An Indecent Partnership: IUCN and Shell

An Analysis of how a Leading International Environmental Organisation is Greenwashing one of the Biggest Polluters in the World

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Abstract

Partnerships of international environmental organisations (IEOs) and polluters can have positive outcomes for the environment, but they can also result in an organisation greenwashing a polluting company. The International Union for the Conservation of Nature (IUCN), a leading IEO, is partnering with the oil giant Royal Dutch Shell, one of the biggest polluters worldwide. This study aims to determine whether the partnership makes a positive contribution to the environment or if the opposite is the case and IUCN is greenwashing Shell. Specifically it investigates the effectiveness of an IUCN–Shell project in the Niger Delta, which aims to improve Shell's sustainability record in the area. As a result of the project, two reports were published which give recommendations on how to reach this aim.
These reports are the substance of this study's methodology, with a number of hypotheses testing their integrity, whether they had a positive effect and whether the absence of positive effects was criticized by IUCN. Methods which test the hypotheses are a summative content analysis, evaluating the content – and process-tracing, assessing the effects of the reports. The results showed that IUCN is greenwashing Shell, as the reports are biased, not transparent and the authors not independent. Furthermore, there was determined only a minor process and a lack of criticism by IUCN to Shell's poor behaviour.
The outcome of the study questions not only the legitimacy of IUCN as an IEO but also the overall system of global environmental governance in which these organisations operate and are entrusted with effecting a meaningful impact for the environment.

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GLOSSARY

CSR	Corporate social responsibility
DPR	Department of Petroleum Resources
EGASPIN	Environmental Guidelines and Standards for the Petroleum Industry in Nigeria
IEO	International environmental organisation
IO	International organisation
IUCN	International Union for Conservation of Nature
JIV	Joint Investigation Visit
NDP	Niger Delta Panel
NNPC	Nigerian National Petroleum Corporation
NOSDRA	Nigerian Oil Spill Data Response Agency
O&G	Oil and gas
SPDC	Shell Petroleum Development Company of Nigeria Limited Joint Venture
THO	Transnational hybrid organisation
UNEP	United Nations Environmental Programme
WWF	World Wildlife Fund

1 Introduction: Greenwashing of Polluting Companies by IEOs

In recent years, the issue of climate change has gained increasing amounts of attention both from the general public (Chen & Huang, 2020) and within the political domain (Garnier, Ferdinand & Lawson, 2020, p. 18). This has led to sustainability becoming more and more important within the business world, partly due to a growth in demand from customers for firms to behave in an ecologically friendly manner and partly due to the proliferation of government regulations aimed at limiting environmental damage (Stonehouse, 2015). It has also resulted in increasing pressure being placed upon companies to engage in corporate social responsibility (CSR) (Helmig, Spraul & Ingenhoff, 2016), with firms that fail to do so facing the risk of losing profits due to reputational damage (Khojastehpour & Johns).

Whilst some companies are genuinely motivated to change by these developments, others are solely driven to seek to preserve their reputations and consequently uphold their profit margins (Hategan et al., 2018). This appears to have resulted in some companies partnering with international environmental organisations (IEOs) for the purpose of "greenwashing" (Poret, 2019), which is a term that is used to describe them engaging in behaviour aimed at painting them as more environmentally friendly than they actually are (More, 2019). In instances in which a major polluter actively engages in making its business more sustainable with the help of an IEO such partnerships can be beneficial. However in some situations, it can also help firms that do not actually wish to enhance their sustainability to give the impression that they are acting in an ecologically sound manner due to their association with an IEO (Greengard, 2013).

The International Union for Conservation of Nature (IUCN) has partnered with big polluters such as Rio Tinto, Black Mountain Mininh and Royal Dutch Shell (referred to hereafter as 'Shell') (IUCN, n.d. a). It is a powerful and longstanding IEO (Ananjeva et al., 2015) with various different governments and a diverse range of NGOs within its membership (IUCN, n.d. b) and is regarded as "the most important organisation within the international conservation community" (Richardson, 2015).

When a such powerful IEO partners with major polluters it seems imperative to know if such partnerships lead to improvements in sustainability or if they merely constitute greenwashing. If IUCN is indeed facilitating greenwashing for polluters, we would not only need to question IUCN's high position in global environmental governance (GEG) but also the entire concept of environmental governance, as it would mean that one of its main stakeholders is actively participating in greenwashing, hindering the effective tackling of the

environmental crisis. This thesis therefore aims to settle this question by looking into IUCN's controversial partnership with the oil giant Shell, one of the world's most pollutant companies (Taylor & Watts, 2019).

So far, the literature has left out IUCN almost entirely when discussing IEOs and greenwashing. Only Fuller (2020) and Nigerian activist Bassey (2013) have implied that the organisation could be facilitating greenwashing for Shell. However so far these claims have remained allegations and could not be to verified or falsified. This thesis therefore aims to ascertain whether these allegations can be proven and will address the following the research question: "Does IUCN greenwash Shell?"

The case study that the thesis will assess is one of IUCN and Shell's projects, namely improving Shell's oil-spill-remediation performance in the Niger Delta. It will seek to ascertain whether or not the *substance* of the partnership – two reports that advise on oil spill remediation and biodiversity conservation – are composed in an objective, independent and transparent manner. It will also assess whether the reports had a noticeable effect in the region, and if they did not, if IUCN was critical of this. The answering of these questions will be utilised in order to derive an answer to the research question and establish the extent to which IUCN greenwashes or does not greenwash Shell.

The structure of this thesis is as it follows: Chapter 2 is a literature review, that will lead to the research problem, to be discussed in Chapter 3. This part will also lay the grounds of the methodology by defining the scope and delimitations of the research and presenting the study's two research methods, summative discourse analysis and process tracing. Next, the methods will be applied in Chapter 4. In Chapter 5, the results will be discussed. Finally, the author will provide a conclusion in Chapter 6 and deliberate on the implications of the results.

2 Literature Review

2.1 Global Environmental Governance in IR

In order to provide additional context about IUCN, it is necessary to gain a clear perspective of precisely who is responsible for global environmental governance (GEG), as greenwashing has been identified as a threat to effective environmental governance (Fuchs, 2006). Liu (2018) defines global governance as the governing activities of state and non-state actors. It entails various different parties coming together to collaboratively solve global problems and provide

government-like services. According to Liu (2018), GEG entails cooperating in an international rule-based framework via which economic actors can resolve environmental issues stemming from their collective actions and promote cross-border collaboration in the exchange or provision of technical expertise, services, money and goods in a manner that facilitates the protection of the environment.

As far back as the early 2000s, international-relations literature emphasised the shift away from global governance via the nation-state towards that which is orchestrated by non-state actors (Falkner, 2003), with Strange (as cited in Falkner, 2003) noting that the majority of states' power declined between the 1980s and 2000s, meaning that other actors became more actively involved in governing on a transnational basis. International environmental organisations (IEOs) are an integral component of the global networks that are responsible for GEG (Partelow et al., 2020), with Marsden and Warner (2016) identifying IUCN as playing a particularly important part in implementing it. Given that those that undertake GEG are entrusted to act in the world's best interests and conduct themselves in an ethical manner, it is arguable that mankind is reliant upon them to steer us away from potential environmental catastrophes. It is therefore necessary to analyse the role that IEOs play in this form of governance.

2.1.1 International Environmental Organisations

Davies and Woodward (2014) define international organisations as continuous, formal structures consisting of members in at least two sovereign states who possess a common interest. International organisations focussing on ensuring the protection of the environment first began to gain momentum during the mid-1940s and have become increasingly commonplace ever since (Sands et al., 2018). Panke (2020, p.365) points out that IEOs are trusted to engage in the "greening of international politics" and making a "corresponding contribution to improved environmental standards around the globe".

From an examination of the literature about these organisations, it becomes clear that they fall into three main categories. The first is non-governmental organisations like Friends of the Earth International, WWF and Greenpeace, which have become more and more active in GEG throughout the course of the last four decades (Campagna & Fernandez, 2007; Partelow et al.,2020). The second is organisations like the United Nations Environment Programme (UNEP) and United Nations Development Programme (UNDP) that are affiliated with larger

organisations like the United Nations (UN), whose membership consists of state actors (Campagna & Fernandez, 2007).

The third category is transnational hybrid organisations (TNOs) that include both NGOs and governmental actors (Missoni, 2014). These organisations are also known as "mixed government and NGOs organisations" (Campagna & Fernandez, 2007, p. 371). IUCN is the largest and most important organisation that falls under this umbrella Campagna & Fernandez, 2007), which means that it is based on global public-private partnerships, which possess their own resources, governance structure, membership and legal personality (Missoni, 2014).

2.2 Partnerships between IEOs and Polluters

In recent years IEOs have frequently partnered with polluters. Geengard analysed the partnership between Rainforest Alliance and Chiquita Banana and found that it brought about improvements in sustainability for the Chiquita Banana. Qudrat (2012) examined the partnership between the Environmental Defense Fund and McDonalds and concluded that it resulted in McDonalds successfully reducing its waste and decreasing its ecological footprint. This suggests that in some cases relationships of this nature can be useful for encouraging companies to become more environmentally friendly, thus serving the legitimate purpose of the IEOs that are involved.

It is arguable that IEOs have an incentive to partner with highly pollutant companies as the bigger the polluter, the greater the potential for a substantial change for the better there is. However Qudrat (2012) notes that IEOs can also enter into such arrangements because it brings additional financial resources their way, citing the partnership between Pollution Probe and the supermarket chain Loblaw, which has been criticised by Greenpeace for using excessive amounts of plastic packaging on its products (King, 2019). Qudrat (2012) claims that this constituted a failed strategy on the part of Pollution Probe as it damaged its credibility and caused staff members to resign.

There are numerous different advantages that polluters can gain from partnering with IEOs. It is possible that they genuinely wish to become more environmentally friendly and that IEOs can play a major role in their corporate-social-responsibility efforts. They can also gain information on how to better pursue sustainability goals. However in some situations, greenwashing comes about as a result of them entering into such relationships, as an association

with an IEO helps to create the perception that they are more concerned about the environment than they actually are (Greengard, 2013).

2.2.1 Partnerships between IEOs and Polluting Companies in IR Perspectives

In order to gain a more thorough insight into partnerships between IEOs and polluters, it is helpful to look at the issue from two IR perspectives that are substantially opposed to one another: social greens and market liberalists. Social greens are highly critical of attempts by polluting companies to convince customers that they are doing something positive by merely reducing the amount of pollution that they are responsible for, as they believe that they are part of a system that proliferated the technologies and processes that catalysed the spreading of environmental damage in the first place. They point out that corporations need to be held accountable for previous polluting as opposed to merely cleaning up their mess (Clapp & Dauvergne, 2005).

Given that market liberals believe that economic growth leads to elevated incomes, which subsequently result in increases in the will to protect the environment (Clapp & Dauvergne, 2005), they are clearly not likely to share the same objections to partnerships between IEOs and corporations as social greens. When this view is combined with a positive perspective on international organisations, the belief that they can be a force for sustainability and the notion that market-based tools can facilitate environmental protection (Clapp & Dauvergne, 2005), there are no clear objections to IEOs partnering with corporations from a market liberalist perspective. Indeed, market liberals stress the need for businesses to voluntarily subject themselves to ecological standards (Utting, 2013), and collaboration with IEOs could be viewed as one way of doing this.

2.3 The International Union for Conservation of Nature (IUCN)

Given that this paper focuses upon greenwashing facilitated by the International Union for Conservation and Nature (IUCN), it is necessary to provide an overview of this organisation, its values and mission and its connection to greenwashing. IUCN was founded in 1948 (IUCN, n.d. c) and is the oldest global environmental organisations (Olive, 2014). It operates

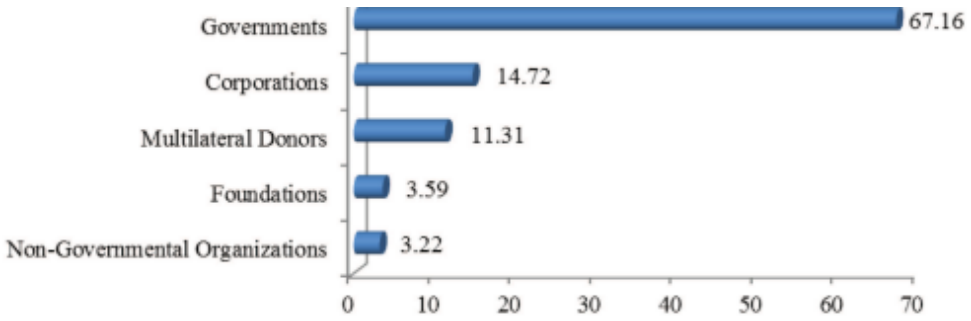
as a membership union comprised of 1,400 civil-society and governmental membership organisations and receives input from over 17,000 experts (IUCN, n.d. d).

