



# THE SUDD INSTITUTE

RESEARCH FOR A PEACEFUL, JUST AND PROSPEROUS SOUTH SUDAN

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## Policy Brief

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### **Understanding the Enforcement of Environmental Provisions of Petroleum Act 2012 and Why Environmental Ruin Continues**

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#### **Summary**

*When the South Sudanese Petroleum Act was enacted in 2012, a flicker of hope of a better environmental management was felt after many years of environmental degradation due to negligence by the government in Khartoum. However, since the Act was passed three years ago, environmental ruin has continued. So what explains the continued social and environmental impacts of oil production in South Sudan? This paper, therefore, evaluates the extent to which the environmental provisions of the Act have been enforced, and attempts to identify the gaps and challenges facing the implementation. To determine the level of enforcement, we conducted structured interviews with key officials from the ministries of Environment and Petroleum and Mining and Nile Petroleum Corporation<sup>1</sup>.*

*We found that environmental provisions in the Act have not been implemented as expected, no wonder that environmental degradation has continued. Only 23% of environmental standards, which have no reference to the Petroleum Act 2012, have been enforced and most of this enforcement happened before the Act was passed. Some of the factors and challenges cited as responsible for lack of implementation include the shutdown of oil operations in 2012, ongoing civil war, delay in the enactment of overall national environmental law and in establishment of an independent and technical environmental body, nonexistence of political will and lack of environmental awareness, among others. Some of the gaps identified include lack of provisions on climate change adaptation and mitigation measures, cumulative effects assessment (CEA), environmental management system (EMS) and detailed processes on principles and triggers for strategic environmental assessment (SEA).*

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<sup>1</sup> The Sudd Institute thanks Cordaid for its financial support which has resulted in the production of this research.

*We recommend to the government and petroleum companies to (1) submit and publish past EIA, CEBS, Audit and SEA reports, (2) carry out a comprehensive social and environmental audit on the existing petroleum activities and rehabilitate the damaged environment and compensate the affected people as required by the Act, (3) speed up the finalization of the national environmental bill, create an independent and technical environmental regulatory body and give it the full responsibility to supervise, monitor and regulate environmental matters in the petroleum industry, (4) prioritize and enact regulations on EIA, SIA, climate change and emissions control, petroleum waste management, pollution damage fund, contingency fund, oil wells decommissioning plan and fund, greenhouse gases, and clean technology specifications for the industry, (5) consider amendment of the Act to include provisions on EMS, greenhouse gases limit, greenhouse gases reporting requirements, CEA and framework on clean technology specifications for the petroleum industry to reduce the industry's negative impacts and enhance its performance, and (6) accelerate the implementation of EMS and EMP as provided in the Act and recent regulation on EMS and EMP.*

## **I. Introduction**

South Sudan enacted the Petroleum Act in 2012, about a year after it attained its hard-fought independence. The main purpose of the Act is to manage the petroleum sector ‘in an ethical, efficient, transparent and accountable manner, on the basis of environmentally, socially, and economically sustainable principles.’ The enactment of the Act raised hopes of a better environmental management after many years of environmental degradation and pollution due to petroleum activities and negligence by the government in Khartoum.<sup>2</sup> However, since the Act was passed, environmental degradation has continued. Rueskamp et al. (2014) attribute contamination of drinking water to petroleum activities at Thar Jath and Mala Oil Fields in Unity State. Besides, a parliamentary fact-finding mission in 2013 found incredible evidence of environmental impacts in the oilfields in Unity and Upper Nile States. In addition, petroleum activities in Melut County in Upper Nile State have resulted in the loss of 37 villages and displacement of people whose lands have been converted into ‘produced water<sup>3</sup> ponds,’ soil excavation areas, oil rigs stations and pipelines and access roads corridors.<sup>4</sup> Most produced water is released into the environment without

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<sup>2</sup> Before the old Sudan broke up in 2011, Khartoum government had the sole monopoly of the oil industry, extracting most of it from southern fields but did very little, if any at all, to care for the environment.

<sup>3</sup> Produced water is the water, which is separated from crude oil. It needs to be properly treated before being released to the environment.

