

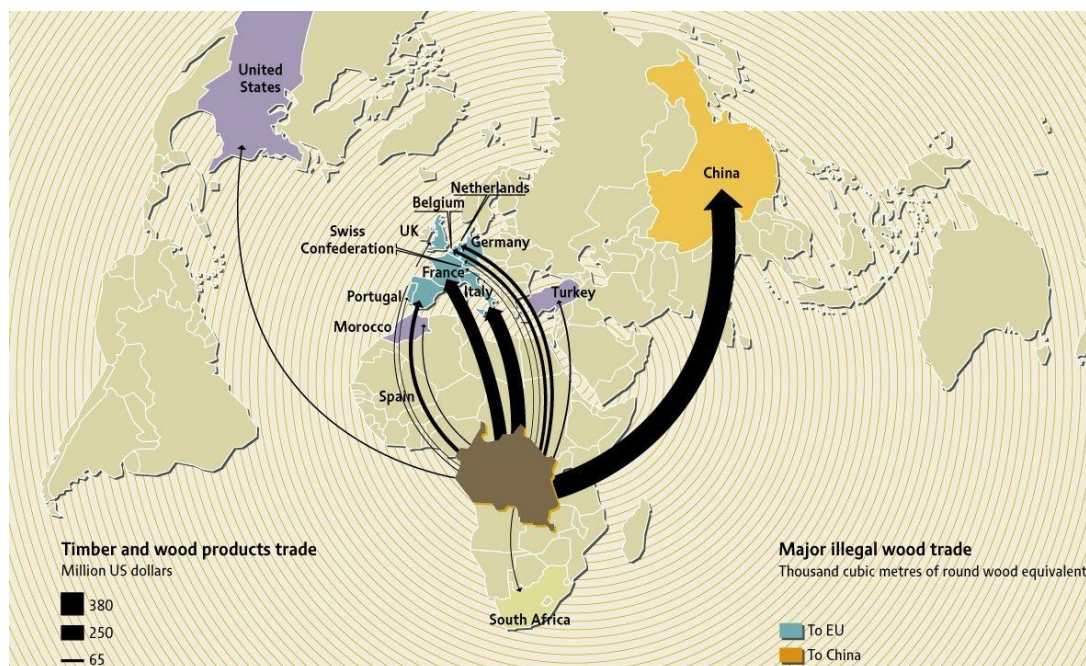
Monitoring Sustainable Logging in the Congo

Digital Database supporting the subcontract between logging companies, the government and local Indigenous communities of the Congo Basin

Executive Summary:

Fabrice Inkonkoy is a 2019 - 2020 Hubert H. Humphrey Fellow at UC Davis. Currently, he is working as the Indigenous People & Local Community Advisor to integrate community development into the biodiversity conservation and forest management of Democratic Republic of Congo.

The goal of Mr. Inkonkoy's project is to create designed systems to support and manage logging companies working legally under governmental agreement of the Congo Basin Forest. These systems will encourage sustainable logging practices, support local and Indigenous communities who collect a percentage from logging companies for development protects and ensure the government is able to collect the taxes required by legal loggers.



"All Africa" Illegal Logging trade in Central Africa

There are three main components to the client's project:

The first component is a database of legal logging companies to begin building their credentials. Because of the reputation the DRC currently has for corrupt and unsustainable logging practices, even those following the sustainability agreement struggle with selling their product in the International Wood Market. This database will ideally endorse those following the agreement to receive an FSC (Forest Stewardship Council) certification, in turn increasing the marketability of the wood.

The second component will be a website where logging companies can showcase their wood products and allow accessibility to vendors to connect with them and make less complicated transactions. Presently, wood sales are mainly being sold to China at a lower rate, as the practices are considered unsustainable and thus undesirable to conscious consumers. Wood that is given a certificate of sustainability will be more successful in selling across the world at a higher rate, allowing vendors to be more profitable without over foresting. ([fsc.org](https://www.fsc.org))

The third component will be to create a different database that can support the subcontract between logging companies local communities. This database will reflect the relationship between how many trees were cut and how many communities this was able to help. It is important to consider that many of the people participating in illegal or corrupt logging practices, are doing so because they cannot afford governmental taxes.

My own deliverable will solely focus on the third component. This includes recommendations for Mr. Inkonyo to move forward with creating an accessible, yet safe database that supports contracts with local and Indigenous people of the DRC.

