

DIGITIZING EXTRACTIVE INDUSTRY DATA

Lessons Learned from Building the Extractive Industry Data Portal (EIDP)



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LIST OF ACRONYMS

CSO	Civil Society Organization
DG	Development Gateway
DP	Development Partner
EI	Extractive Industry
EIDP	Extractive Industry Data Portal
EITI	Extractive Industries Transparency Initiative
MSWG	Multi-Stakeholder Working Group
NAMS	NEITI Audit Management System
NEITI	Nigeria Extractive Industry Transparency Initiative
OSIWA	Open Society Initiative for West Africa
SEITI	Senegal Extractive Industry Transparency Initiative

ABOUT THE PAPER

The goal of this paper is to share the triumphs and challenges of building Extractive Industry Data Portals (EIDPs), tools that can streamline the annual production of extractive industries (EI) sector audit reports. Findings are based on technical assessments conducted by Development Gateway (DG) in Guinea, Senegal, and Nigeria; and on DG's development of a first-phase EIDP in Nigeria.

This work was conducted with support from the Open Society Initiative for West Africa and the Ford Foundation, and aims to provide advice and encouragement to national governments, civil society organizations (CSOs), and development partners considering the development of their own EIDPs.

WHY BUILD AN EXTRACTIVE INDUSTRY DATA PORTAL?

Global- and national-level actors have expressed demand for more disaggregated data to fuel advocacy around EI activities and policies. A key driver of this demand are annual EI audit reports, which are required under the Extractive Industries Transparency Initiative (EITI) Standard.

Audit reports often take months to prepare – in some countries, even longer than that. The report building process involves collecting, cleaning, and aggregating data from dozens of different stakeholders. The final products play a central role in bringing more transparency to EI financial flows with regards to taxes,

royalties, and production volumes. Many national EITI bodies have established goals to consistently publish these audit reports on time, often through data automation tools like EIDPs.¹

Like any digital tool, EIDPs are not built in a vacuum.

A strong contextual understanding is essential for identifying preparatory steps to not only to support tool sustainability, but to also identify other preparatory steps prior to investing the time and resources needed to build an EIDP.

1. (Nigeria Extractives Industry Transparency Initiative, 2017).

METHODOLOGY

Before building any software, the first step in DG's development process was assessing the feasibility of implementing and maintaining an EIDP in Guinea, Senegal, and Nigeria. The Nigeria feasibility study included both a country ecosystem assessment and a technical assessment, with the plan to implement the EIDP soon afterward. In partnership with the Ford Foundation, DG had selected Nigeria as the pilot country. Nigeria's readiness for an EIDP was also coupled with NEITI's desire to build a tool consistent with its strategic plan.

The assessment process, integral to a user-driven process and ensuring sustainability, involved meeting with and collecting the expressed needs of over three dozen individuals in both Lagos and Abuja, representing a variety of stakeholders across Nigeria's EI sector. The assessment revealed a high level of complexity in the current audit process, leaving NEITI and its partners little time or ability to effectively use recent data as evidence in the EI sector. The DG-built solution, locally referred to as the NEITI Audit Management System (NAMS), is designed to simplify the EI data collection process by securely allowing data providers to enter their data online. It also allows independent auditors to reconcile the EI financial flows for the oil and gas sector from cash and in-kind to volume reconciliation data.

ASSESSMENTS IN SENEGAL AND GUINEA

In Senegal and Guinea, the assessment process focused on each country's readiness for an EIDP in the future, highlighting potential challenges and

opportunities to the sustainable incorporation of an EIDP into each country.

SENEGAL

In Senegal, implementing a data collection tool was included in the Senegal National EITI Committee (SEITI) annual strategy. The assessment revealed that data were being collected, but not made publicly available to meet citizen demand. Private company data were available in company quarterly and annual activity reports, but generally not published or shared externally. Environmental impact studies were published, but filled with technical terms difficult to understand. Lastly, contracts were published, but without amendments containing updated provisions on taxes and royalties, leaving an incomplete picture of company obligations.