IUCN's stated mission includes protecting biodiversity and helping governments and private companies to have a positive net-impact upon it (IUCN, n.d. e), encouraging investment in conservation and sustainable development (Bhandari, 2018) and providing advice and guidance on a variety of different issues including greenhouse-gas emissions, implementing environmental-management systems (IUCN, n.d. f) and the reintroduction of species into natural habitats (IUCN, 2013, pp. viii-2). It also focusses on a number of non-environmentally-oriented social-justice issues, including gender equality, human rights (IUCN, n.d. f) and poverty reduction (IUCN, n.d. g). Its strategies include promoting dialogue with both private companies and governmental organisations about employing approaches to business that protect natural capital, providing tools for improving their partners' sustainability records and collaborating with corporations and financers to motivate them to invest in sustainability and conservation (IUCN, n.d. h).

The organisation is funded by a variety of different partners and donors including NGOs, foundations, multilateral donors, corporations and governments (Bhandari, 2018). The proportion of its overall funding that each of these sources provides can be seen in Figure 1 (below). The fact that IUCN works with a variety of governmental actors and NGOs with a range of different interests has caused it to come under scrutiny for alleged bias, for example there are accusations that its inclusion of animals on its Red List, which classifies specifies as endangered, is subject to political influence (Hayward et al., 2015). Hayward et al. (2015) warn against the potential "increasing politicization of Red List assessments to leverage distinct agendas, particularly when the species is subject to trade or utilization".

Figure 1

Percentage of IUCN's Funding Derived from Main Sources of Funds



Source: Bhandari (2018, p. 80).

It is also arguable that IUCN reflects the principles of environmentalism as opposed to ecology. Campagna and Fernandez (2007) studied the language used by IUCN, amongst other organisations, in order to establish whether it portrays the environment as consisting of resources to be utilised by people in line with an emphasis on sustaining human well-being or as comprising of wildlife and the natural world, the latter being more representative of an ecologist perspective. They concluded that the organisation tended more towards the former of these two conceptualisations (Campagna & Fernandez, 2007), in line with market liberalist and institutionalist perspectives.

With this in mind, it is perhaps unsurprising that IUCN has also been accused of facilitating greenwashing (Bassey, 2013; Fuller, 2020). Bassey (2013) has claimed that the organisation omitted certain critical information when writing a report on its partner Shell's oil spills in Ogoniland, Nigeria. He also states that it blamed the local people, implied that the spills were partly due to criminality and minimised Shell's wrongdoing, acting as little more than a shield to protect the company from the critical glare of the world. He points out that Friends of the Earth International gave up its IUCN membership due to the organisation's partnership with Shell (Bassey, 2013).

It is notable that there has previously been a vote to determine whether or not IUCN's connection with Shell should be terminated. However the voting panel included governmental actors, who voted against the decision, meaning that the partnership remained (Prideaux, 2017). Whilst some argue that partnerships of this nature help to temper the activities of the companies and bodies that IUCN collaborates with (Pachecho-Vega, 2015) and generate much-needed funds (Lewes, 2015), there is also a clear case for it introducing bias and greenwashing into the running of IUCN.

However this does not necessarily mean that such biases definitely have been introduced. The fact that market liberalism incorporates the notion that businesses can lead to improvements to the environment (Clapp & Dauvergne, 2005) also means that some of IUCN's principles being in line with the tenants of this ideology does not necessarily mean that it is engaging in greenwashing. It is worth noting that IUCN also incorporates elements that are in line with the social green perspective, for example it acknowledges that inequality and environmental degradation are interlinked, with the former exacerbating the latter (Clapp & Dauvergne, 2005; IUCN & WWF, n.d.). It has also previously expressed the notion that the pursuit of financial capital drives the unsustainable exploitation of natural resources (IUCN & WWF, n.d.), in line with the connection that social greens make between the current capitalist systems and ecological damage (Clapp & Dauvergne, 2005). With this in mind, it could be

possible that its partnership with Shell is based on a genuine desire to protect the environment. It is also notable that the organisation has criticised Shell's actions in the past in spite of its close links to the company (Fuller, 2020), further supporting this possibility. Lastly IUCN is bound to its own "Policy on Transparency" which obligates the organisation to "maximizing access to information" to the public (IUCN, 2016), which gives yet another reason to believe that IUCN's motives with the Shell-partnership are genuine.

2.4 Royal Dutch Shell

Royal Dutch Shell is a Dutch-British oil company founded in the early 1900s. It is one of the world's most profitable firms, earning $16.46 billion in 2019, and the largest oil producer in Europe (Hennchen, 2015; Meredith, 2020). It has been the subject of a number of different environmental scandals throughout the years including allegations of failure to clean up oil spills and human rights abuse (Parboteeah & Cullen, 2018).

Shell has also invested a considerable amount of money in CSR (McQueen, 2015) including collaborations with NGOs (Hennchen, 2015). Some believe that this has helped it to operate in a more ecologically friendly manner (Kaczorowska-Ireland, 2015), suggesting that its partnership with IUCN could facilitate genuine change. However others claim that the NGOs have facilitated greenwashing (Fuller, 2020). This begs the question of whether NGOs and polluting companies working together is a cause for scepticism. This is particularly pertinent given the accusations that have been levelled at Shell based on its activities in the Niger Delta (Bassey, 2013), which will now be explored in greater detail.

2.5 Shell in the Niger Delta

The Niger Delta is amongst the most species-rich wetlands and most important marine ecosystems, providing a habitat for a wide range of different rare animals. It is an ecosystem that is under attack from the oil industry, which is Nigeria's core industry (UNEP, 2011). The country is heavily dependent on the export of oil, which comprises "90 percent of export earnings and over 70 percent of total government revenues" (International Trade Administration, 2019).

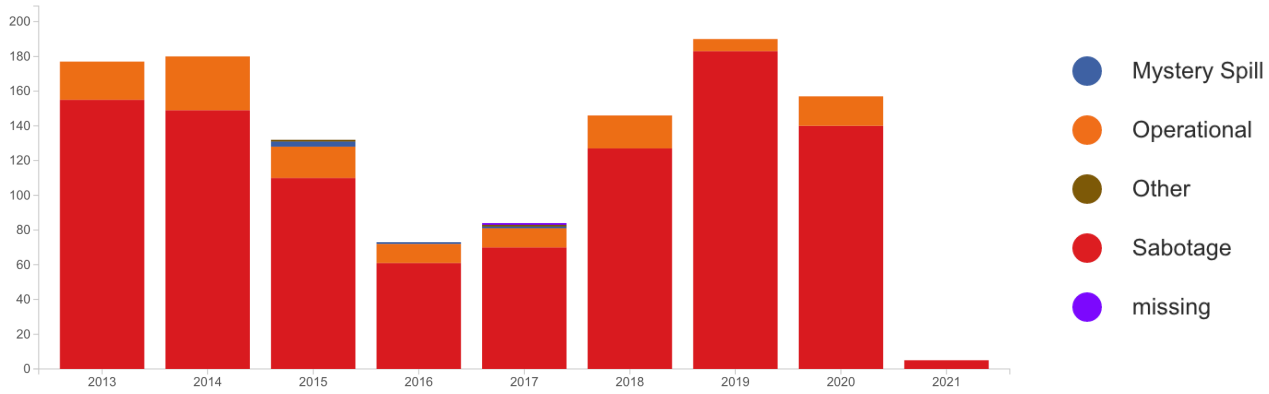
The majority of Nigeria's oil extraction happens in the Niger Delta, where the industry is managed by joint ventures consisting of the Nigerian government and some of the biggest players in the oil industry, such as Shell, Eni, ExxonMobil, Chevron, Total and others. The biggest venture is the Shell Petroleum Development Company of Nigeria Limited Joint Venture (SPDC), its main shareholder (55% share) being the Nigerian government via its Nigerian National Petroleum Corporation (NNPC). The second largest shareholder is Shell (30% share), followed by Total (10% share) and Eni (5% share) (Amnesty International, 2018). Importantly, Shell operates the SPDC's oil drilling machinery, which means that the company is in charge of maintaining the wells, pipelines and other instruments on behalf of the SPDC joint venture (Shell International, 2020) and oversees a total of approximately 1,400 oil- and gas-wells and 4,000 kilometres of pipelines (Amnesty International, 2018).

Since 1958, when commercial oil production began in Nigeria, hundreds of oil spills have taken place in the delta every year. Shell states that most spills that happened at the sites of the SPDC since then were predominantly due to sabotage and not of 'operational' nature (Shell Nigeria, 2021; view also Figure 2), meaning spills that the company is responsible for due to pipeline corrosion or human error. 'Sabotage' or 'third party interference' means that they were caused by deliberate demolition of infrastructure by criminal groups and individuals (Amnesty International, 2018). Sabotage claims have always been disputed as many cases lack definitive evidence of how the spills came about (Amnesty International & CEHRD, 2013).

In late 2020, research on this case made a new advance when the Dutch NGO Milleudefensie published a documentary that provided evidence that Shell employees are responsible for many of the alleged 'sabotage spills'. According to Milleudefensie, Shell workers call the locals in the villages to ask if they can create a leak so that they can make money from cleaning up the spill. SPDC has neither rejected nor confirmed the accusations (Zembla, 2020; Al Jazeera, 2020). The question of sabotage or operational cause is crucial, as oil companies are only obliged to compensate for spills that occur due to operational mismanagement (Amnesty International & CEHRD, 2013).

Figure 2

The Number and Cause of Spills from Shell Infrastructure in Nigeria, According to Shell Nigeria.



Source: Shell Nigeria, 2021.

2.6 The IUCN-Shell Partnership and the Niger Delta Panel

IUCN and Shell first made contact when collaborating in 2000 (IUCN, n.d. i). Since 2004, IUCN has been working with Sakhalin Energy, a consortium of various oil companies – of which Shell holds 27,5% shares – that drill for oil and gas close to Sakhalin Island in Russia (Sakhalin Energy, n.d.). IUCN created a panel of scientists to consult the consortium in order to investigate how harmful drilling activities are for endangered western grey whales, which are native to the Sakhalin area, (IUCN, n.d. k).

In 2006, IUCN published a joint report with the Nigerian Ministry of Environment entitled *"Niger Delta Natural Resource Damage Assessment and Restoration"* (IUCN–CEESP et al., 2006), which criticises Shell's oil drilling activities in the region. In 2007, Shell and IUCN entered into a five-year partnership, which has been extended ever since. The overall goals of the partnership are improving Shell's "biodiversity conservation performance" (Turner, 2010, p.1) and thereby increasing the overall sustainability standards in the O&G industry, which could be achieved with Shell shining the light, and lastly to consolidate IUCN's role in biodiversity and business issues (Turner, 2010).

In 2012, the Niger Delta Panel (NDP) was established (IUCN, n.d. l). According to IUCN, it is an independent Panel "composed of international and local experts in issues relating to oil spill recovery" (IUCN, n.d. q) whose goals are to provide expertise on how to best remediate and rehabilitate oil impacted sites in the Niger Delta and to protect the areas of the delta that are not

yet affected, therefore supporting the Nigerians who depend on an intact ecosystem to provide for them (ibid.; IUCN–NDP, 2018).

The NDP has published two reports related to these goals: one in 2013 that aims to address the first two objectives (IUCN–NDP, 2013) and another in 2018 that focusses on biodiversity conservation and mostly addresses the third objective (IUCN–NDP, 2018) by giving recommendations on how Shell should act to reach these goals. The NDP further indicated that it would be monitoring whether SPDC has implemented the recommendations from 2013 to 2016 (IUCN–NDP, 2013). The Panel's work ended in 2016 but IUCN and SPDC are continuing their collaboration, which includes observing how well nature recovers at the sites where the oil company has cleaned up spills (IUCN, n.d. q).