Constraints:

Through my recommendations, some considerations must be taken into account in order to support the digital framework being constructed. Start-up costs ranging from 100,000 - 160,000 USD are needed for coordinating committees, creating boundary lines and maps, baseline studies, and other formal procedures. Formalizing legal logging and paying all regulatory requirements including taxes and permits often prevent small businesses from making a profit. "If national regulations continue the same, people might even favor illegal practices to cover these costs."

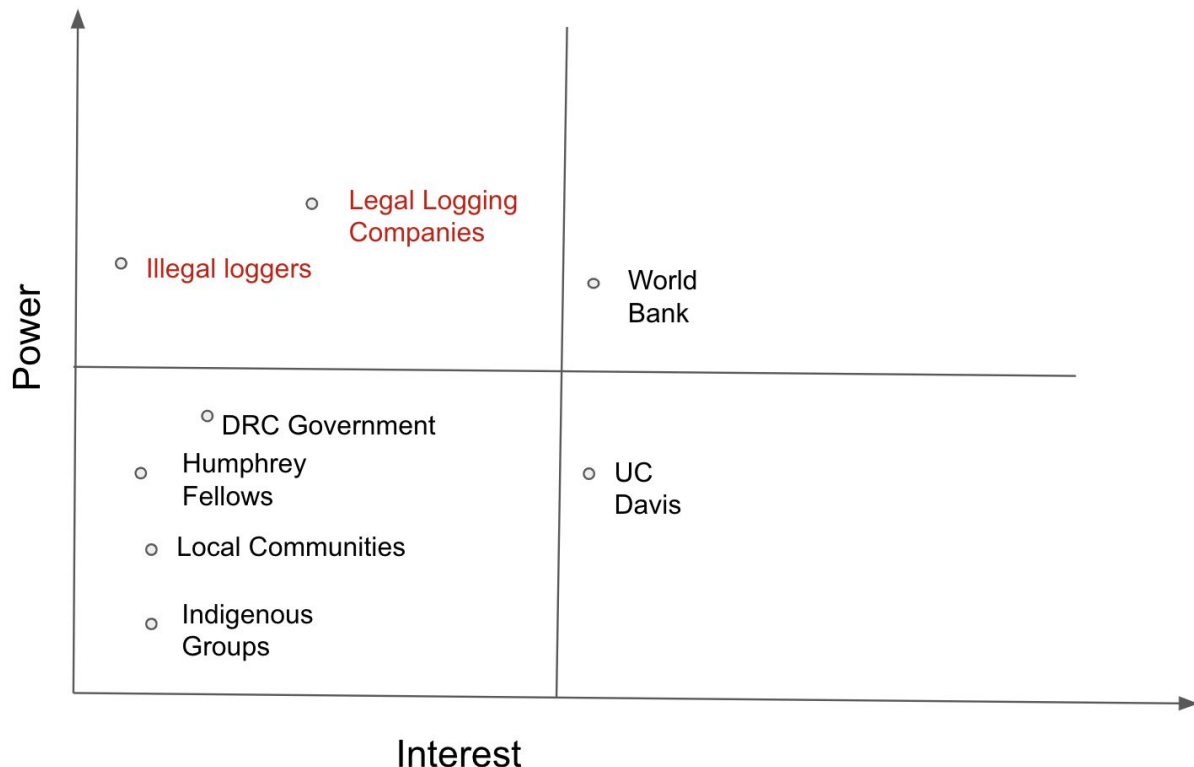
(<https://forestsnews.cifor.org>)

Based on this research, Local institutional processes should be streamlined to facilitate operations. Simplifying legal constraints to reduce the cost of creating and managing community forests. Local communities should also focus on the productive uses of forest resources, creating a business case with short and medium-term livelihood outcomes. Currently, no community forest in DRC has conducted such analyses. This need to be quantitatively measured is to support strong evidence of a significant economic impact.



Methodology :

It is important to recognize the relationship between legal logging companies and those doing it illegally. A Stakeholders analysis reflects the close nature of dynamics between the two as well as the power they both hold over every other party. With this in mind, we can design an App that gives deciding power back to the people of Local communities and Indigenous groups.



Currently, the DRC is unable to sell their wood product in the *International Wood Market* because they are recognized as having unsustainable logging practices. Contingent Policy Plans involve getting the DRC on the map for a Certificate of Sustainability from the *Forest Stewardship Council*. This certificate would enable small communities to profit more from products coming out of their regions because it would be marketable to a wider audience. As of now, there is a plan in action for the Congo to put together a team that will aid the DRC in reaching the National standards to achieve the certification. This Policy analysis illustrates an unavoidable route to adopting the practices of the FSC.