The Senegal assessment highlighted that SEITI was already in the process of developing a data collection tool, but also that it was not clear whether data from the new system would be made public.

Willingness to publicize data (or not to) is an important consideration, given that numerous public stakeholders expressed a strong interest in using digital tools to understand data for themselves.



EXPRESSED NEEDS

In Senegal, key EI data needs include:

Implement an online data collection tool for SEITI that goes beyond financial flows and presents easy-to-understand information on EI impact, such as:

- Environmental risks, mitigation measures, and company commitments
- Projects/initiatives contributing to the local economy
- Educational activities aimed at reducing school dropout rates
- Health initiatives to address recurring diseases and company compliance with health and safety regulations

The tool must also include user-friendly features, such as:

- Visual tools to translate the most complex data aspects into easy-to-interpret visualizations
- A geographic information system to highlight the localized impact of EI on the environment and other social sectors
- A multimedia module with short videos in local languages

Access to data – especially gender-disaggregated data – within company reports to support national-level CSO advocacy.

Increase publicly available data to serve as an evidence base for stakeholders to discuss improvements in the EI sector.



GUINEA

Guinea was the only country assessed with several pre-existing IT systems collecting EI data. None of the data from these platforms were public, aside from information contained in the annual EITI audit reports. In contrast to Senegal, **the Guinea assessment highlighted that data integration, rather than creation, should be the priority.**

Guinea EITI does not have a dedicated data collection tool to effectively gather and aggregate data published in its annual audit reports. Guinean stakeholders would benefit significantly from any future system in which data are routinely made publicly available, and it will be important to determine how much data from any future system will be public.

In the case of Guinea, the question was not whether an EIDP is needed, **but whether – and how – stakeholders can work together to integrate existing digital platforms and disclose relevant information to the public.** Instead of facing a lack of platforms, Guinea's challenge involves integrating existing systems and making more data publicly available. Coupled with EITI Guinea's Open Data Policy which promotes the publication of key EI sector data, addressing this challenge is even more essential.²



EXPRESSED NEEDS

In Guinea, key EI data needs include:

Implement an open data portal that integrates existing government IT tools and fully supports Guinea EITI's Open Data Policy.

Improve data sharing (and overall relationships) between CSOs and the private sector, in particular related to gender-disaggregated data and environmental compliance.



2.(ITIE-G uinée, 2005).

PHASE ONE OF PORTAL DEVELOPMENT IN NIGERIA

In Nigeria, the impetus to develop an EIDP stemmed in part from goals outlined in NEITI's medium- to long-term strategy, specifically to automate its data collection process and more consistently publish audit reports on a 12-month cycle.³

This section looks at the first phase of EIDP development in Nigeria in practical terms: what worked well, what did not, and what lessons partners, funders, and others can take away from DG's process.

WHAT WORKED WELL?

Strong engagement between NEITI and DG throughout the tool development process. NEITI was responsive to questions, often providing input within 24 hours. With increased communication, DG was able to move quickly to implement changes. NEITI also shared its data entry templates early in the process, which gave DG time to analyze the templates and develop a responsive design that would fit NEITI's existing data entry process. The templates are often modified ahead of each audit cycle. Therefore, the dynamic data entry system DG built gives NEITI the flexibility to add new forms to the system or modify existing forms in future.

Use of a dynamic, modifiable system. DG had initially planned for a static system, with templates uploaded once to be reused in future audits. However, given the complex reconciliation environment and the volume, detail, and need for yearly updates to templates, a static system proved inadequate. A dynamic system ultimately enables users to add new templates without needing additional programming, a process which can be completed by NEITI administrators without further assistance from DG or another technical partner.

WHAT DIDN'T WORK WELL?

Digitizing complex templates. The volume and uniqueness of the templates meant the DG team required additional time to tailor the data entry process to fit each custom template. This detail impacted the budget and delivery timelines.