3 Theoretical Framework

This chapter presents the theoretical framework that underpins the study. First, the gaps in the literature are examined. Next the scope and the delimitations of the study are laid out.

3.1 Gaps in the Literature and Research Problem

As the literature review demonstrates, there are mixed opinions on IEOs partnering with polluters, as such co-operations have brought about both positive outcomes by improving companies' sustainability and negative outcomes by greenwashing companies that continues to pollute the environment. The result is clear: partnerships between IEOs and polluters *can* lead to greenwashing; several texts have looked at NGO behaviour with respect to this. However there appears to be a lack of research regarding the more powerful THOs and partnerships with polluters, particularly a THO of the size of IUCN with the degree of power it wields. The organisation is one of the most important and influential players in GEG *and* it partners with Shell, one of the biggest global polluters. Over seven years have passed since the NDP's first report was published and so far there has been no assessment of the results and the usefulness of project. Overall there is a dearth of *detailed* analyses of the substance and the outcome of IEO-polluter partnerships.

The partnership between these two powerful actors is important to look at more closely, as it could be extremely positive for the environment and prove the effectiveness of GEG. The

idea of Shell leading the way to initiate a sector-wide rethinking within the O&G industry should be appreciated, and is, from a market-liberal perspective, a progressive step to enable sustainable development. Furthermore, the literature shows that IUCN is indeed a relatively market-liberal oriented organisation that attaches increasing importance to the combination of business and biodiversity. However it can also been argued that the organisation's values and principles are grounded in social-green principles.

Furthermore, IUCN has been a critic of Shell in the past so it is therefore possible that the organisation kept a professional and critical distance from its partner during and after the work of the NDP. The literature also shows that Shell has spent money and engaged in cooperation with NGOs, which some believe to have a positive impact and others criticise as greenwashing. However there is no definite determination on the nature of the company's CSR-engagement, which is another research gap that should be explored, based on Shell's powerful standing in the world.

As both stakeholders count to the most powerful actors in their sectors, it is important to gain clarity about the nature of their partnership. By examining this, it will be possible to put IUCN more into perspective and gather further information about the Union, what its partnerships with polluters look like and whether it is worthy of praise or criticism. If IUCN is found to be facilitating greenwashing for Shell, this result could act as a catalyst for a deeper examination of these kinds of cases and possibly result in findings that might question the legitimacy of not only IUCN, but also other IOs and THOs and the current system of GEG. If one of GEG's most important representatives is deemed to have enabled a major polluter to greenwash, it could suggest that GEG's objective of bringing about a healthy planet is not being realised. If IUCN is not allowing Shell to greenwash but has helped improve its performance in the Niger Delta, this could be an incentive for other IEOs to follow suit and address the environmental crisis from a market-liberal perspective.

In conclusion, IUCN operates in both the sustainability and the heavy industry sectors, seeking worthwhile results for both biodiversity and business. Can this work? This thesis' aims to get to the bottom of this and will therefore answer the following research question: "Does IUCN greenwash Shell?" The way in which this question will be answered will be explained throughout the course of the subsequent subchapter.

3.2 Scope and Delimitations of the Study

This study focuses on the outcomes of the partnerships between polluting companies and international environmental organisations, specifically looking at whether such a partnership can be successful at protecting the environment or if they are merely a tool for greenwashing. The case study used as an example is the IUCN–Shell partnership. The materials for analysis are the two reports that IUCN published for Shell and that are the substance of the cooperation. The study is conducted by means of a qualitative research-design, using a mixed-methods approach with process tracing as a positivistic epistemological foundation and content analysis as a post-positivistic one.

The first method, content analysis, explores the integrity of the two IUCN reports and assesses whether the documents provide adequate material to address the problems that Shell is supposedly causing. This is achieved by means of codes that clarify how objective, transparent and independent the project was. The second method, process-tracing, assesses whether or not the reports had an effect on Shell cleaning up its spills in the Niger Delta region. If there is no progress with regards to this, it will analyse whether IUCN was critical of Shell's behaviour, in order to verify or falsify greenwashing claims. Both analyses will be conducted in order to prove or falsify a number of hypotheses with the intention of answering the research question and determining whether IUCN facilitates greenwashing for Shell and if so, the extent to which it does so.

This study is delimited to the IUCN–Shell case study and does not look at other IEOs and polluters or seek to provide answers to the question of whether greenwashing is a problem that affects the entire domain of global environmental governance or whether it is merely a problem that is solely associated with IUCN. However, the results will give grounds for further research with regards to this matter. Furthermore, the content analysis of the two reports does not include a technical assessment of oil-spill remediation techniques and therefore does not determine how reasonable and effective the recommendations given by the NDP are. Neither are the annexes and appendices of the reports part of the analysis, because some of them were not available on request and because the ones that were available are for the most part biophysical reports about toxins in soils and water, the public health of Nigerians, oil -spill remediation techniques et cetera, which does not fall within the author's the area of expertise.

4 Methodology and Conceptualisation

In this chapter hypotheses related to the research question are drawn up, followed by an explanation of how the two methods of summative content analysis and process-tracing work, how they yield results, how they were used in this study and what kind of data was used is presented.

4.1 Hypotheses

Hypotheses to be analysed by means of the summative content analysis

The goal of the summative content analysis is to provide evidence about the IUCN–NDP reports' integrity. A number of different sources provide definitions of integrity in scientific research (e.g. ESF-ALLEA, 2011; IAC-IAP, 2012). They all put forward a similar conceptualisation, emphasising the importance of objectivity, accountability, fairness, transparency, reliability, respect and more. As the definition of 'integrity' that is pertinent to this thesis is that which relates to an IEO-company relationship, it was decided that the content analysis would look specifically at i) *objectivity*, as it is important that IUCN is not biased towards Shell, ii) *independence,* as it is important that NDP scientists receive no funds from Shell and also have no further dependence-based relationship to the company, and iii) *transparency*, as it is important that the NDP's research is comprehensible and accessible to everyone.

Consequently, hypotheses 1 to 3 read as follows:

> Hypothesis 1 "The NDP is impartial towards Shell."
>
> Hypothesis 2 "The NDP members are independent."
>
> Hypothesis 3 "The NDP's work is transparent."

Hypotheses to be analysed by means of process-tracing

The goal of the process-tracing is to assess whether the IUCN–NDP reports had an effect, more specifically if they achieved positive results in the Niger Delta e.g. by achieving the NDP's goals or by having an impact on Shell's action in the rehabilitation and remediation of oil spill sites, therefore positively affecting the delta's ecosystems.

Consequently, hypotheses 4 reads as follows:

> Hypothesis 4: "The reports had a positive effect in the Niger Delta."

Should the outcome be that the reports had a positive effect in the Niger Delta, hypothesis 4 would be approved and greenwashing claims negated. If, however, the outcome is that the reports did not have no – or only a very small effect, it would be unfair to hold IUCN and NDP responsible, as it is Shell's responsibility to implement the recommendations. Therefore, in this case, a fifth hypothesis is advanced, which aims to ascertain whether IUCN and the NDP criticised Shell's lack of progress in the project or not. The final hypothesis therefore reads as follows:

> Hypothesis 5: "IUCN and NDP criticised Shell for the lack of process in the Niger Delta project."

4.2 Methods and Data Collection

Summative Content Analysis

Content analysis is "a technique for the objective, systematic, and quantitative description of the manifest content of communications" (Riffe et al., 2014). Summative content analysis, a sub-form of content analysis, is a mix of qualitative and quantitative analysis and is used to analyse text or other types of media. The content of the examined text is interpreted by first defining what the researcher aims to look for in the text and then creating codes that entail a specific content pattern, theme or word based on this. Using this type of content analysis, the researcher counts and compares keywords or items of content and consequently interprets them to find out more about the underlying context (Hsieh & Shannon, 2006). An example of a such a category in the context of this thesis is 'IUCN criticizes Shell', where we want to find out how often Shell was criticised but also the way in which the critique is voiced in order to allow conclusions to be drawn about possible greenwashing by IUCN. A summative content analysis is particularly helpful to use in the case of this thesis, as keywords and contents are identified based on the interests of the researcher and can be determined before and during the analysis of the given text (Hsieh & Shannon, 2006).

The data that were analysed were the two NDP-reports from 2013 and 2018. Throughout the analysis, various scientific articles and website content was used to confirm or dispute

arguments put forward by the Panel, or to investigate, for example, the independence of NDP members. The reports were analysed based on various codes that are predominantly oriented towards answering hypotheses 1, 2 and 3. Particular attention was therefore paid to looking for content that verifies or rejects the idea that the NDP is impartial towards Shell, the notion that NDP members are independent and the idea that the NDP's work is transparent. The citations which contribute to testing the hypotheses are attached in tables in the appendix.

Process Tracing

Process tracing is used to detect processes, also called "causal mechanisms", that lead from a set of initial conditions (X) to an outcome (Y). The qualitative method is used for evaluating whether causal claims lead to outcome Y (Collier, 2011). It aims to analyse the different steps that have caused the process (Vennesson, 2008). In the past, it has been used by civil-society organisations such as Oxfam to evaluate the impact of their charity strategies (Punton & Welle, 2015), or to measure if a specific action had an influence on a particular outcome (Dür, 2008). As this thesis aims to assess whether or not IUCN's reports had an effect, namely if they have influenced Shell to clean up its mess, process-tracing was considered a suitable fit for this evaluation.

Data from an Amnesty International report was used to test hypotheses 4 and 5. Data from thorough online research and NOSDRA's 'www.oilspillmonitor.ng' website, which collects oil spill data in Nigeria, was assessed to find reports on the effectiveness of the IUCN–NDP's reports. The timespan that was looked at was from 2013 after the publication of the first report until the end of 2020. Special attention was given to the years from 2013 to 2016, as the Panel monitored SPDC during that period. The analysis engages with the Panel's objectives 1 and 2 (developing a best practice strategy for oil spill remediation and encouraging Shell to implement the Panel's recommendations) to a particularly large extent, as there was no data available that could be used to assess objectives 3 and 4. Overall, there was not as much data available as the author had wished for, which is why she decided in the process of this thesis to refute or confirm greenwashing claims based on two methods instead of solely relying upon process tracing.

Mixed Methods Design

Importantly, this thesis employs a multimethodology research approach, as the epistemological foundations of content analysis (post-positivist) and process tracing (positivist) are distinct.

There exist a number of typologies about mixed methods and they mostly distinguish in the timing of the methods, whether one method depends on the outcome of the other or if they look into the same different phenomena (Creswell & Clark, 2017). The usage and evaluation of the methods employed in this thesis follow Creswell and Plano Clark's convergent mixed methods design, more precisely the parallel-databases variant. This means that the research design, data collection and analysis of the two main methods were kept separate and their results were built independently from one another, and then finally interpreted together in the discussion and the conclusion.

5 Analysis

In this chapter, the contents of the IUCN–NDP's 2013 and 2018 reports are analysed by means of process tracing and a summative content analysis. With the 2013 report, the Panel aims to encourage the company to engage with 33 recommendations to the SPDC. The recommendations range from advice on enabling a socio-environmental strategy to bioremediation and rehabilitation, oil-spills response-procedures and suchlike. The Panel bases its findings and recommendations on "extensive literature reviews" (p. 21) and on field work in the three Nigerian towns (IUCN–NDP, 2013)

The 2018 report (IUCN–NDP, 2018) outlines what the different ecosystems in the delta are and what flora and fauna can be found there. It lists a number of threats to the natural elements that remain intact there and presents a number of studies and reports that have been drawn up in order to create a biodiversity strategy. Finally, the NDP provides eleven recommendations to SPDC and twelve recommendations to other stakeholders on how biodiversity can be preserved. The Niger Delta Panel is the author and IUCN the publisher for both of the reports. The following chapter will assess the integrity of the reports by means of a summative content analysis.

5.1 Summative Content Analysis

5.1.1 Objectivity

It can be argued that it is important that IUCN remains objective when working with Shell so that it diminishes the risk of greenwashing its partner, and that this could be achieved by bluntly

touching upon the root of the company's poor sustainability record and recommending appropriate measures. Assessing whether this was done in the reports is substance of this point.