<sup>4</sup> Bol, M.B. 2014. Scrutiny of South Sudan’s Oil Industry: Oil Industry’s Impact on Land Use Patterns in Upper Nile State.

undergoing treatment.<sup>5</sup> Such untreated wastewater contains toxic chemicals that carry serious negative consequences for aquatic life, people, livestock and wildlife.

This paper is an attempt to understand why environmental degradation resulting from oil production continues in South Sudan three years after the Act was passed in 2012. There are divergent views on this issue. On the one hand, some people believe that the government has not imposed stringent environmental policies on the petroleum companies. This is coupled with lack of culture of environmental norms and values and the tendency by the companies to cut costs at the expense of environmental protection.<sup>6</sup> On the other hand, others attribute the petroleum related environmental pollution in South Sudan to lack of environmental laws. This view is shared by a 2013 National Legislative Assembly's fact-finding mission to the oil producing areas, which blames lack of environmental laws for the degradation. However, the reality is that the country has some environmental laws, including the Transitional Constitution, 2011, and the provisions in this Act, to address petroleum environmental impacts. Given that the laws exist, what exactly explains the continued social and environmental impacts of oil production in South Sudan? This paper, therefore, evaluates the extent to which the environmental provisions of the Petroleum Act, 2012 have been enforced, and attempts to identify the gaps and challenges facing the implementation. Findings should enable the government and stakeholders to take informed actions in addressing environmental impacts related to the petroleum sector.

It goes without saying that environmental protection has been neglected. However, it is costly to ignore and treat environmental protection as a fringe issue. Environmental degradation does not only affect people and the environment, it also costs oil companies reputation<sup>7</sup> and real money, which could lead to bankruptcy and possible collapse.<sup>8</sup> For example, Union Carbide suffered immensely after the 1984 Bhopal disaster in India, which killed over 3000 people.<sup>9</sup> ExxonMobil and British Petroleum (BP) lost billions of dollars in

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<sup>5</sup> Patey, L. 2012. Lurking beneath the surface: Oil, environmental degradation, and armed conflict in Sudan. In *High-Value Natural Resources and Peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.

<sup>6</sup> Patey, L. 2012. Lurking beneath the surface: Oil, environmental degradation, and armed conflict in Sudan. In *High-Value Natural Resources and Peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.

<sup>7</sup> Eccles, R. G. 2007. Reputation and its risk. *Harvard Business Review*, 104 -114.

<sup>8</sup> Esty, D.C. and Winston, A.S. 2006. *Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage*. New Haven: Yale University Press.

<sup>9</sup> Ibid

punitive charges and cleanup for Exxon Valdez Oil Spill (1989) and Deepwater Horizon Oil Spill (2010) respectively. Sony, a Japanese electronics company, lost about \$130 million when cadmium, a toxic chemical, was found in the cables of its game control.<sup>10</sup> Reputation and financial costs combined with dwindling level of natural resources and pressure from the stakeholders have moved the environmental protection to the center of business strategy to safeguard reputation, save money and create a competitive advantage. In most cases, it pays to protect the environment. For example, it cost BP about \$20 million to develop and implement its carbon policy. In return, the company saved \$650 million over the first few years.<sup>11</sup> By the year 2006, BP's saving from its carbon policy reached \$1.5 billion, something they had not imagined when they started the policy change. Toyota, through its environment friendly car, the Prius, achieved a sale rise, expanded production and collected a record profit of \$11.8 billion in 2006 and earned "the title of world's largest automaker."<sup>12</sup> Toyota reached this feat because it had put the environment at the center of its business strategy "ahead of all the selling points that automakers traditionally used: size, speed, performance, or even ability to attract beautiful girls or hunky guys."<sup>13</sup>

Stringent regulatory framework matters in ensuring that companies put environmental protection at the center of a business strategy. However, this depends on a particular country to a certain extent.<sup>14</sup> For example, countries with strong environmental values<sup>15</sup> are more likely to create stringent regulatory framework and put the environment at the center of business strategy. They are also more likely to yield to pressure or to improve their practices overseas if faced with stakeholder pressures back home. For example, Talisman, a Canadian petroleum company, quit the South Sudanese petroleum industry and sold its concessions after facing huge pressure from stakeholders back in Canada accusing it of human rights violations due to its participation in an industry that was seen as fueling the North –South Sudan Civil War. South Sudan needs a strong environmental awareness to instill strong environmental values which can create a fertile ground for implementing stringent regulatory framework.