Hosting the application in-house. NEITI has robust servers, but has limited capacity to guarantee consistent server access. As a result, NEITI is considering an external agency to host the server and the application. Government-approved third party options are limited, in part because the system includes sensitive data. DG encourages local server management to support country ownership and data confidentiality, but it is not always cost effective when compared against more affordable international remote cloud options.

Managing expectations among external stakeholders. The assessment revealed some frustration that the NAMS would not be open to the general public. With this in mind, DG recommended NEITI emphasize how the content would directly improve timely data, including more frequent updates to the annual audit report and NEITI's other dashboards — the latter which provide essential data visualizations for the public.⁴

Limited opportunities to collect user feedback. The novel coronavirus outbreak impacted plans to collect in person feedback. DG and NEITI have mitigated the impact by conducting online demo sessions with small groups of partners. NEITI also plans to collect additional feedback during the full rollout of the NAMS.

3. (Nigeria Extractives Industry Transparency Initiative, 2017).

4. See for example the NEITI Oil and Gas dashboard available here - <https://dashboard.neiti.gov.ng/oil-and-gas/>

PRACTICAL TIPS FOR IMPLEMENTING AN EIDP

Be strategic about area(s) of focus

In developing an EIDP or equivalent system, it is important to decide which parts of the EI sector the tool will cover:

- Prioritize based on which extractive sub sector dominates in a country – for example gas or mining;
- Consider the level of burden expected in digitizing templates – such as if oil and gas has hundreds of templates to digitize, versus the mining sector with fewer.

For the NAMS, DG focused on the oil and gas sector due to high demand for oil and gas data coupled with the critical need to digitize an unwieldy, analog process with numerous actors. By contrast, DG would recommend a focus on the mining sector in Guinea given the primacy of mining in the country's extractive activities.

Know the data

Determining the scope and cost of an EIDP tool depends on how well the tool owners understand the data to be included. The following are some key questions that NEITI considered:

- How many templates will be digitized?
- What kinds of data needs to be reconciled (cash, in-kind, volume)?
- Will the tool be available to public users? In part or in full?
- How will duplicate forms be removed?
- Will some templates be updated more regularly than others?

Determining which stakeholders have strong data skills, are most likely to learn the new system quickly, and will provide substantive feedback on the tool, can also help tool owners ensure an efficient test, improvement, and rollout process.

Go beyond the EITI Standard

Stakeholders should consider:

- Will the EIDP cover data beyond the EITI Standard?⁵
- Which other data could help address community needs?
- How can the tool support existing country data collection processes and systems?

Technical tools should aim to fit into the existing ecosystem, prioritizing access to government data and websites over creating parallel structures. The EITI International Secretariat encourages this approach, making it clear that data and reports generated for EITI should first be published on country government websites.⁶

5. The EITI Secretariat stresses that the standard should serve as guidance (and not edict) at country level. Multi-Stakeholder Groups (MSGs) have the liberty to go beyond the standard recommendations as appropriate.

6. (EITI International Secretariat, 2020).

LOOKING FORWARD – PHASE TWO OF EIDP DEVELOPMENT

DG's experience building the NAMS highlights the benefit of developing an EIDP in phases to balance expectations and timelines with the available budget. In a future iteration, we hope expansion will include mining data as well as embedded visualization features to support community use of annual audit report data.

In particular, the next version could include key socioeconomic indicators from national development plans. Connecting EI data to broader development goals could strengthen public understanding of how EI revenue allocations are linked to financing (or lack thereof) for critical needs such as health, education, and environmental risk mitigation.

CONCLUSION

The development of an EIDP can be a critical step to improve timely data— in more accessible formats— for stakeholders throughout the EI sector. This paper provides a frank discussion of the successes and roadblocks to developing an EIDP, with the aim of preparing others for the practical challenges of implementation. We hope that providing more transparency will encourage the development of

user-driven tools that meet country data needs and facilitate stronger engagement between communities, governments and other stakeholders committed to the equitable distribution of EI resources in resource rich communities.

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