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Shedding Light on Myanmar's Jade Industry by Building the Open Data:
Myanmar Jade Portal

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MAY
2019

CONTEXT

Myanmar is the world's leading producer of jade, a green hued gemstone that can be worth up to millions of dollars per kilogram. The main market in the world for jade is China, where it has traditionally been highly valued and associated with royalty. Right on China's southern border is Myanmar's Kachin state, where the world most valuable jade mines are located. This proximity between the world's largest source of jade and the biggest market, combined with ongoing conflict, mismanagement, and corruption, has contributed to the rise of a highly lucrative but shadowy industry estimated to be worth billions of dollars annually.

The idea of building a data portal covering the jade industry in Myanmar was born out of the need for data about the industry to be properly aggregated, contextualised, and presented. This would make it readily available to stakeholders and oversight actors such as researchers, civil society organisations, journalists, members of parliament, and the general public.

This project builds on and contributes to a drive towards transparency in Myanmar's jade sector through initiatives such as the EITI (Extractive Industries Transparency Initiative), efforts by civil society, and government reforms. Although more data about the country's jade industry has been released to the public than ever before, the available data is often scattered across various sources, suffers from data quality issues, and requires a significant amount of contextual understanding before it can be made sense of. Thus, emphasis was placed on creating a portal with a suite of features to address the differing data needs of stakeholders depending on their data literacy and prior contextual understanding of the industry.

PROJECT ACTIVITIES

The project was initially conceived in early 2017 as a collaboration between the Natural Resource Governance Institute (NRGI), the School of Data, and the Publish What You Pay (PWYP) Data Extractors Programme. Yan Naung Oak, who was a School of Data Fellow and a PWYP Data Extractor, worked in collaboration with the NRGI Myanmar team to design and build an online resource to aggregate, contextualise, and present data about the jade industry in Myanmar. Stakeholder research was conducted from Q1 to Q3 of 2017, and the first prototype portal was built from Q3 to Q4 of 2017. In early 2018, stakeholder feedback on the prototype was collected and the portal was modified to incorporate this feedback before launching in May 2018 as Open Data: Myanmar Jade (https://openjadedata.org).

UNDERSTANDING STAKEHOLDERS' NEEDS

Myanmar is a country going through a political transition, with transparency and accountability mechanisms still evolving. There are no legal means to obtain data from the government such as a Freedom of Information Act, and the data that is available is often scattered across various government websites and reports. Although more data is being made available, government departments are only releasing it in a cautious and protracted manner. Therefore, one of the crucial tasks when working to increase transparency is to get buy-in from government officials, as well as from other stakeholders such as civil society organisations, researchers, and independent media.

The project included at an early stage a series of stakeholder meetings and interviews to determine the needs of different stakeholder groups. Specifically, we looked at the "pain points" that stakeholders faced and designed the portal around building solutions that addressed these pain points. To illustrate:

1. **Government wanted to communicate its transparency initiatives:**

The government department responsible for regulating the jade industry, the Myanmar Gems Enterprise at the Ministry of Natural Resources and Environmental Conservation, wanted to make its efforts to disclose data more visible and the data more usable. However, the department was limited to only publishing data in PDFs because its staff lacked data literacy skills and workflows had not been developed to include data publication in open formats.

2. **Civil society and journalists who had limited data literacy wanted to be able to easily identify interconnections in the data:**

The Myanmar Alliance for Transparency and Accountability (MATA) and other civil society groups, as well as some investigative journalists, wanted to conduct investigations into how and to whom jade mining licenses were being awarded. However, they lacked the technical skills to clean, analyse, and visualise the data that was available, given that 20,000 individual jade mining licenses had been issued.

3. **Members of parliament wanted to understand how revenues from the jade industry fed into the state budget:**

Unlike in many other countries, members of parliament in Myanmar do not have adequate support or research staff to help them understand issues that affect their constituents in a rigorous way. Much of the data that they would greatly benefit from access to is locked away in tables and appendices of EITI reports and NGO reports. Specifically, they wanted access to, and to understand, data about the government's revenues from the jade industry.

4. **Public discourse was uninformed:**

Across the board, public discourse around the jade industry in Myanmar was mostly informed by anecdotes, scattered news reports, and NGO reports that are not thoroughly read beyond the executive summary. The jade industry plays an outsized role in the country's socio-economic life, and it is crucial that citizens, as well as other stakeholders, have access to a baseline of knowledge about it, presented in a way that lay people can understand.

DEVELOPING THE PORTAL

We then analysed these pain points of the stakeholders by categorising them into three separate areas of need that three specific features of the portal could address: data stories, data tools, and datasets.