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<sup>10</sup> Ibid

<sup>11</sup> ibid

<sup>12</sup> Ibid

<sup>13</sup> Ibid

<sup>14</sup> Shadbegian, R., & Wolverton, A. 2010. Location decisions of US pollution plants: theory, empirical evidence and consequences. *International Review of Environmental and Resource Economics*, 1-49

<sup>15</sup> Strong environmental values and culture are created through environmental education and awareness. Therefore, adequate environmental education/awareness is important for the authorities to develop and implement stringent regulatory framework.

This analysis focuses on the implementation of strategic environment assessment<sup>16</sup> (SEA), environmental and social impact assessment<sup>17</sup> (ESIA), comprehensive environmental baseline study<sup>18</sup> (CEBS), environmental management plan<sup>19</sup> (EMP) and environmental audit<sup>20</sup>. Other important provisions whose enforcement the paper also assesses include pollution damage fund<sup>21</sup>, contingency fund<sup>22</sup>, creation of regulations<sup>23</sup> to implement some of the above provisions and transparency of some of these practices<sup>24</sup>. For this review, structured interviews were conducted with key informants from the ministries of Environment and Petroleum and Mining and the state owned Nile Petroleum Corporation to determine the level of enforcement. The paper is structured as follows: Section II summarizes the provisions of the Act, Section III discusses results, and Section IV concludes with policy recommendations.

## II. Environmental Provisions in the Petroleum Act 2012

The Act requires the ministry responsible for petroleum, in consultation with the ministry responsible for the environment, to ‘initiate and coordinate a strategic environmental assessment (SEA) before opening an area for petroleum activities pursuant to Section 15.’ Section 15 of the Act states that ‘the Council of Ministers may, in consultation with the Ministry, open an area for petroleum activities after a strategic environmental assessment is carried out and a determination made by the Council of Ministers to open the area in accordance with Section 59 of the Act.’ SEA is defined as a “formalized, systematic and comprehensive process of evaluating a policy, plan and program and its alternatives including the preparation of a written report on the findings of that evaluation and using the findings in publicly accountable decision making.”<sup>25</sup> Put differently, SEA is a system of

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<sup>16</sup> Sub-section 59 (1) of the Petroleum Act 2012

<sup>17</sup> Sub -section 59 (2)

<sup>18</sup> Sub - section 59 (3)

<sup>19</sup> Section 60

<sup>20</sup> Sub-section 100 (8)

<sup>21</sup> Sub –section 61 (3)

<sup>22</sup> Sub –section 54 (4)

<sup>23</sup> Sub-section 99 (n)

<sup>24</sup> Sub – sections 60 (4), 59 (4f), 59 (7)

<sup>25</sup> Therive, I R., Wilson, E, Thompson, S., Heaney, D. and Pritchard, D. (1992), "Strategic Environmental Assessment", Earthscan Publications, London, U.K., 19-20.

integrating environmental measures into policies, plans and programs.<sup>26/27</sup> It is usually carried out before an Environmental Impact Assessment (EIA), which deals with environmental impacts of projects.

The Petroleum Act 2012 falls short of providing details of the processes, principles and triggers of the SEA apart from stating that it should be carried out before an area is opened for petroleum activities. There are four main components of an effective SEA. These include triggering mechanism, technical assessment, decision and follow up, and feedback.<sup>28</sup> Triggers usually include a legal requirement and alternative for court to order a SEA if requested by stakeholders.<sup>29</sup> The provision requiring SEA can be considered a legal trigger. However, the Act misses on other triggering mechanisms such as ordering it through court. In addition, SEA, in common practice, involves an assessment of the impacts of sectorial policies (e.g. petroleum sector policy on the environment) and clearly states the alternatives and measures to minimize the impacts of the sector on the environment. The 2012 Act misses on specifically stating the goal of SEA as that of incorporating environmental measures, strategies and principles into a petroleum policy. The rationale for SEA is that government policies have more adverse impacts on the environment than a single project (Buckley 1998).SEA has been designed to act as a tool to promote sustainable development, which the Act does not clearly state, even though it makes sustainability one of its main principles. Countries continue to tread on unsustainable development track because of lack of conducting SEA for policies, plans and programs.