No thorough assessment of Shell's role in the Niger Delta

What stands out is that both reports lack a thorough description of the true dimension of the problems that SPDC's oil spills have caused with regards to the environment and the associated health risks for the local communities. There is no detailed description whatsoever about the number of spills, the number of litres spilled, whether or not Shell had cleaned them up, and if not, in how many cases this occurred, how long it takes Shell to respond to react to spills and so forth. Overall, the report fails to address the severity of the crisis that the spills have caused in the Niger Delta. One explanation for this is, as the Panel notes in the 2018 report, "*that the recommendations here are aimed at improvement rather than criticism"* (IUCN–NDP, 2018, p.23).

Still, the author found that IUCN mildly criticised the SPDC in three cases in the 2013 report. However it did not criticise it at all in the 2018 report (view Appendix, Table 2). This is pointed out specifically as this chapter will later deal with the tendency of the NDP to emphasise the faults of other actors rather than suggesting that the SPDC plays a major role in the pollution. These actors are consequently criticised far more often than the oil company.

Furthermore, the Panel mentions implications for the local population twice in the 2013 report, stating that "*the high levels of pollution in the Niger Delta […] mean that habitats, livelihoods and people are now severely impacted"* (Table 3, s4) and *that "habitat loss [results] from pollution and dredging"* (s5). In the 2018 report, the Panel mentions some impacts on the environment in six cases (Table 4), such as the impact of aquatic pollution (s8, s10) and consequences for fisheries and mangroves (s9), but the explanations remain quite superficial, with statements such as *"Oil and gas related activities are rampant in the Delta. […]. This has led to serious damage to the environment and severe loss of biological resources"* (s6). When describing the consequences of oil for the environment and local communities, the author found a clear lack of information. This deficiency turns out to be dramatic when contrasting it with the ways in which the environment and the Nigerians are depicted in the reports, as the next two sections will show.

Wilful concealment of information by means of inadequate scientific work

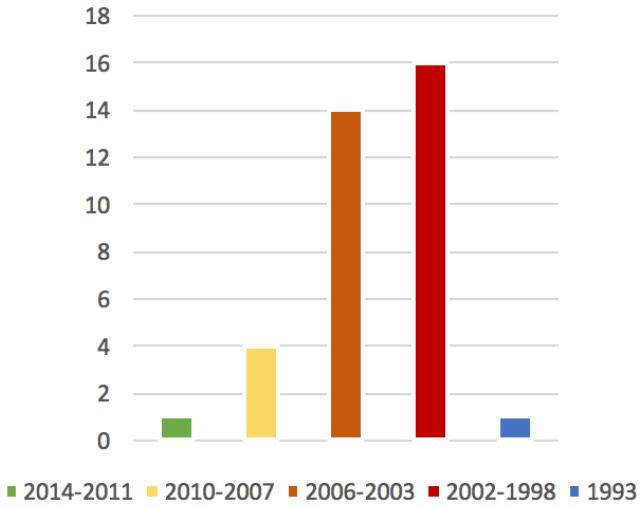
The chapter in the 2018 report entitled "Biodiversity Endowment of the Niger Delta" (pp. 6-12), where the Panel expatiates upon the delta's numerous endemic insect, fish, bird, mammal and plant species, many of them endangered, and the overall rich biodiversity of the region (Table 5, s13, s14, s15, s18, s19) stands out on account of the fact that the description of biodiversity is based almost exclusively on sources that were, at the time of its publication, between twelve and twenty years old (see Figure 3 or s16). It is notable that the newest cited research (Borokini, 2014) is not an explorative study but merely a compilation of endemic flora in Nigeria, which also mainly uses old sources. The Panel is aware of this discrepancy but states that *"[a]lthough relatively little field work has been carried out in the area in the past 15 years, due to social insecurity, existing data and some limited information available in recent times reconfirm the ecosystem richness of the Niger Delta"* (Table 5, s12), but on the other hand notes that their findings *"may not now reflect current biodiversity richness of the Delta"* (s17).

Not only do the two statements contradict each other, but the former is simply not true. Studies exist about the current state of the region's biodiversity, some of which were even conducted by authors that the 2018 report cite numerous times, such as Luiselli, Akani and Eniang (s16). Eniang et al. (2016) and Luiselli et al. (2015) report that a number of plant and animal species have gone extinct, with Luiselli et al. (2015) confirming the loss of 45 species in the Niger Delta because of oil spills. There is also the fact that "Luiselli et al., 2006b", for example, were cited in the report for supporting the claim of rich biodiversity, confirming the occurrence of the "*forest hinged back tortoise"* (IUCN–NDP, 2018, p.8), while the same article also mentions that two endemic mammals have gone extinct *"due to a decline in prey species (mass mortality of fish caused by the oil contamination of waters) […], and due to a suboptimal adaptation to forest environments, aggravated by the catastrophic oil spillage event"* (Luiselli et al., 2006, p.256).

The fact that the author found that 32 out of 84 of the 2018 report's references are not actually used in the text (Table 6) is another indication that the Panel came across literature that describes the poor condition of the delta's biodiversity. Examining the content of the omitted sources, it was found that at least eleven of these references deal with the subject matter of oil spills harming ecosystems and species in the Niger Delta. Akani et al.'s for example (2010) (Table 6, s26) point out that *"the presence of five species of high conservation concern and the strong environmental pressure which is caused […] by oil companies do make Brass a*

Figure 3

Quantity and Age of Cited Sources for the Description of the Niger Delta's Biodiversity in Chapter 3.



Based on IUCN–NPD, 2018, pp. 6-12; view also Appendix I, Table 5, s16

threatened forest habitat in southern Nigeria" (p.159), s21 shows that petrochemical pollutants from oil are likely to be a reason for low species diversity of amphibians, s29 elaborates how Nigerian otters are affected by oil spills, and s30, s32, s33, s40, s41, s44, s48 and s49 are about similar topics. A similar issue is also present in the 2013 report, where 14 out of 54 references were not used in the text (Table 7), however the content of most unused references is about oil spill remediation techniques.

Pointing to the locals: 'Sabotage' and 'illegal oil refining' as causes of spillage

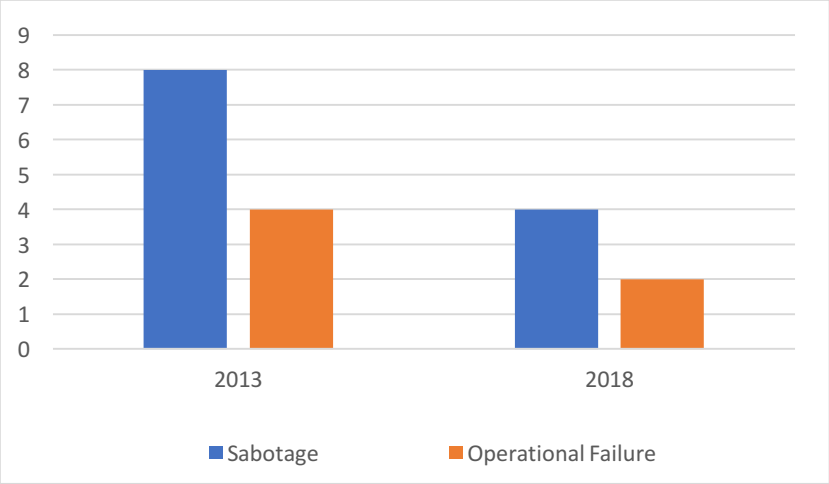
Whilst the Panel appeared to be reticent to criticise Shell, it appeared to have a tendency to implicate Nigerians as the causes of the spills. As was laid out in section 2.5, the matter of sabotage and oil theft has always been an extremely controversial one. However the NDP did not engage in finding the truth behind the cause of the majority of the spills but yet emphasises the widespread problem of illegal oil theft and refining and sabotage, mentioning it eight times in the 2013 report (Table 8) and four times in the 2018 report (Table 9) while mentioning 'operational failure' four times in the 2013 report (Table 10) and two times in the 2018 report (Table 11; view Figure 4).

'Operational failure' is downplayed in all cases and put forward either in combination with 'sabotage' as just one of many reasons for spills, for example in Table 10, s79, where it

says *"SPDC acknowledges that operational spills occur occasionally but also states that vandalism, oil theft and illegal refining cause several spills along the pipelines and frequently interrupt production"*. Similar quotes can be found in Table 10 s78, s80, s81 and Table 11, s83, while s82 concedes that operational failure is the main reason for spills but only *"prior to the 1990s"*. Overall, the reports lack an assessment of the state of the SPDC's drilling materials and infrastructure despite the fact that it was stated multiple times that many pipes are corrosive and have not been maintained for over 15 years (statement made in 2009) and are prone to leaking (Amnesty International, 2013).

Figure 4

Mention of Sabotage vs. Operational Failure as the Reason for Oil Spills.



Based on Tables 8 to 11.

After determining the evidence for bias or non-bias in the reports, the following section will look in greater detail at whether or not the Panel's work was transparent.

5.1.2 Transparency

One issue is the reports' annexes and appendices. In the 2013 report it says: *"The annexes are separate documents from this report and will be made available by request via email to biobiz@iucn.org"* (IUCN–NDP, 2013, p. 4) and the 2018 report mentions the existence of 'Appendix II': *"This led to the production of a second report which is attached as Appendix II to this report"* (p. 5; see also p. vii). However neither appendices are attached to the report, nor is there a mention of 'Appendix I' anywhere, nor a reference for where to find or request the appendices. The annexes of the 2013 report were sent to the author upon request. However

this only occurred after two emails were sent, after which three annexes were still missing. They were sent upon a third email. The author also requested the 2018 appendices twice, but the IUCN employee would not send them and did not react to questions regarding their content.

Another point is that in neither of the two reports is it possible to identify who the authors – the members of the Niger Delta Panel – are. Their names can only be found in the annexes and on a separate PDF that can be accessed on the IUCN website (IUCN, n.d. m). The rather awkward display of the Panel members' names contrasts with the broad presentation of a Nigerian scientists group ('Okali et al.') in the 2018 report, who are thanked on a separate 'acknowledgements' page (IUCN–NDP, 2018, p.iv), for drawing up two reports that served as support for the 2018 report. On another extra page, each of the six scientists is introduced and their expertise laid out, emphasizing that *"[this] report relies heavily on the work of the […] biodiversity experts"* (p.4).

Notably, both of Okali et al.'s reports are *unpublished* but can be requested at IUCN, which the author did. However this request also remained unanswered. The Panel remains unforthcoming about the content of these reports, but judging from the titles (IUCN–NDP, 2018, p. iv), one can guess that they assess the way in which oil spills impact upon biodiversity in the Niger Delta, and how SPDC could best integrate biodiversity into its strategy.

Another question mark that remains regards the amount of money that Shell has paid for the Panel and the respective reports. UNEP for example, whose Ogoniland report (UNEP, 2011) was also entirely financed by Shell, at least disclosed this, even if it did so in an extra document and not in the report itself (UNEP, 2007). IUCN on the other hand remains silent about how much funding had flown into its pockets.

5.1.3 Independence

When reading the IUCN–NDP reports, it becomes clear that the Panel attaches a great deal of importance to pointing out that it is 'independent'. This can be seen in the way it wishes to be cited: *"IUCN Niger–Delta Panel (2013). Sustainable remediation and rehabilitation of biodiversity […]. A report by the independent IUCN–Niger Delta Panel (IUCN–NDP) […]" (IUCN–NDP, 2013)* In order to examine the Panel members' independence, they were placed under scrutiny, assessing whether they had ties to Shell or to IUCN while working in the Panel. The following enumeration lists the members of the NDP who have ties to either IUCN or Shell:

Niger Delta Panel members:

1. Dr Egbuche is the Panel Chair and, according to IUCN, an expert in oil spill remediation. She is the executive director of the Nigerian-based NGO CERASE, which is a IUCN member (IUCN, n.d. r), and promotes bioremediation techniques as an oil spill response (Urhobo Historical Society, 2002).

2. Prof Laffoley is an "expert on biodiversity conservation [and the] Marine Vice Chair of the IUCN World Commission on Protected Areas" (IUCN, n.d. r).

3. Prof Ekweozor is an expert in marine and estuarine ecology and environmental pollution studies. In 2013, he worked at the Rivers State University of Science & Technology in Port Harcourt, Nigeria (IUCN, n.d. r). This university has in the past received funds from an education support programme ran by Shell whilst investigating air pollutants under the lead of a "Shell professor or Environmental Studies", employed at the Port Harcourt River State University (Shell Nigeria, n.d.). However it is unclear when this sponsorship happened and if it is still in place.