1. Data stories: Thematic articles written in a journalistic style would explain the contextual information behind various aspects of the jade sector, such as "How much is the jade industry worth?", "What are the effects of the industry on local residents?", and "How is the jade industry related to ongoing civil conflict?" These articles would combine narrative journalism with data visualisations and be co-written by the project's core team as well as journalists and researchers who are well versed in the context behind each topic.
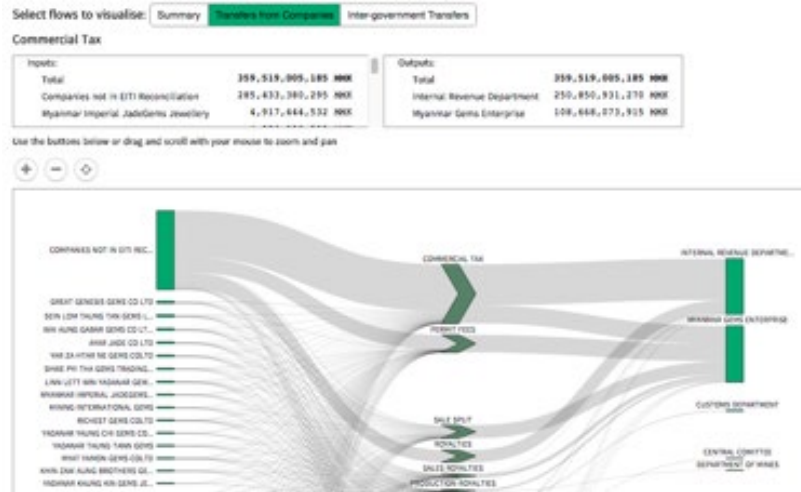
The data stories, which we have begun to publish at https://openjadedata.org/index.html#three, are intended to address the pain point of uninformed discourse. By including a capacity building initiative to train journalists on data journalism skills as part of this project, we are also ensuring that now, after the portal has been launched, new data-driven articles written by journalists will continue to be published on the portal.

One of the trainees, Tin Htet Paing from The Irrawaddy, used her newly acquired data skills to write the article "Challenges impede development of Myanmar's public health".[1] Another trainee, Htun Min from 7Day, wrote a story that will be adapted for the portal about how local communities in the jade mining regions have been dealing with the boom in mining over the past decade.[2]

1   https://www.irrawaddy.com/specials/challenges-impede-development-of-myanmars-public-health.html, 15 Nov. 2017.
2   http://www.7daydaily.com/story/116977, 4 Jan. 2018.

2. Data tools (https://openjadedata.org/tools.html): Exploratory data visualisations enable users to explore the available data on the jade industry in detail, such as the mining licenses that have been awarded to companies – mainly for jade but also for gems – and the revenue flows between companies and the government.

The Revenue Flows Explorer addresses the pain point that members of parliament had about not being able understand data about government revenues from the jade industry. This is an interactive Sankey diagram that compiles together data from multiple EITI reports and appendices. This tool is accessible at https://openjadedata.org/tools/revenues-explorer/

The Mining Licenses Explorer tool addresses the pain point that civil society and journalists had regarding how and to whom mining licenses were being awarded. The tool is an interactive dashboard that enables users to filter the 20,000 jade and gem licenses according to date of award and expiry, location, company that holds the license, and other factors.

This allows users to easily analyse the particular companies and locations that they want to investigate. This tool is accessible at https://openjadedata.org/tools/licenses-explorer/

3. Datasets (https://openjadedata.org/datasets.html): For users with higher levels of data literacy who want to dig into the data, the portal will also provide the raw datasets, both in their original form as made available from the source as well as cleaned, machine readable versions.

The datasets feature of the portal, which is currently under development, addresses the pain point that the government had in communicating its transparency initiatives. Since the datasets will be provided in open formats that are standardised and cleaned, stakeholders will be able to more easily and directly access and use official data released by the government.

MAINTAINING THE PORTAL THROUGH CONTINUED COLLABORATION

When the prototype of the portal was presented to stakeholders in late 2017 and early 2018, we received several offers of collaboration that would be mutually beneficial to the continued development of the portal, as well as to transparency efforts in the extractive sector in Myanmar. The NRGI Myanmar team and the local civil society group MATA will be taking ownership of various components of the portal so that the data and tools will be kept up-to-date in the future.

CONCLUSION

Globally, the open data movement has matured from the initial belief that merely opening up data is sufficient for improving transparency and accountability. We now know that accessible presentation, relationship building with – and getting buy-in from – stakeholders, and improving stakeholders' data literacy are the keys to making the leap from opening data to the data being used to make progress in transparency and accountability. Our experience in developing and launching the Open Data: Myanmar Jade portal reaffirms this point. The road to increased transparency and accountability in Myanmar's extractive industries will require a continued coordinated effort. Technology and open data are not a cure-all, but are most effective when applied with the needs of the stakeholders in mind.

WORK WITH US TO UNCOVER THE STORIES HIDDEN BEHIND EXTRACTIVES DATA!

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