The Act requires the ministry responsible for petroleum to act in consultation with the environment ministry to ‘coordinate an environmental and social impact assessment (ESIA) that shall be initiated and undertaken by the licensee or contractor and linked to the strategic environmental assessment.’ ESIA, according to the Act, must be conducted before the following:

1. Reconnaissance activities;
2. Exploration drilling;
3. Development and production;

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<sup>26</sup> Therivel, R., & Paridario, M. R. (2013). *The practice of strategic environmental assessment*. Routledge.

<sup>27</sup> Partidario, M. R. (1996). Strategic environmental assessment: key issues emerging from recent practice. *Environmental Impact Assessment Review*,16(1), 31-55.

<sup>28</sup> Buckley, R. (1998). Strategic Environmental Assessment. In *Environmental Methods Review: Retooling Impact Assessment for the New Century*. Ed. Porter, A. L. and Fittipaldi, J.J.

<sup>29</sup> Ibid

4. Construction of transportation system;
5. Decommissioning;
6. And before any other activities that are likely to have a significant social or environmental impact.

Permits and licenses for the above activities cannot be issued unless an ESIA has been conducted to prove that the activities will not cause adverse environmental and social impacts. ESIA needs consultation with the public and local communities<sup>30</sup>. Apart from consultation with the public and local communities, ESIA must examine ‘preliminary geological, geophysical and geochemical data and the actual and potential impact of petroleum activities on various interests in the relevant area, including local communities, the environment, sites of historical importance, trade, agriculture and other industries and past, present or potential conflict.’<sup>31</sup>

Results of SEA and ESIA must be published as notices in the governmental gazette and in ‘any other appropriate means to inform interested persons as determined by the Ministry.’<sup>32</sup> The notice must specify the contract area, nature and scope of the activities and the public must be given 90 days to react to ESIA results and present their views to the ministry of petroleum. After the public reaction to ESIA results, the Petroleum Ministry must present the results along with the stakeholder views to the Oil and Gas Commission, which in turn must present them to the Council of Ministers to make a final decision after the consideration of environmental and social impacts of the proposed petroleum activities. Any decision made regarding the environmental and social impact of the proposed petroleum activities must be done in consultation with the environment ministry and published in the government gazette and other appropriate means. At the same time, the petroleum companies must ‘conduct a comprehensive environmental baseline study that provides for an understanding of the existing environment in the contract area in which the activities referred to in subsection (59.2) of the Act are intended to take place.’<sup>33</sup>

Petroleum companies, referred to as licensees or contractors, must ‘prepare an environmental management plan (EMP) for the systematic implementation of the environmental requirements for the petroleum activities.’<sup>34</sup> The EMP should be based on

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<sup>30</sup> Sub –section 60 (4b)

<sup>31</sup> Sub – section 60 (4c)

<sup>32</sup> Sub – section 60 (5)

<sup>33</sup> Sub – section 59 (3)

<sup>34</sup> Sub – section 60 (1)

relevant environmental and social impact assessments for the area. The plan must particularly do the following:

1. Provide a summary of the studies undertaken to identify environmental hazards and to evaluate environmental risks relating to the proposed activity;
2. Provide a description of the hazards that were identified and the results of the risk evaluation;
3. Provide details of the activity and measures that will be implemented to manage the hazards and risks identified and described above;
4. Provide measures for mitigating and remedying any pollution and pollution damage including measures for environmental protection and compensation of any affected persons;
5. Provide a list of all structures, facilities, equipment and systems critical to environmental protection and a summary of the system in place for their inspection, testing and maintenance;
6. Establish and implement effective and safe systems for disposal and treatment of waste and prevention of pollution resulting from petroleum activities in accordance with best petroleum industry practice;
7. Establish a system to track the source, transport and destination of potential hazardous waste from petroleum activities;
8. Establish review and audit systems to assess the state of the environment at intervals of time specified in the plan and institute the necessary remedial and improvement measures as a result of the review or audit;
9. And identify the person responsible within the licensee's or contractor's organisation for implementation and compliance with the plan.