4. Dr Aminu-Kano is an expert on Biodiversity Conservation and works at the IUCN Species Survival Commission (IUCN, n.d. r).

5. Dr Kairo is an expert in restoration ecology and works for the Kenya Marine and Fisheries Research Institute in Mombasa (IUCN, n.d. r). He is also a board member at Wetlands International, an NGO that is partnered with Shell (Wetlands International, n.d.; Shell n.d.).

6. Dr Obinna is an expert in environmental sociology and a staff member of the Rivers State University of Science and Technology (IUCN, n.d. r), which has ties to Shell.

In total, three out of seven members of the NDP are in some way affiliated with IUCN and four of them with Shell. Many work or have worked in organisations and institutions that are directly or indirectly financed by the company. After looking at the reports' integrity, the following section will discuss if the reports had any positive effects in the Niger Delta.

5.2 Process-Tracing

The analysis of process tracing will not interpret every recommendation by the NDP and how and if they were applied, as in many cases this is not retractable, for example all recommendations that concern the improvement of SPDC's internal environmental management strategy, such as improving remediation standards and monitoring protocols for

spill sites visits, as the strategy is not publicly available. The author sent an interview request to Shell Nigeria to clarify these issues. However it was not answered. Therefore this method can merely look into possible effects that are either fully or partially observable, such as the number of new oil spills, the amount of time that SPDC takes to clean up spills, the number of sites that are cleaned up, the effectiveness of recommended bioremediation-techniques and overall observations by NGOs.

5.2.1 Number of cleaned sites

One cannot tell for certain whether the number of oil spill clean-ups decreased or increased during and after the work of the NDP, as reports about this vary. Watts and Zalik (2020) found that neither reports by oil companies nor those by responsible agencies, such as the Department of Petroleum Resources (DPR) or Nigerian Oil Spill Data Response Agency (NOSDRA) are reliable. They found extreme discrepancies in the indicated spill and remediation numbers, and revealed that NOSDRA refers a far greater number of spills to SPDC than the company itself. In order to receive at least approximate results on whether fewer or more sites were cleaned after 2013 data by NOSDRA was analysed.

It is possible to access data about all O&G companies that operate in Nigeria on NOSDRA's website 'www.oilspillmonitor.ng', and also to narrow down one's search using filters. In order find out if SPDC's clean-up behaviour changed after 2013, the years from 2010 to 2013, 2013 to 2016 and 2016 to 2019 were looked at, starting in August for each year (as the 2013 report was published in July 2013) and ending three years later in July. In all three cases, the filters that were applied were: (i) Company: SPDC; and depending on the case (ii) Incident Date: January 2006[1] to July 2013 / 2016 / 2019. The 'Table' option was then clicked on and the researcher looked for all 'clean-up date[s]' and 'clean-up completed' dates that took place in the respective three-year periods. Finally the number of incidents within the examined time periods was calculated by means of the total number of incidents in the top right corner.

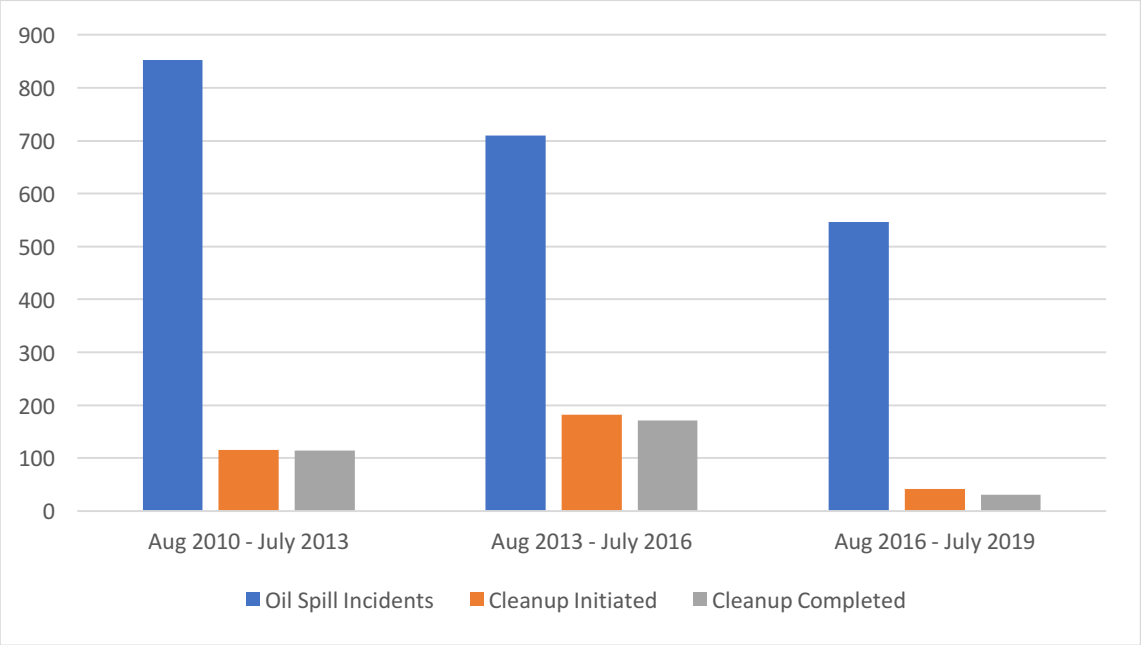
As can be seen in Table 1 and Figure 5, SPDC improved its clean-up activities between 2013 and 2016, the time in which it was working with the NDP and in which it was monitored by it. When compared to the previous three years, it is notable that company increased the total number of clean-ups that it performed from 115 to 182, meaning that it cleaned up 67 more sites, which is an increase of more than a third. In the years from 2016 to

[1] There are no records older than January 2006.

2019 however, Shell completed only 30 clean-ups, which is only about 16% of the clean-up activities from the 2013 to 2016 period. Even though SPDC's performance decreased after 2016, it is noted that during the time the company was working closely with the IUCN–NDP, its performance at clean-ups increased.

Figure 5

Spills and Clean-Ups by SPDC from 2010 to 2019.



Source: NOSDRA, 2021.

Table 1

Spills and Clean-Ups by SPDC from 2010 to 2019.

	Oil Spill Incidents (NOSDRA)	Clean-up Initiated	Clean-up Completed
Aug 2010 - July 2013	853	115	114
Aug 2013 - July 2016	710	182	171
Aug 2016 - July 2019	546	41	30

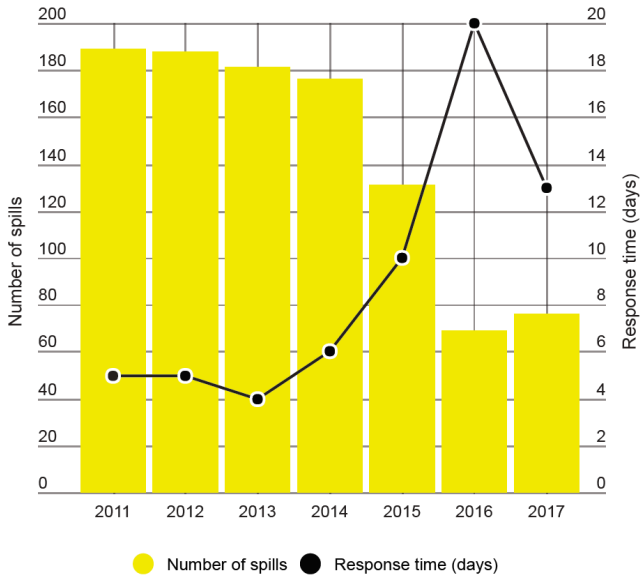
Source: NOSDRA, 2021.

5.2.2 Response time to React to Spills

An important recommendation that was made by the Panel is that "clean-ups should occur rapidly after spill incidents" (IUCN–NDP, 2013, p.25). In the 2013 report, the Panel indicates that Shell is already aiming to react within 24 hours to TIER 1 and 2 spills[2] and acknowledges that Shell has insufficient capacity to deal with TIER 3 spills within the optimum time frame of 48 hours and needs help by government authorities or experienced groups to deal with them (IUCN–NDP, 2013). However it is evident that despite Shell's plan to react quickly to spills in 2013, the fact remains that its response time for spill remediation was slow both before and after the publishing of the report. In 2018 Amnesty International found that the average time for Shell to react was seven days, with an average of twenty days in 2016 being the highest recorded (see also Figure 6). The NGO further notes that in one case from 2015, the SPDC did not arrive at a spill site until 190 days after it had occurred (Amnesty International, 2018). The fact that SPDC has not improved its response rate to oil spills at all since 2013 is an indicator that the reports have had no effect in the Niger Delta.

Figure 6

SPDC's Average Time for Oil Spill Clean-Ups.



Source: Amnesty International (2018, p. 20).

[2] TIER describes the severity of a spill, with TIER 1 meaning less severe spills, TIER 2 meaning accidents that can require special expert response-teams to intervene and TIER 3 meaning huge spills that require special equipment and a large workforce to intervene.

5.2.3 Effectiveness of the recommended bioremediation techniques

In the 2013 report, the Panel emphasises that bioremediation techniques should be used for oil spill clean-ups as it was shown "that enhanced biological remediation by stimulating and accelerating naturally occurring processes has the potential to significantly improve the recovery of ecosystems impacted by oil pollution in the Niger Delta (IUCN–NDP, 2013, p. 27). On their website, IUCN links to a scientific article that was conducted amongst others by two Shell experts and two Panel and IUCN members (Brown et al., 2017). The research is a follow-up study to the Panel's recommendations on bioremediation and is intended to test which bioremediation techniques work best for Nigerian soil (Brown et al., 2017).

The trial remediation-technique was landfarming, with the goal of removing petroleum hydrocarbons from soil. In total, seven amendment supplements were tested, with the objective of finding out which one works best in the prevailing conditions. Other literature about oil spill remediation in the Niger Delta shows that science has not yet determined ideal methods and materials for all of the different ecosystems in the delta, and that research to find the most effective measures continues (Madiana et al., 2021). The trial which bases upon the NDP's work adds to the literature and is cited as a relevant contribution to the study field (view e.g. ibid.; Ossai et al., 2020). It can therefore be said that the work of Brown et al. (2017) had an effect on the Niger Delta as science is building upon their results. Although the article is not part of the NDP's work, Brown et al. (2017) make it clear that the study was initiated as a consequence of the IUCN-NDP's 2013 report, which is why the accomplishment of the research can in part be attributed to the NDP and therefore counts as a positive effect of the reports.

Even though it is in some ways evident that the report has had a positive effect, there are still numerous different points that suggest otherwise, which make it imperative find out about the NDP's and IUCN's reaction to the lack of process. Therefore, hypothesis 5 "IUCN and NDP criticised Shell for the lack of process in the Niger Delta project", is advanced and discussed throughout the course of the following section.

5.2.4 Criticism by the NDP towards Shell's lack of process

In the 2013 report, the Panel underlined that it would oversee SPDC's response to its recommendations "later in 2013" and that it would determine the adequacy of its recommendations and ascertain how well SPDC has implemented them and adjust its

recommendations if necessary (IUCN–NDP, 2013, p.10). Notably, there is no mention of there being any negative consequences for Shell if did not act upon the recommendations, such as being held accountable by the Panel or IUCN or a possible cancellation of the IUCN–Shell partnership. Furthermore, the NDP stated that it "will need to be transparent about milestones and progress to enable stakeholders to understand what the Panel is doing and how its work is progressing" (IUCN–NDP, 2013, p.21).

Despite the Panel's announcement that it would monitor SPDC's behaviour and be transparent about this, the author was unable to find any form of scientific assessment of this whatsoever. This appears somewhat peculiar as IUCN had quite ambitiously published an assessment of the IUCN–Shell partnership in 2010, three years after its initiation, which was based upon a quantitative study of interviews with both IUCN and Shell employees regarding the way in which they evaluate the progress (Turner, 2010). In this document, IUCN is open about shortcomings of the partnership and appears to take evaluation and assessment seriously.

In the case of the Niger Delta project however, we do not get to know the results of the three-year monitoring phase by the Panel and how many of the 33 recommendations were implemented. Admittedly, one document by IUCN recalls the success of the partnership (Martin Mehers, 2018). However it appears more like a brochure than a scientific assessment as there are no sources or any kind of proof for the claims that are made, and in one instance it even contains an untrue affirmation[3], which is why it is not analysed in this thesis.

