[126] AllAfrica, Nigeria: Shell Responds to Al's Criticisms Over Niger Delta Oil Spills at:23 April 2012http://allafrica.com/stories/201204240911.html..

[127] Shell statements made during a TV debate on the issues in Norway on the NRK channel on 21 October 2012.

[128] Email communication with Sue Lloyd Roberts of the BBC, who covered the case in a report on the Niger Delta in 2008. The emails quoted from Shell are from December 2008.

[129] Email from Shelll to Amnesty International, 20 April 2012.

[130] The first time this claim was made to Amnesty International was during a televised debate in Norway on NRK on 21 October 2012 (debate aired on 22 October).

[131] Accufacts assessment of Bodo August 2008 oil flow video, prepared for Amnesty International on 11 March 2012.

[132] Calculations based on days of full oil flow between 28 August and 5 October and three further days of flow which is based on Shell's statements. Additionally, even when the oil flow is turned off, it would continue to flow for some time and these figures do not include this flow so would underestimate the total.

[133] Interview with Kpoobari Patta, President of the Bodo Youth Council, May 2011.

[134] Amnesty International and Centre for Environment, Human Rights and Development, *The True Tragedy: Delays and Failures in Tackling Oil Spills in the Niger Delta*, November 2011, AFR/44/018/2011.

[135] Communication from Shell's International Relations Manager to Amnesty International Italy, 16 February 2012.

[136] Email from Shell to Amnesty International on 30 May 2012

[137] Communication from Shell's International Relations Manager to Amnesty International Italy, 16 February 2012.

[138] Letter from Managing Director of SPDC to the UK Financial Times on 22 March 2012. See: http://www.shell.com.ng/environment-society/our-response/mutius-letter.html

[139] Water quality of Bodo Creek in the lower Niger Delta Basin, Advances in environmental Biology (2008) 2, 132 -136, ; Population structure, biomass and production of West African lucinid Keletistes rhixoecus (Bivalvia, Mollusca) in Sivibilagbara swamp at Bodo Creek, Niger Delta, Hydrobiolgia (2010) 645: 193 – 203.

[140] These images and the other satellite images referred to in this report were obtained by Amnesty International and analyzed by the Geospatial Technologies and Human Rights Project of the American Association for the Advancement of Science (AAAS).

[141] Mineral Oils (Safety) Regulations 1962, Regulation 7.

[142] United Nations Development Programme (UNDP), *Niger Delta Human Development Report, 2006*, p74.

[143] Steiner, R., report on behalf of Friends of the Earth Netherlands "*Double standard, Shell practices in Nigeria compared with international standards to prevent and control pipeline oil spills and the Deepwater Horizon oil spill*", November 2010, <http://milieudefensie.nl/publicaties/rapporten/double-standard.

[144] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, pp 99-100.

[145] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 99.

[146] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 100.

[147] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 99.

[148] ENI, Answers to the questions received prior to the Shareholders' Meeting, pursuant to art.127-ter of Italian Legislative Decree n. 58/1998, p. 17.

[149] Written response from Agip received on 30 October 2013.

[150] SPDC, Nigeria Brief, The Environment, 1995.

[151] SPDC, Nigeria Brief, The Environment, 1995.

[152] An interview with Nigeria Country Chair, Basil Omiyi by Roger Hammond. See: http://sustainabilityreport.shell.com/2006/workinginchallenginglocations/nigeria.html

[153] District Court of Amsterdam, C/09/337058 / HA ZA 09-1581 and C/09/365482 HA ZA 10-1665

[154] Nigeria: Pipeline Expert Says 73 Percent Of Niger Delta Pipelines Need Replacement, Cause Spills, Consulate Lagos (Nigeria), 17 December 2008

[155] See for example: BP, "the Baku-Tbilisi-Ceyhan (BTC) pipeline", <http://www.bp.com/sectiongenericarticle.do?categoryId=16002865&contentId=7020378>
Norwegian Petroleum Directorate, "Pipelines and onshore facilities", http://www.npd.no/en/Publications/Facts/Facts-2010/Chapter-15.
Andrew Palmer, research professor in petroleum engineering at Cambridge University, quoted in 2004 Christian Aid, report "Behind the mask, The real face of corporate social responsibility", January 2004, <http://www.scribd.com/doc/38236692/Behind-the-Mask>

[156] "As a result of deterioration in the integrity of the existing trunkline, occasioned by the harsh Niger Delta environment, vandalisation and severe age-related deterioration, the project was initiated to improve, modernize and restore the technical integrity of the facilities." Source, website content contractor Nestoil as quoted in the following report: Richard Steiner, report on behalf of Friends of the Earth Netherlands "Double standard, Shell practices in Nigeria compared with international standards to prevent and control pipeline oil spills and the Deepwater Horizon oil spill", November 2010,

<http://milieudefensie.nl/publicaties/rapporten/double-standard>
Information is no longer on the website of Nestoil, but similar sentences can be found in: Pipelines International, "Maintaining Nigeria's pipeline integrity", December 2010, <http://pipelinesinternational.com/news/maintaining_nigerias_pipeline_integrity/053581>

[157] ENI, Answers to the questions received prior to the Shareholders' Meeting, pursuant to art.127-ter of Italian Legislative Decree n. 58/1998, p. 18

[158] Reported by NGOs working with local community and who visited the area at the time.

[159] This Day, "Presidency Accuses IOCs of Complicity in Oil Theft", 18 July 2013.

[160] This Day, "Presidency accuses IOCs of Complicity in Oil Theft", 18 july 2013.

[161] Department of Petroleum Resources, Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), revised edition 2002, p150, para 2.11.3 (i).

[162] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 150.

[163] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 12.

[164] UNEP, Environmental Assessment of Ogoniland, August 2011, ISBN: 978-92-807-3130-9, p 112.

[165] A report by the independent IUCN - Niger Delta Panel (IUCNNDP) to the Shell Petroleum Development Company of Nigeria Ltd (SPDC), January 2013, p 4.

[166] A report by the independent IUCN - Niger Delta Panel (IUCNNDP) to the Shell Petroleum Development Company of Nigeria Ltd (SPDC), January 2013, p 4.

[167] Email from Shell to Amnesty International, 12 August 2013.

[168] Email from Shell to Amnesty International, 12 August 2013.

[169] See http://www.shareholdersalliance.com/projects.

[170] Interview with fisherman at Oya Lake, 8 May 2013.

[171] Shell email to Amnesty International, 12 August 2013.

[172] Available on YouTube: http://www.youtube.com/watch?v=xdOvsAwIsEA

[173] Email correspondence with Accufacts, 3 November 2013.

[174] Shell website at: http://www.shell.com.ng/environment-society/environment-tpkg/oil-spills.html (last acessed on 3 November 2013)

[175] Email from Total to Amnesty International, 21 October 2013.

[176] Written response from Agip to Amnesty International, 30 October 2013.

[177] SPDC, *People and the Environment Report*, 2006.

[178] SPDC, *People and the Environment Report*, 2005.

[179] SPDC, *People and the Environment Report*, 2004.

[180] Interview with Shell representatives, Shell Headquarters, The Hague, Netherlands, 15 September 2008.

[181] Interview with Shell representatives, Shell Headquarters, The Hague, Netherlands, 15 September 2008

[182] Based on data from NOSDRA database, viewed 7 May 2013.

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