In addition, the Act requires the companies to do the following:

1. Submit the environmental management plan to the petroleum ministry and the ministry responsible for the environment for review;
2. Disclose the plan to the affected communities;
3. Report to the communities periodically on any changes to the plan;
4. Pay for the performance of an environmental audit on the environmental management plan to be carried out by the environment ministry or an expert on its behalf.



5. Make annual reports to the petroleum ministry and the ministry responsible for the environment on implementation of the environmental management plan.

While this is considered an important legal milestone in South Sudan, the Petroleum Act, 2012 is silent on Environmental Management System (EMS), a tool that addresses the overall impacts of business operations that pose adverse environmental consequences. Although the Act provides for an EMP, this tool is considered adequate only at a project level. Based on the ISO's 14001 standards, the EMS contains almost the same requirements needed of the EMP.

As well, the Act stipulates that petroleum companies are liable for pollution damage.<sup>35</sup> In this case, companies can either be held jointly or individually liable for the pollution caused.<sup>36</sup> Most importantly, legal action must be brought before a court against liable petroleum companies to compensate for pollution damage.<sup>37</sup> The petroleum companies must establish two types of funds, namely a pollution damage fund and a contingency fund. The former is required to be used to clean up and rehabilitate a site where the pollution has occurred and the later needs to be used 'to meet the costs of restoration and for compensation for any persons whose income or livelihood is damaged whether temporarily or permanently, through fault or not.'<sup>38</sup> The contingency fund is more like an emergency preparedness fund and is therefore expected to be available at any time, with the proof of its existence submitted to the Petroleum Ministry.<sup>39</sup>

The last aspect of the Act is the requirement for creation of implementation regulations by the Petroleum Ministry. Noticeable are regulations on environmental management system, waste management and environmental and social impact assessment. The Act gives the Petroleum Minister the power to enact regulations to enforce the Act. However, another shortcoming of the Act is its failure to provide a framework including the time framework for the enactment of these regulations.

The Act restricts flaring and venting,<sup>40</sup> actions, which if effectively controlled, can reduce the emissions of greenhouse gases, which cause climate change. However, the Act does not have measures on how the petroleum sector can adapt to climate change, particularly to

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<sup>35</sup> Sub – section 61 (1)

<sup>36</sup> Sub – section 61 (2)

<sup>37</sup> Sub – section 61 (3)

<sup>38</sup> Sub – section 54 (4)

<sup>39</sup> Ibid

<sup>40</sup> Section 33

the sector’s infrastructure vulnerability to climate induced floods and how oil producing communities can cope with such shocks and stresses. The phrase climate change is not mentioned anywhere in the Act let alone measures for adaptation. Flaring and venting are not mentioned among the areas for which the minister can make regulations. These gaps can be addressed by incorporating a climate change section in the Act or by enacting a climate change and emissions control regulation, which lays out emission limits, emission reporting and investment in clean and less emission intensive technologies, among others.

In addition, the Act does not have a provision on cumulative effects assessment (CEA). CEA addresses combined effects of past, present and future human actions.<sup>41</sup> Examples of cumulative effects in South Sudan would include air pollution from the petroleum projects combined with pollution by diesel powered electricity plants and deforestation by petroleum access road, combined with deforestation resulting from trees cutting for firewood and agricultural activities, among others. EIA focuses on a single project and does not look at the effects of these other actions. The CEA achieves that by addressing the project’s effects as well as the impacts of other activities. Although it has its own challenges, including scoping difficulties, it has become a common best practice in environmental assessments, and should therefore be incorporated into the Act and a regulation should be created for it.

### III. Assessment and Results

We developed questionnaires, which were administered to key officials from the Ministry of Petroleum, Mining and Industry, Ministry of Environment, and Nile Petroleum Corporation. The questions were structured in form of a ‘yes’ or a ‘no,’ where a *yes* stands for confirmation of enforcement of a particular legislative requirement and a *no* stands for an absence of enforcement of that legislative requirement. The answers were coded and analyzed to determine the extent of the enforcement. Tables 1 and 2 provide the results.