6 Discussion

In this section the findings of the analysis are interpreted, looking first at the outcome of the summative content analysis, therefore identifying whether the IUCN–NDP reports are integer and discussing what the results of the process-tracing and the effects of the reports tell about the success of the IUCN–Shell partnership. Based on the interpretation, the hypotheses are tested and lastly, the limitations of the study are laid out.

[3] It is claimed that "many of the Panel's recommendations emphasised prevention and the need to reduce the number of oil spills overall" (Martin Mehers, 2018 ,p.10). This is simply untrue as the Panel never recommended for SPDC to reduce its oil spills.

6.1 Interpretation

6.1.1 Integrity of the Reports

Objectivity

Overall, the analysis presented in section 4.1.1 indicates that the Niger Delta Panel is not truly objective in the reports due to a number of reasons. Firstly, there is the issue of the Panel's professed declaration that it will not criticise SPDC and that it will instead focus on the improvement of the company. This manifests itself in the reports in the form of a dearth of not only criticism but also more importantly of thorough description of the state of affairs in the delta, providing only a modest summary of the bearing of oil spillages on flora and fauna and the affected communities in six cases.

It is debatable whether thoroughly addressing the substance of Shell's actions in the delta would need to result in 'criticism', as much of what we know about the spills are facts about a sad record of environmental pollution and negligence, and as such constitute objective events as opposed to something that can be accurately argued as not having took place. IUCN and the Panel are not expected to criticise their partner Shell for its wrongdoings in the past but the overall situation should be adequately laid out which could have easily been done without judgement and criticism. It seems imperative to do this for two reasons: firstly so that the average reader of the reports can understand the full scale of the pollution and secondly so that adequate recommendations can be suggested that are geared towards the scale of pollution.

This overall lack of data contrasts objectionably to the information that *is* given about the Niger Delta's biodiversity, most notably in the 2018 biodiversity report. The picture that the NDP paints of the region's environment is one of mostly intact ecosystems with a rich diversity of plant and animal species. What it lacks entirely, for example, is a summary of the species that have been severely decimated or gone extinct in recent years due to oil spills. It becomes apparent that the NDP's description of the delta's natural state results from the usage of almost exclusively old sources, a failing that the authors are aware of but excuse by saying that there is a lack of available recent sources. In the analysis, this claim was disproven as available, up-to-date literature *does* exist about the topic, and it was possible that it was not mentioned as it contains research about species extinction in the delta. It was also proven that this omission of information has happened consciously and willingly, as species extinction as a result of oil spills was mentioned in a source from as early as 2006, which the Panel itself cited to fortify an argument about species richness, leaving out the critical part of the article.

These results are not only problematic from a scientific and ethical point of view, but they also contrast very drastically with the IUCN's stated value of the 'conservation of nature', which is even manifested in the organisation's name. Failing to raise the alarm bells when species extinction is happening at fast pace not only contradicts the picture that IUCN wishes to represent, but also raises the question of whether, for example, its Red List of Endangered Animals is a source we can still trust.

Finally the imbalanced portrayal of the causes of oil spills also highlights the NDP's lack of objectivity. In both reports the responsibility of the Nigerians for the spills due to the notion that they were saboteurs was emphasised repeatedly in contrast to the mentioning of the operational failure of SPDC's infrastructure as a result of, for example, poor maintenance. It does not speak in IUCN's favour that the NDP pillories the Nigerians for alleged sabotage when there is reasonable doubt about the matter, and that it did not investigate further, or at least pointed out in the reports that it remains unclear as to what extent spills result from sabotage or operational reasons. Instead, the Panel shows clear bias by taking it as given that Shell's testimony in the case is true. As a result of the findings of this section, hypothesis 1 is falsified; the Niger Delta Panel is not objective.

Transparency

As articulated in its policy on transparency, IUCN places a great deal of importance upon being transparent, which is indeed essential when partnering with one of the world's most polluting companies. It should be in the interest of the organisation to do its best to be transparent and show the public that the partnership is worthwhile for the environment and people in the Niger Delta. It therefore comes as a surprise that this is not always the case in the reports. Detaching annexes and appendices from the reports does not necessarily signify a lack of transparency, as long as these documents are sent to the reader upon request. In the case of the 2013 report, the author received all annexes. However IUCN ignored the authors requests for the appendices and her questions about the existence of 'appendix I' on two occasions.

IUCN also failed to send Okali et al.'s unpublished papers to the author despite offered them in the report. The emails in which these documents were requested were answered by an IUCN employee. However the employee paid attention only to the questions and requests regarding the annexes from the 2013 report, while all other requests were ignored. The refusal to provide reports that IUCN states are open to the public is a clear indicator of a lack of transparency, and to make matters worse it seems like one of Okali et al.'s works deals with the

way in which oil impacts upon biodiversity in the Niger Delta, which is - as stated above – an extremely relevant and hardly mentioned theme. The fact that the Panel had scientists other than those at the IUCN–NDP elaborate on this in a report that is not made available upon request suggests that an attempt was made to obscure this work.

Lastly, the fact that it is unknown to the public how much money Shell paid for the establishing of the NDP is yet another indicator of a lack of transparency, as it is crucial that such costs are disclosed. Information regarding the amounts that were spent on, for example field work, laboratory costs and expenditure on employees and the amount of funding that has been received by IUCN should be made openly accessible. It can and will not be argued here that IUCN was paid for immoral behaviour. However silence about finances often leaves room for speculation, particularly as it was shown in this study that the Panel's work is biased. Legitimate questions therefore exist regarding whether it was paid by Shell for such a bias to exist. Based on these arguments, hypotheses 2, which states that the NDP's work is transparent, can be falsified.

Independence

It is important that the Panel members are independent in order to guarantee that the reports are as objective as possible, and vice versa an objective unbiased report can be a hint for independent authors. The fact that the latter is not the case could be taken as an indicator of bias on the part of the NDP, which is supported by the findings outlined in section 5.1.3, where it was shown that six of seven members have had ties to organisations and institutions that are directly or indirectly financed by Shell, and / or that the members were working at or with IUCN at the time of the reports' publications. While IUCN might argue that its members are independent, the author disagrees, as the organisation has not disclosed any details about financial transactions between Shell and itself, which makes it a putative ally of the oil giant. For the stated reasons, it is argued that the Niger Delta Panel is not independent, meaning that hypothesis 3 is deemed to be falsified.

6.1.2 Effect of the Reports

When looking at the findings of the process-tracing, one gets a mixed picture about the effectiveness of the reports on the Niger Delta. One noticeable effect that the 2013 report had a group of scientists conducted a study on bioremediation techniques as a result of it, which contributed to the base of knowledge about the task of finding the best possible clean-up

measures and materials to use. As one of the goals of the NDP was to establish remediation standards for SPDC, it is surely important to stimulate research in this area.

A second positive, however putative effect is that between 2013 and 2016, when the NDP was monitoring SPDC, the oil company cleaned-up more than a third spill sites more than in the previous three-year period from 2010 to 2013. It is also noticeable that after the monitoring period, SPDC's spill clean-up performance became even worse than before the IUCN–Shell project had started, which is why, even though a short-term effect was visible, an overall positive effect to date has not been seen.

Finally, the Panel addressed the point in their reports regarding the response time to react to oil spills. The results of the analysis show that there has been no improvement at all; on the contrary SPDC's response time was at a record low in 2013 and increased dramatically over the following years. As Amnesty International's data on this only covers the period up to 2017, it is unclear whether the oil company has corrected its time management. However it is clearly recognisable that the reports had no effect during the time in which the NDP had been monitoring SPDC.

Overall, the process-tracing produced a mixed picture of the effectiveness of the report. There were numerous different indicators that the reports had no effect. However Brown et al.'s findings cannot be ignored when addressing hypothesis 4. Due to this improvement, it would be wrong to refute h4 entirely, as an effect was visible, even if it is only a very small one. Therefore, hypothesis 4 is verified, but with the note that the effect was comparably small to areas where no effect was visible. However the poor results regarding the company's performance demand an appropriate response by the IEO. The response that the organisation gave will now be explored in greater detail.

6.1.3 IUCN's Response

The analysis showed that the NDP and IUCN both remained excessively silent about Shell's poor performance. With the exception of Martin Mehers's (2018) aforementioned unscientific document, no assessment of the Niger Delta project was available, more than eight years after the project first started. Even though it is known that the NDP made an assessment on SPDC's behaviour, no results of that had been made public. This result gives reason to assume that IUCN could facilitating greenwashing on the part of Shell, as the oil company's minimal response to the NDP's report at the very least requires a clear statement by IUCN of its disapproval of its partner's behaviour. Another appropriate reaction could have been the

termination of the partnership once it was clear that Shell was not doing its best to follow the NDP's recommendations. Due to this overall lack of criticism, h5 is refuted, meaning that neither IUCN nor the NDP criticised Shell for the lack of process in the Niger Delta.

IUCN's failure to comment on the aforementioned deficiencies can be interpreted as an indicator that there is not only an apparent bias within the IUCN–NDP's reports but also associated with IUCN itself, and also that there is a lack of transparency on the part of the organisation itself and not just the Panel. The meanings of this within the context of the present study will be discussed in the conclusion. Prior to this, the limitations study's limitations will be put forward.

6.2 Limitations of the Study

One limitation of the summative discourse analysis is the issue that some of the results are based upon the author's subjective interpretation of the reports. Even though she tried her best to remain objective, the fact remains that a different researcher may come to slightly different conclusions, particularly when interpreting what counts as 'criticism' of the NDP towards SPDC (Appendix, Table 2). Another limitation associated with the process-tracing is the overall lack of reliable sources that make an assessment of the effects of the report. While there are results about the tendencies of SPDC to clean-up more or less spill sites, there remains an overall lack of information on whether the oil company has established best practice strategies for remediation and rehabilitation, for the protection of biodiversity and if it has engaged more with Nigerian organisations, which was part of the objectives of the Panel. The author looked for the perspectives of scientists, NGOs, journalists, governments and Nigerians who could confirm or reject that the objectives were met, but could not find any. Due to this large gap in data, the question to what extent the reports had an effect cannot be answered decisively in this thesis. However one could argue that it is most important for Nigerians and biodiversity right now that rapid action is taken in cleaning up spills, which the study was able to demonstrate that Shell did not do.

7 Conclusion

Looking back to the definition of greenwashing, which is when an actor engages in making a polluter seem more environmentally friendly than they actually are, this is very much so the case for IUCN and Shell. The NDP – as dependent representatives of the organisation –

disregarded a number of preconditions for integer scientific research, which resulted in presenting the company in a more favourable light in their reports through a lack of objectivity, likely though a lack of independence of the Panel members and by refusing access to the public to components of their study. What speaks against greenwashing is that the IUCN–NDP reports contributed positively to the science, however this small success is being overshadowed by the otherwise poor record of Shell's clean-up response and the fact that announced monitoring results were not published, and that there was no other form of scientific assessment of the project's outcome to date.

Overall, the research question of this study about whether IUCN greenwashes Shell is being answered with the affirmative: Yes, IUCN greenwashes Shell. At least it has done so in the case of the Niger Delta project and as the partnership continues without IUCN having criticized a lack of engagement by Shell in clean-ups, IUCN shows this way that they are still standing firmly behind the alliance and what it represents. This further means that IUCN continues to be a showpiece for Shell which attests the oil company an active engagement in sustainability matters. What remains unanswered is the exact extent to which greenwashing happens, as the question of the effect of the reports could not be assessed determinatively. However the results of h1, h2, h3 and h5 give clear evidence for greenwashing to be happening in some ways.

The results of the study provide a number of implications to the science. Starting with IUCN itself, the study settles the question to whether the organisation is a greenwasher and adds one more IEO to the list of organisations which harm the environment more than help by greening a polluter's image. With IUCN being on that list, this brings up essential questions about the system of global environmental governance, as the organisation is not only the eldest but also one of the largest and most influential IEOs in the world, meaning it is one of the organisations with the most power in GEG which sets the tone among IEOs. When such a leading IEO is greenwashing one of the biggest polluters worldwide, this brings up the question of whether other leading IEOs which partner with polluters may be greenwashing too. It also makes it imperative to ask to what extent these partnerships contribute to the apparent failing of climate politics which we have seen happening in the last decades.