Prior Art:

Keeping the constraints in mind, I have collected prior art and applications as reference for Mr. Inkonyo. Prior art research has revealed pre existing model applications and software that can be implemented or derivative.

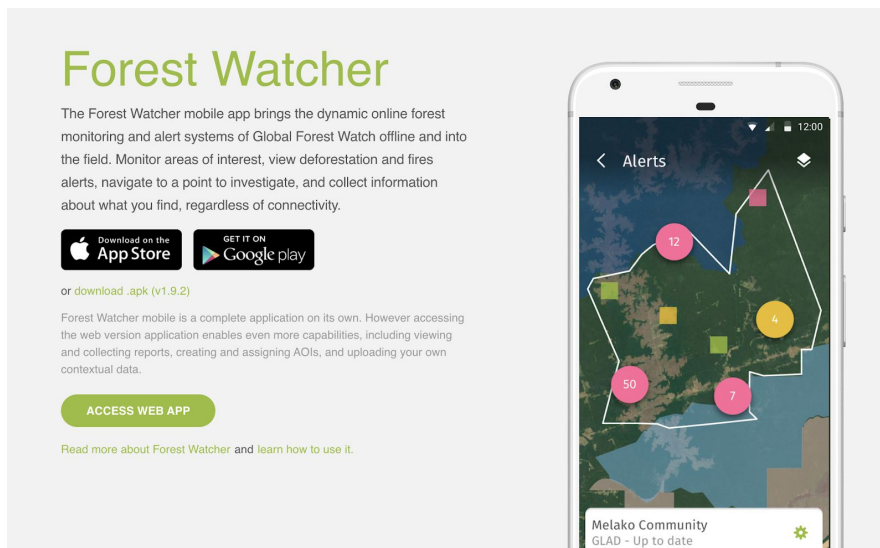
Current Apps being used in the DRC include KoBoCollect, used for primary data collection in humanitarian emergencies and other challenging field environments. With this app, you can enter data from interviews or other primary data -- online or offline. There are no limits on the number of forms, questions, or submissions (including photos and other media) that can be saved on your device.

Mobile App "Forest Watcher" was released September 26th, 2017 and recently introduced to communities in the DRC . Users can receive forest change alerts, navigate to designated areas and report on any damage they see, from a mobile device. The platform gives law enforcement agents, Indigenous communities access to the information to act accordingly.

Elyse Mack
D-Lab Winter 2020

While systems like Global Forest Watch monitor forests remotely, those on the frontlines in the fight against deforestation and wildlife protection often lack internet

connection needed to access and act on this information. Even so, the government of the Congo strongly believes the innovation will significantly improve the fight against forest loss. (<https://infocongo.org>)





In the Congo Basin Forest region deforestation often occurs in remote areas far from view, making monitoring and protecting these places difficult even for those working on the ground. Photo credit/Jane Goodall Institute

Photo credit: Global Forest Watch

Additional existing data mapping *Mapping For Rights* by the Rainforest Foundation of the United Kingdom, allows local communities to participate in creating maps of their land and resource rights that can be viewed by government and logging companies. It is an icon-based application that allows users who are unable to read or write to participate, producing maps that more accurately reflect the interests of each individual community. This database also showcases the direct relationship between the money coming in from legal logging practices and its impacts on local communities.



Photo Credit: *Mapping for Rights*

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Design Recommendations:

The first important recommendation is ensuring small communities have an electrical source to power digital devices and an internet connection to connect with online platforms. My client identified that existing apps are unusable unless they are being accessed in the nearest large city. For this, I recommend establishing a reliable source of electricity to more remote areas. This could be generators or solar energy. Persuading stakeholders to invest in solar charging stations for vital local communities is one approach to funding.

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In addition to being able to power the electronic app, it will be imperative to educate its users, including trouble-shooting any issues. This will include enabling anonymous settings, so users personal information remains secure.

Giving small communities access to share information will open up the conversation of deforestation and logging to any audience accessing the platform. it will be beneficial for communities to profit by highlighting the data that reflects the relationship between the number of trees cut in their area and how much of the profit goes back into their development projects.

Prior to creating App

Implement National Standards for Sustainable Logging Certification

Quantitative Economic Analysis of Community Forestry in DRC

Provide electrical source to more remote communities to charge digital devices (solar or generator)

Identify which technology is most accessible in the region

Creating the App

Name it (Logging Legalizer, Logging Leverage) it should probably have some alliteration and represent communities

Anonymity - ensure the information of its users is kept secure

Provide education for trouble-shooting the App

Create an algorithm that reflects the direct relationship between the number of trees cut and amount of money that goes to each community.

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