*Table 1: Levels of Enforcement of Environmental Standards in the Petroleum Sector*

Enforced standards	23%
Unenforced	77%

<sup>41</sup> Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling and D. Stalker. 1999. *Cumulative Effects Assessment Practitioners Guide*. Prepared by AXYS Environmental Consulting Ltd. and the CEA Working Group for the Canadian Environmental Assessment Agency, Hull, Quebec

standards	
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Table 2: Extent of Enforcement of Environmental Standards in the Petroleum Sector

EMS	29%
EMP	0%
EMTP	0%
EAs	38%
EPF	50%
ER	20%

Key:

EMS = Environmental Management System

EMP= Environmental Management Plan

EMTP =Environmental Management Transparency Practices

EAs = Environment Assessments (which include EIA, SIA, SEA, Environmental Audit and Baseline Assessment, among others)

EPF = Environmental Protection Funds

ER =Environmental Regulations

Only 23% of the environmental standards have been enforced (see table 1). None of the enforced standards<sup>42</sup> is in reference to the Petroleum Act 2012. So the environmental provisions have barely been enforced and this could partly be one of the main reasons the environmental degradation has continued. There is zero implementation of EMP in non-compliance with the Act while EMS has been implemented by 29%. The EMS' finding is in line with the international best practices, as this is not stipulated in the Act. The three operating companies, namely Dar Petroleum Operating Company (DPOC), Sudd Petroleum Operating Company (SPOC) and Greater Pioneer Operating Company (GPOC) have EMS documentations, which have been submitted to the Petroleum Ministry. However, the same documentations have not been submitted to the Ministry of Environment for a review as required under the Petroleum Act, 2012. DPOC has documentation of EMS audit, which was released on June 1, 2011 and submitted to the Petroleum Ministry. However, there are no documentations showing EMS audit for SPOC and GPOC. In addition, there are no records of annual reports on the implementation of

<sup>42</sup> We use the term standards in general reference to both requirements in the Act and other best practices the companies have implemented. Some of these standards were implemented under Sudan's laws when the country was still one. We include them as part of the standards, which have been enforced while noting that they were not implemented under the Act passed in 2012.

the EMS. The Ministry of Petroleum blames any non-compliance on delays in passing the national environmental bill.

Environmental assessments have been implemented by 38%. Although these assessments are required in the Petroleum Act 2012, they were carried out before the Act became operational in 2012. Therefore, it is important to note that no environmental assessments (e.g. EIA, environmental and social audit etc.) have been carried out so far as required by the 2012 petroleum law. All of the three operating companies had conducted environmental impact assessments (EIA) for their current petroleum blocks before exploration and drilling, oil development and production, and construction of transportation systems. However, there are no records available indicating EIA documentations (reports) for decommission and reconnaissance activities. There are also claims that Comprehensive Environmental Baseline Studies (CEBS) and SEA have also been conducted before the current petroleum activities but there are no documentations available at the petroleum ministry to show these requirements have been met. Reports of two EIAs for SPOC's and GPOC's blocks in Unity state are not available except DPOC's EIA report for the blocks in Upper Nile State, which was prepared by the University of Khartoum's Institute of Environmental Studies for the Petro –Dar Operating Company.

There is a zero level enforcement for environmental management transparency practices (EMTP). For example, SEA, ESIA, CEBS, EMP, EMS and oil spills, incidents and leakage, have not been disclosed to the public and the communities as required by the Act. No measures have been taken against non-compliance in disclosing the above to the communities and the public.

There are no regulations on EIA, SIA, decommissioning, waste management, pollution damage fund, contingency fund and decommissioning fund. Absence of the above regulations up to this point is a violation of the Act. However, the Petroleum Minister has finally signed the EMS/EMP regulation<sup>43</sup>. This only constitutes 20% of the