IEOs are supposed to function as the defenders of environmental protection which improve sustainability standards worldwide. When we cannot trust the most powerful of these organisations to do their job anymore, we must ask ourselves if partnerships between IEOs and polluters should be allowed to continue in the form they exists momentarily. As these organisations are to some degree dependent on funds coming in, to remain capable of acting in

the name of the environment, a solution should be found to guarantee the financialization of IEOs, so that they can work with as well as against polluters and either way remain independent of money coming in from these firms.

Ultimately, the study closed one gap in the literature but opened up many more which could be looked into in future research. The IUCN–Shell partnership could be followed and further assessed by e.g. keeping an eye on the developments in the Niger Delta or looking at other projects which the partners have worked on. Furthermore, other IUCN-polluter partnerships could be looked at by using a similar research strategy as this thesis and analyse reports and results of respective projects. Should greenwashing occur in these alliances too, patterns could be worked out give evidence about whether greenwashing is a systematic problem within IUCN or merely an individual case with Shell. Likewise, it could be analysed whether other IEOs which Shell is working with are also greenwashing the company or if their work had an actual impact. Lastly, an important research project would be to analyse whether the largest and most powerful IEOs which have partnered with or have in recent years received funds by polluters, are also greenwashing.

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9 Appendix

Table 2

NDP Criticizes SPDC (2013 Report).

Source Number	Page Number	Citation
S1	35	The IUCN–NDP also observed that **the SPDC monitoring protocols need to be reviewed and tightened up** to ensure that remediation guidelines are followed and implemented as directed.
S2	38	**The current parameters determining SPDC's oil spill response interventions do not properly extend to biodiversity issues.** In addition to farmlands, they should include habitats of key relevance to the Niger Delta biodiversity such as mangroves, shorelines and barrier islands, freshwater marshes, and lowland forests.
S3	52	Although there is some evidence that SPDC is already doing so**, there is room for improvement in the manner of interface with the various community groups**.

Source: IUCN–NDP, 2013

Table 3

NDP points out Social and Environmental Consequences of Oil Spills (2013 Report).

Source Number	Page Number	Citation
s4	22	**A number [of] oil pollution impact assessment studies suggest that the high levels of pollution in the Niger Delta**, particularly from residual/recalcitrant hydrocarbons, synthetic pollutants and continuing pollution from natural and anthropogenic activities **means that habitats, livelihoods and people are now severely impacted**.
s5	24	Such a framework would need to take into account the challenges to biodiversity conservation in the Niger Delta, including urbanization, deepening poverty and declining incomes (which exacerbate the dependence on biodiversity as food and income resources) as well as **habitat loss from pollution and dredging.**

Source: IUCN–NDP, 2013

Table 4

NDP points out Social and Environmental Consequences of Oil Spills (2018 Report).

Source	Page Number	Citation

Number		
s6	2	**Oil and gas related activities** are rampant in the Delta, including in its **most sensitive sites and habitats**. This has led to **serious damage to the environment and severe loss of biological resources**. Biodiversity rehabilitation has to some degree been addressed through a disjointed set of activities undertaken by disparate stakeholders with the result that not enough is being done, in time or in scale, to remedy the situation.
s7	11	**Threats related to the oil industry are locally affecting both land and water. These include impacts of spills, gas flaring and land clearings for establishing various infrastructures such as wells, pipelines and other facilities**. *Note from the author: Critical, yes. But before the critique stood this sentence:* Not all of the threats to the Niger Delta's biodiversity are linked to the oil and gas sector. Threats such as from hunting, land clearings for agriculture, bush burning, unsustainable harvest of trees, fish and other biological resources are commonly seen throughout the Delta. These threats are highly significant.
s8	11	A significant direct threat from the oil and gas industry arises from oil spills and hence the focus of IUCN NDP on this aspect. **Water pollution such as from oil spills is the single most important threat to freshwater-, coastal-, and marine ecosystems of the Niger Delta. Such spills in fresh water regions of the Delta impacts the drinking water quality, fisheries and the survival of mangroves**.
s9	14	Lighter oils are more acutely toxic to mangroves than are heavier oils**. Oil-impacted mangroves may suffer yellowed leaves, defoliation, and subsequent tree death**. More subtle responses include branching of pneumatophores (vertical root structures), **germination failure, decreased canopy cover, increased rate of mutation, and increased sensitivity to other stresses** (Naskar and Palit, 2015).
s10	14	**Oil pollution also creates other impacts, such as dead zones in aquatic and marine habitats**. This happens when bacteria multiply to consume spilled hydrocarbons and other organic material. During the degradation most of the dissolved oxygen in the water is utilized creating dead zones where no higher aquatic or marine life can be sustained (Naskar and Palit, 2015).
s11	14	Oil in water cause[s] a number of chemical and biological effects in a wide array of organisms ranging from micro-organisms up to vertebrates, degrading the complex trophic chains of the wetlands including the regionally important mangrove vegetation. This means that **fisheries in the Gulf of Guinea are jeopardized**. By some estimates, over 60% of fish caught between the Gulf of Guinea and Angola breed in the mangrove belt of the Niger Delta (World Rainforest Movement 2002).

Source: IUCN–NDP, 2018

Table 5

A Flawed Depiction of the Niger Delta's Biodiversity (2018 Report).

Source Number	Page Number	Citation	
s12	6-7	An elaborate and systematic survey of the biodiversity of the Niger Delta was conducted by Powell (1993). **Although relatively little field work has been carried out in the area in the past 15 years, due to social insecurity, existing data and some limited information available in recent times reconfirm the ecosystem richness of the Niger Delta**. Blench (2007) has presented an overview of the mammals of the Niger Delta developed from materials left by Bruce Powell and Kay Williamson and incorporating updated field materials and analyses but that in itself is about 10 years ago. **Several researchers from universities in the region have undertaken limited and focused surveys since but these have had a narrow focus due to the challenges mentioned.**	
s13	7	Despite the limitations of chronology or scope, available studies have shown that the Niger Delta is very rich in biodiversity. Some of the most highly endangered species of primates in the world such as the Sclater's guenon, the White-throated guenon, the Niger Delta red colobus, the Nigeria-Cameroon **Chimpanzee (Angelici et. Al. 1998; Angelici and Luiselli, 1999; Luiselli et. Al., 1999; Eniang and Luiselli, 2002; Angelici, 2005; Angelici and Luiselli, 2005; Lea et. Al., 2005; Luiselli et. Al., 2006 and Eniang, 2010)** and the Cross River Gorilla are known to still exist in the Delta. The brackish water environment supports a rich fauna.	
s14	7	**The Delta is the home of some remarkable coastal wetlands and a high diversity of avian fauna (Ezealor, 2003).**	
s15	7	Although now out of date, the findings of the Niger Delta Environment Survey (NDES**, 2005**) document: • 70 mammalian species in 49 genera, • 500 bird species, • 219 fish species, • 85 mollusk species, • 1,773 insect species, • 50 macro-crustacean species, • 2,000 angiosperm (higher plants) species, and • 500 phytoplankton species. The study identified 16 rare and three endemic plant species, 27 mammalian species with declining populations and five rare mammalian species.	
s16	6-10	View whole Chapter 3: Biodiversity Endowment of the Niger Delta. Sources which describe rich biodiversity, animal species etc.:	1x (Akani et. al.. 2004) 1 x (NDES, 2005) 1x (Lea et. al. 2005)

		1x (Powel, 1993) 1x (Luiselli et. al.. 1998) 1x (Angelici, 1998) 1x (Angelici, et. al. 1999) 3x (Luiselli et. al.. 1999) 2x (Angelici and Luiselli,1999) 2x (Luiselli, 1999) 2x (Angelici, et. al. 2000) 4x (Luiselli et. al.. 2000) 1x (Abam, 2001) 1x (Luiselli et. al.. 2001) 3x (Akani et. al. 2001) 1x Stutz and Pilkey, 2002) 3x (Eniang and Luiselli, 2002) 1x (Luiselli et. al.. 2002) 1x (Eniang et. al. 2002a) 1x Eniang et. al. 2002b) 2x (Luiselli et. al. 2003) 1x (Luiselli, 2003) 1x (Ezealor, 2003) 2x (Eniang et. al.. 2003)	2x (Angelici, 2005) 3x (Angelici and Luiselli, 2005) 2x (Luiselli, 2005) 1x (Angelici, 2005) 1x (Luiselli et. al. 2006) 1x (Luiselli et. al.. 2006a) 1x (Luiselli et. al.. 2006b) 1x (Blench, 2007) 1x (Akani and Luiselli, 2009) 1x (Eniang, 2010) 1x (Bamy et. al., 2010) 1x (Borokini 2014a) 1x (Borokini, 2014b) *Note by the author:* *In 'References', only Borokini 2014 exists. No other studies of Borokini 2014 were found, therefore counted as one source.*
s17	9	The summary below provides some facts about the biodiversity hot spots as well as particularly vulnerable species in the Niger Delta. **IUCN-NDP notes the lack of more recent surveys and species status reviews, and the dependency here on a limited number of studies, and recognises that this may not now reflect current biodiversity richness of the Delta.**	
s18	9	Coastal upwelling, and hence **a rich production of plant and animal life**, occurs seasonally and locally off the central gulf coasts of Ghana and Côte d'Ivoire.	
s19	9	"Figure 2: Distribution of some marine species in the Niger Delta Source: UNEP-WCMC *Note from the author: This figure is a map is from 2005 and indicates where in the Niger Delta animals such as the West-African dwarf crocodile, marine turtles and fished live and nest, where mangroves grow et cetera.*	

Source: IUCN–NDP, 2018

Table 6

Sources which are noted in 'References' but do Not Appear in the Text (2018 Report).

Source Number	Page Number	Citation
s20	34	Akani, G.C., Luiselli, L.(2001): Ecological studies on a population of the water snake Grayia smythii in a rainforest swamp of the Niger Delta, Nigeria. – Contributions to Zoology, Amsterdam; 70 (3): 139-146.
s21	34	Akani, G.C., Luiselli, L. (2010): Aspects of community ecology of amphibians and reptiles at Bonny Island (Nigeria), an area of priority relevance for petrochemical industry. – African Journal of Ecology, Cambridge; 48: 939-948.
s22	34	Akani, G.C., Luiselli, L., Angelici, F.M., Corti, C., Zuffi, M.A.L. (2001): The case of rainforest stiletto snakes (genus Atractaspis) in southern Nigeria. Evidence of diverging foraging strategies in grossly sympatric snakes with homogeneous body architecture? – Ethology Ecology and Evolution, Florence; 13 (1): 89-94.
s23	34	Akani, G.C., Luiselli, L., Eniang, E.A., Amuzie, C.C., Ebere, N. (2007): Aspects of the ecology of the spotted blindsnake, Typhlops punctatus punctatus in Port-Harcourt, Nigeria. – African Journal of Ecology, Cambridge; 46 (3): 533-539.
s24	34	Akani, G.C., Luiselli, L., Eniang, E.A., Ebere, N. (2007): Community structure and ecology of snakes in fields of oil palm trees (Elaeis guineensis) in the Niger Delta, southern Nigeria. – African Journal of Ecology, Cambridge; 46 (3): 500-506.
s25	34	Akani, G.C., Luiselli, L., Eniang, E.A., Rugiero, L. (2007): Life in the tropical suburbs: Food type partitioning among sympatric house snakes of the genus Lamprophis (Colubridae). – Italian Journal of Zoology, Modena; 75 (4): 395-399.
s26	34	Akani, G.C., Luiselli, L., Ogbeibu, A.E., Onwuteaka, J.N., Chuku, E., Osakwe, J.A., Bombi, P., Amuzie, C.C., Uwagbae, M., Gijo, H.A .(2010): Aspects of species richness and seasonality of amphibians and reptiles in the coastal barrier island of Brass (Nigeria). – Revue d'Ecologie (Terre et Vie), Paris; 65: 151-161.
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s28	34	Angelici, F.M., Politano, E., Bodugue, A.J., Luiselli, L. (2005): Distribution and habitat of otters (Aonyx capensis and Lutra maculicollis) in southern Nigeria. – Italian Journal of Zoology, Modena; 72: 223-227.
s29	34	Baird J (2010). "Oil's Shame in Africa". Newsweek: 27. July 26, 2010.
s30	34	Bombi, P., Akani, G.C., Ebere, N., Luiselli, L. (2010): Potential effects of climate change on high- and low-abundance populations of the Gaboon viper (Bitis gabonica) and the nose-horned viper (Bitis nasicornis) in southern Nigeria. – Herpetological Journal, London; 21 (1): 59-64.
s31	34	Bronwen Manby: The Price of Oil Human Rights Watch. 1999. Retrieved November 9, 2007.
s32	34	Chindah (2011). Effects of crude oil on the development of white mangrove seedlings (Avicennia germans) in the Niger Delta; Polish Journal of Environmental Studies Vol 20; no 2 (2011) 275-284.
s33	34	Chindah A.C Braide, Amakiri J, and Onukurhefe (2007). Effect of crude oil on the development of mangrove (Rhizophora mangle L) seedlings from the Niger Delta; Institute of Pollution Studies River state , University of Science and Technology Port Harcourt Rivers State.
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s36	35	Hamme JD, Singh A, Ward OP.(2003) Recent advances in petroleum microbiology. Microbiol Molec Biol Rev. 2003;67:503–549. Doi: 10.1128/MMBR.67.4.503-549.2003. [PMC free article] [PubMed] [Cross Ref]
s37	35	Luiselli, L. (1998): Food habits 51nvolv pelomedusid turtle Pelusios castaneus castaneus in southeastern Nigeria. – Chelonian Conservation and Biology, Lunenburg; 3 (1): 106-107.
s38	35	. Luiselli, L., Akani, G.C., Ebere, N., Rugiero, L., Vignoli, L., Angelici, F.M., Eniang, E.A., Behangana, M. (2010): Food habits of a pelomedusid turtle, Pelomedusa subrufa, in Tropical Africa (Nigeria): The effects of sex, body size,