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<sup>43</sup> The new regulation, entitled Petroleum Health, Safety and Environmental Management System and Plans Regulation, 2015, is considered a bold step towards improving the environmental performance in the petroleum industry. Among other things, the regulation requires petroleum companies to submit EMS/EMP to the petroleum ministry 60 days before commencing petroleum activities. The companies are required to submit EMS/EMP for existing petroleum activities no later than 90 days from the date the regulation comes into existence. The regulation lays out requirements for EMS/EMP. However, there are no clear degrees of penalties should the companies fail to abide by the requirements of the regulation. Its signing took place on the 31 March 2015 about 12 days after this paper was presented to stakeholders composed of civil society, members of the National Legislative Assembly, Petroleum Ministry officials and officials of the petroleum companies. During the discussions, the petroleum ministry and relevant government institutions were urged to speed up the enactment and signing of this regulation as one of the steps towards ensuring full environmental protection from the petroleum activities and therefore, the

implementation of the section, which requires regulations on these areas. It took a very long time for this regulation to be finalized and signed because of stiff bureaucracy. For example, the Petroleum Ministry submitted the draft to the Ministry of Justice on May 8, 2014, for review and was just sent back about ten months later for signing at the end of March 2015. There have been concerns from the Petroleum Ministry officials that the stiff bureaucracy caused by sending draft regulations to the Justice Ministry for review and approval is hampering the speed in which the ministry can enact regulations.

There are claims of establishment of contingency fund, decommissioning fund and pollution damage fund but there are no proofs that these funds have been established. Officials interviewed admitted that petroleum-operating companies have caused pollution damage but they have not been held accountable. Mitigation measures against environmental impacts, according to Petroleum Ministry, have been put on paper but the petroleum-operating companies have not been able to put them into practice. The Petroleum Ministry has been able to establish a joint ministerial committee between the Ministry of Health and the Ministry of Petroleum. The committee's objective is to establish the facts and recommend appropriate measures to correct the environmental impacts. The committee's work has been hampered by the ongoing conflict.

Challenges put forward as hindering proper implementation of the environmental provisions in the Petroleum Act 2012 and other international best practices include:

- **Shutdown of the oil operations in 2012:** The Act was passed in 2012 when the oil operations were shut down. When the operations resumed, it did not take long before the ongoing civil war erupted and this has distracted the government's efforts to implement the requirements in the Act;
- **Insecurity due to the ongoing civil war:** The war has worsened environmental conditions as some oilfields have been abandoned without cleaning of leakages and spills. The conflict has made it difficult to prioritize environmental protection as the focus has been on military and political efforts related to the war;
- **Delay in the enactment of overall national environmental law and in establishment of an independent and technical environmental body:** Absence of overall national environmental legal framework and competent and

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petroleum and justice ministries deserve acknowledgement for speeding up the enactment and signing of this important regulation. Apart from this regulation, the country still needs regulation on petroleum waste management (including requirements and technological specifications for produced water treatment), EIA, decommissioning and unambiguous penalties and fines for any violations, among others.

independent environmental regulatory body are some of the main challenges cited as responsible for lack of full environmental protection in the petroleum industry;

- **Lack of awareness** among communities about their rights and the danger of petroleum environmental impacts. The point is that if the communities were aware, they would have put efforts and negotiated with companies and the government on how to protect the **environment and the people**;
- **Employment of non – specialized and technical personnel:** officials interviewed cited lack of specialized and technical health, safety and environmental personnel as an impediment to full environmental protection in the petroleum industry;
- **Non-existence of political will:** due to lack of political will to prioritize environmental protection, little effort has been made to enforce necessary measures including implementing the Act;
- **Deficiency of transparency** in disclosing pollution, leakage and spills by operating companies: companies get away with pollution because of lack of transparency in disclosing it to the government and the communities so that necessary actions can be taken;
- **Absence of cooperation between institutions:** HSE departments at the companies, Ministry of Petroleum and Ministry of Environment have very little cooperation;
- **Player cum referee (conflict of interests):** It has been stated that one cannot be a player and a referee at the same time, referring to the fact that the petroleum ministry manages both the petroleum production and its impacts on the environment. As a result, environmental protection has easily been neglected in pursuit of maximum petroleum production as this is the main mandate of the ministry. Therefore, most officials interviewed want an independent environmental regulatory body to regulate the petroleum environmental impacts;
- **Insufficient cooperation between the Ministries of Environment and Petroleum:** The Ministry of Environment does not sometimes know what the Petroleum Ministry is doing to address petroleum environmental impacts. Officials interviewed said sometimes the Environment Ministry officials are not allowed to get access to the oilfields unless permitted by the Petroleum Ministry;
- **Lack of openness by petroleum companies to stakeholders:** For example, nobody is allowed to visit the fields and get access to information unless given a permission by the Ministry of Petroleum;

- **Absence of regular monitoring:** Sometimes there are no resources to independently monitor the activities, as the government has to rely on companies for facilitation.

Government officials from the ministries responsible for petroleum and environment suggest a number of solutions to overcome these challenges. These include:

- Cooperation between HSE departments;
- Transparency in disclosing environmental incidents;
- Effective collaboration with stakeholders;
- Collaboration between Ministries of Environment and Petroleum as environmental issues cannot be solved by a single ministry;
- Comprehensive legal framework on the environment that can establish, among others, an independent environmental regulatory body.

#### **IV. Conclusion and Recommendations**

In conclusion, environmental provisions in the Petroleum Act 2012 have not been implemented and this could partly be one of the main reasons environmental degradation has continued. Only 23% of the standards, which have no reference to the Petroleum Act, 2012, have been enforced. Some of the factors cited as responsible for lack of implementation include shutdown of oil operations in 2012, ongoing civil war, nonexistence of political will, absence of a comprehensive national environmental law and deficiency of environmental awareness which provides conducive atmosphere for the petroleum companies to focus on cutting costs at the expense of implementing stringent environmental standards. We, therefore, recommend the following to the government and petroleum companies:

1. Petroleum companies should submit past EIA, CEBS, and Audit and SEA reports to the Petroleum Ministry.
2. The Petroleum Ministry should in turn disclose and publish these documents as required by the Act.
3. The Petroleum Ministry in collaboration with Environment Ministry and companies should carry out a comprehensive social and environmental audit as required in section 100 (8) of the Act and rehabilitate, clean up degraded areas and compensate victims of the impacts. Availability of past EIA and CEBS reports will be crucial in conducting this audit.

4. The responsibility of supervising, monitoring and regulating environmental matters in the petroleum industry should be given to an independent and technical environmental regulatory body. This requires speeding up the enactment of the national environmental bill to create an independent environmental authority. Coordination and cooperation between the Ministry of Petroleum and the Ministry of Environment should be improved.
5. The Act should be amended to include provisions on EMS, greenhouse gases limit, greenhouse gases reporting requirements, CEA and framework on clean technology specifications to reduce the industry's negative impacts.
6. The government should prioritize and enact regulations on EIA, climate change and emissions control, waste management, pollution damage fund, contingency fund, oil wells decommissioning plan and fund, greenhouse gases, and clean technology specifications for the industry.
7. The government should open up access to information by making it easy for civil society, community members and researchers to have access to the oilfields to help the government monitor and document environmental conditions and provide mitigation measures accordingly.
8. The government should order the petroleum companies to start implementing section 60 of the Act and newly signed EMS/EMP regulation by:
  - a. Developing EMS/EMP;
  - b. Submitting the EMS/EMP to the Ministry of Petroleum;
  - c. Submitting the EMS/EMP to the Ministry of Environment for review and approval;
  - d. Disclosing the EMS/EMP to communities in oil producing areas;
  - e. Submitting annual reports about the EMS/EMP;
  - f. Conducting an audit on the EMS/EMP.

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## **About Sudd Institute**

The Sudd Institute is an independent research organization that conducts and facilitates policy relevant research and training to inform public policy and practice, to create opportunities for discussion and debate, and to improve analytical capacity in South Sudan. The Sudd Institute's intention is to significantly improve the quality, impact, and accountability of local, national, and international policy- and decision-making in South Sudan in order to promote a more peaceful, just and prosperous society.

## **About the Author**

*Nhial Titmamer* is Research and Training Officer at the Sudd Institute. He is also the Institute's lead person in environmental, energy and natural resources issues in South Sudan. Nhial received his undergraduate and graduate education in Environmental Studies and Sustainable Energy in Canada where he spent stints as an environmental consultant and research associate in environmental studies. Nhial is the co-founder of the NewSudanVision.com and has been an active member of the South Sudanese community in the Diaspora through which he has been involved in informed activism in issues about South Sudan.