		season, and site. – Chelonian Conservation and Biology, Lunenburg; 10 (1): 138-144.
s39	35	Luiselli, L., Akani, G.C., Eniang, E.A., Politano, E (2007).: Comparative ecology and ecological modeling of sympatric pythons, Python regius and P. sebae. In: Biology of the Boas and Pythons (Henderson, R.W. & Powell, R., eds.). pp. 88-100. CPG/Biological Science Press, New York.
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s42	36	Luiselli, L., Angelici, F.M., Rugiero, L., Akani, G.C., Eniang, E.A., Pacini, N., Politano, E. (2007): Negative density dependence of sympatric Hinge-back Tortoises (Kinixys erosa and K. homeana) in West Africa. – Acta Herpetologica, Florence; 3 (1): 19-33.
s43	36	Luiselli, L., Eniang, E.A., Akani, G.C. (2007): Non-random structure of a guild of geckos in a fragmented, human altered African rainforest. – Ecological Research, Tokyo; 22: 593-603.
s44	36	Luiselli, L., Lea, J. (2009): Pollution: Petrochemicals and Heavy Metals. In: Amphibian Biology (Heatwole, H., ed.), volume 8: Decline, Diseases, Parasites, Maladies, Pollution. Harvard University Press/Surrey Beatty & Sons. Pp. 3239-3243.
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s46	36	Moffat, D.; Linden, O. (1995). Perception and reality: assessing priorities for sustainable development in the Niger River delta. Ambio Stockholm [Ambio], vol. 24, no. 7-8, pp. 527-538.
s47	36	Ogogo, A. U; Eniang, E. A; Nkamenyin, O. O (2010) Threats 52nvolv survival 52nvolv West African Manatee (Trichechus senegalensis) in Eniong Creek, South south , Nigeria. International Journal of Agriculture. Vol. 2, No. 1. 2010.

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s49	36	Nwilo, P. C.; O. T. Badejo (2001): Impacts of Oil spills along the Nigerian coast The Association for Environmental Health and Sciences, 2001.
s50	36	Rugiero, L., Luiselli, L., Eniang, E.A., Akani, G.C. (2007): Diet of a guild of geckos in a fragmented, human altered African rainforest. – African Journal of Herpetology, Johannesburg; 56 (1): 91-96.
s51	36	"Shell And The N15bn Oil Spill Judgement Debt". The Daily Independent (Lagos). 2010-07-19. Retrieved 27 July 2010.

Source: IUCN–NDP, 2018

Table 7

Sources which are noted in 'References' but do Not Appear in the Text (2013 Report).

Source Number	Page Number	Citation
s52	58	Dahrazma, B., and Mulligan, C. N. (2007). Investigation of the Removal of Heavy Metals from Sediments Using Rhamnolipid in a Continuous Flow Configuration, *Chemosphere* Vol 24, pp. 928–935.
s53	59	Dickson U.J. and Udoessien E. I. (2012). Physicochemical studies of Nigeria's Crude Blends. *Petroleum and Coal* 54 (3) 243–251.
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s55	59	Greenberg, R., T. Andrews, P. Kakarla, and R. Watts. (1998). "In Situ Fenton-Like Oxidation of Volatile Organics: Laboratory, Pilot, and Full-Scale Demonstrations," *Remediation* **8**(2): 29–42.
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s57	60	Peixoto R. S. , Vermelho A.B., Rosado A.S. (2011). Petroleum Degrading enzymes: Bioremediation and New Prospects . SAGE-Hindawi Access to Research. Vol 2011, article ID 475193, 7 pages.

s58	61	ThisDay Newspapers, (6th March, 2013). Chalker: Nigeria's Economic Growth Threatened by Terrorism, oil Theft . Leaders and Company, Limited vol. 18. No 6525 pp 8–9.
s59	61	USEPA (1991). Standard Default Exposure factors. OSWER Directive 9285.6-03.
s60	61	USEPA (1993). Provisional Guidelines for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons EPA/600/R-93/089 28 pages.
s61	61	USEPA (2002). A Review of the reference dose and reference concentration processes. Risk Assessment Forum pp 3–33.
s62	61	USEPA (2009). Integrated Risk Information System (IRIS) for Benzo(a)pyrene BAP CASRN 50-32-8.
s63	61	USEPA (2009). Integrated Risk Information System (IRIS) for Dibenz(a,h) anthracene. CASRN 50-70-3.
s64	61	Wang, S., and Mulligan, C. N. (2004). "Rhamnolipid Foam Enhanced Remediation of Cadmuim and Nickel Contaminated Soil". *Water, Air and Soil Pollution* Vol. 157, pp. 315–330.
s65	61	WHO/IPCS (1998). Environmental Health Criteria 202: Selected Non-Heterocyclic Polycyclic Aromatic Hydrocarbon. International Program on Chemical Safety, United Nations Environment Programme, World Health Organization. Geneva.

Source: IUCN–NDP, 2013

Table 8

NPD points to the Locals. 'Sabotage', 'Illegal Oil Refining' and Others as Causes of Spillage (2013 Report).

Source Number	Page Number	Citation
s66	11	The Niger Delta has been under extreme stress for decades due to a combination of complex issues including environmental, socio-political, socio-cultural, and economic challenges—all exacerbated by continuing anthropogenic activities in direct relation to oil and other economic activities (**including illegal artisanal crude oil refining, sabotage and oil theft**).
s67	13	Regarding the widespread reduction in ecosystem productivity seen in the Niger Delta, the Panel noted that other anthropogenic factors, such as **sabotage, crude oil**

		theft, artisanal refining, security issues and blocking of access to sites, in addition to operational spills and occasional infrastructure failures, were also contributors to degradation of the environment.
s68	17	The Panel also recognizes that repeated spills from anthropogenic activities—especially **crude oil theft and illegal refining**—are at critical levels, causing significant economic and environmental impacts. This has led to Nigeria's Honorary International Investors Council (HIIC) urging the government to act fast to curb these activities (This Day Newspapers March, 6th 2013). Repeat spills from these sources are difficult to plan for but it is hoped that the measures the Nigerian government has put in place to work with the youths of the Niger Delta will yield benefits in this regard. Furthermore the socio-environmental strategy may yield benefits that will urge a re-think on these illegal operations.
s69	23-24	This would potentially provide an incentive for them to support **anti-sabotage and anti-oil theft activities** and engage in biodiversity conservation. This would most likely lead to a significant reduction of Tier 1 spills and a lessening of biodiversity threats over time.
s70	27	It also discusses broader challenges to remediation of oil spills in the area. These include the scale of the area and anthropogenic influences, such as **sabotage, crude oil theft, illegal refining**, infrastructure failures, and some of SPDC's internal environmental management processes and policy issues.
s71	33	The discussion above has focused on challenges to remediation techniques in relation to the environmental conditions in the Niger Delta. Other challenges relate to anthropogenic factors such as **sabotage, crude oil theft, artisanal refining**, infrastructure failures, and SPDC internal environmental management procedures and policy issues. This Day Newspapers (2013), a prominent national daily in Nigeria, reported that the Honorary International Investors Council (HIIC), an organization of prominent foreign investors advising the Nigerian government on matters pertaining to economic development, has urged the government to curtail **crude oil theft** owing to the increasing threat to the country's economy. In March 2013, SPDC announced a second closure of a pipeline (the Nembe Creek Trunk Line), following significant leakages caused by **crude oil theft.** This same pipeline had been shut in December 2011 following significant spills caused by **crude oil theft** then. Such spillages cause repeated impacts on the environment, which SPDC pledges to remediate. This is also a challenge for the Panel to seek effective ways to deal with situations such as these, whilst also encouraging government stakeholders to take measures to curtail the problem of **sabotage and crude oil theft**, as well as other illegal activities that are detrimental to the environment and the country's economy.
s72	34	SPDC acknowledges that operational spills occur occasionally but also states **that vandalism, oil theft and illegal refining** cause several spills along the pipelines and frequently interrupt production.
s73	50	Natural regeneration of mangroves is very difficult under the stress conditions that are predominant in the Niger Delta. These include several anthropogenic activities

		such as dredging, **oil theft, illegal refining/transport of crude oil**, constant use of speed boats, operational spills and accidents.

Source: IUCN–NDP, 2013

Table 9

NPD points to the Locals. 'Sabotage', 'Illegal Oil Refining' and Others as Causes of Spillage (2018 Report).

Source Number	Page Number	Citation
s74	11	The main causes of oil spills in the Niger Delta are **sabotage of oil installations, illegal refining of stolen oil,** corrosion of pipelines and storage tanks as well as accidents in oil production operations. Prior to the 1990s when militancy had not yet commenced in the region, spills were mainly due to operational reasons**. However, criminal activities such as illegal refining and theft have assumed increasing importance and are presently responsible for most of the pollution incidences in the Delta**.
s75	11	Fires and leakages are also associated with natural gas production and transportation. Accidental leakages and **vandalisation of gas pipelines result in fires that burn uncontrollably leading to environmental degradation and destruction of the affected area.**
s76	11	The map for November 2015 given in Figure 3 shows **that a majority of onshore spills arise from illegal refining activities and oil theft**, although a significant number still arose from operational failure.
s77	11	View: Figures 3 and 4. Maps of alleged sabotage vs. operational failure are presented.

Source: IUCN–NDP, 2018

Table 10

NDP mentions that some Spills Happen due to Operational Failure (2013 Report).

Source Number	Page Number	Citation
s78	13	Regarding the widespread reduction in ecosystem productivity seen in the Niger Delta, the Panel noted that other anthropogenic factors, such as sabotage, crude oil theft, artisanal refining, security issues and blocking of access to sites, in addition to **operational spills and occasional infrastructure failures**, were also contributors to degradation of the environment.

s79	34	SPDC acknowledges that **operational spills occur occasionally** but also states that vandalism, oil theft and illegal refining cause several spills along the pipelines and frequently interrupt production.
s80	50	These include several anthropogenic activities such as dredging, oil theft, illegal refining/transport of crude oil, constant use of speed boats, **operational spills** and accidents.
s81	53	Some areas are impacted multiple times either due to vandalism **or operational overlaps** especially where two or more oil companies are operating in close proximity

Source: IUCN–NDP, 2013

Table 11

NDP mentions that some Spills Happen due to Operational Failure (2018 Report).

Source Number	Page Number	Citation
s82	11	The main causes of oil spills in the Niger Delta are sabotage of oil installations, illegal refining of stolen oil, **corrosion of pipelines** and storage tanks as well as accidents in oil production operations. Prior to the 1990s when militancy had not yet commenced in the region, spills were mainly due to **operational reasons**.
s83	11	The map for November 2015 given in Figure 3 shows that a majority of onshore spills arise from illegal refining activities and oil theft, although a significant number still arose from **operational failure**.

Source: IUCN–NDP, 2018