

Regulatory and Environmental Challenges of Developing Africa's Biofuel Potential

On December 12, 2015, 195 countries participating in the 2015 United Nations Climate Change Conference (COP 21) adopted the Paris Agreement, which aims at fighting climate change and accelerating the actions and investments needed to reduce carbon output and the greenhouse effect. As of September 7, 2016 there are 180 signatories to the Paris Agreement, of which 27 have also deposited their instruments of ratification, acceptance or approval. During the recent 11th G20 Summit in China, US President Barack Obama announced the ratification of the Paris Agreement by the USA and China, the two biggest emitters of the carbon pollution.

The Paris Agreement has very ambitious milestones. It contains six targets: (i) limiting the increase of global average temperature to "well below 2° C"; (ii) developing efforts to limit that increase to 1.5° C; (iii) achieving a status of neutrality of greenhouse gas emissions (GHG) in the second half of the century; (iv) ensuring sustainability of the national system of contributions (NDC); (v) reviewing liabilities – including national contributions – every five years; and (vi) promoting low-carbon development strategies for 2020.

During the Paris conference, it was yet again put forward the idea that biofuel production could be part of the solution for reducing carbon emissions, based on the evidence that when biofuels are burned, they produce significantly less carbon emissions and less toxins, making them a safer alternative to preserve air quality and lower air pollution.

It should also be noted that the European Union has adopted a directive setting at 10% the threshold to incorporate biofuels in fuel – a target that must be achieved by 2020. The United States also approved legislation to promote the consumption of biofuels over the next decade. However, both the European Union and the United States do not have enough available agricultural land to develop biofuel production at a scale that allows them to meet

these targets. Both regional blocks are net importers of biofuels and need to look outside their borders for supply sources. In this context, Africa appears as a natural choice to host biofuel production projects with a view to exporting to Europe and the US.

The "African Solution" to the Developed World's Biofuel "Problem"

As we approach the deadline set by the EU (2020), it is time to make an initial assessment of biofuel production in Africa.

Africa has always been considered to be well positioned to produce biofuels crops – essentially for export, but also for domestic use. The region has abundant land resources and continues to be supported by the largest economies to enter protected markets with higher-than-world-market prices. However, the production of crops for biofuels has raised several issues, for most of which no legal solution has been found by the relevant countries' governments to date. These issues fall into two main categories: (i) regulatory and (ii) environmental.

Regulatory Challenges

As far as the regulatory framework is concerned, land issues, notably access to land, can be seen as one of the greatest, if not the greatest challenge associated with the implementation of biofuels projects in sub-Saharan Africa. In most sub-Saharan countries, land is usually owned by clans or families and used through complex systems of multiple rights. On the other hand, local /customary tenure systems are commonly applied even when they are not reflected in or aligned with the applicable legal framework. Thus, many legal systems (statutory and customary) coexist in the same territory, multiplying contradictions and inconsistencies between rights, regulations and authorities. This state of affairs generates uncertainty and fails to guarantee reliable title to land. As an example, in the Ivory Coast, until the adoption of the land tenure system

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by means of Law 98-750, of December 23, 1998, and the creation of the Land Registry (*Registre Foncier*), local communities possessed customary rights over land, which had the nature of *in rem* use rights. The Land Law has allowed the registration of such rights by means of a Land Certificate (*Certificat Foncier*), following which the respective holder is required to apply for registration within three years. Since the entry into force of the law until 2014, just over 200 land titles were issued, meaning that less than 2% of the country's land has been properly registered. The Land Registry simply does not reflect the reality of ownership of rural land in the Ivory Coast, leading to serious problems concerning the recognition of the rights that local communities have over these lands.

Generally speaking, in many sub-Saharan countries, particularly in West Africa, the absence of effectively operational property registration systems is largely due to the fact that the land is held by local communities. But this is not the only reason. The implementation of registration systems is not consistent with local practices and traditions. Local communities face some difficulties in accessing the registration system, as they often need to travel to a rather distant location to file their registration applications. Also, registration costs are typically quite high for the income of the average household. This means that if an investor wants to buy or lease land, it must often negotiate directly with the communities and have them register the land before transferring it to the interested purchaser. Another route which is usually followed is the establishment of a partnership between the investors and local communities, under which the latter develop activities and operations until the land is formally registered.

Environmental Challenges

From an environmental perspective, water seems the most delicate problem. In effect, large quantities of water are required for the proper irrigation of biofuel crops, as well as for the production of the fuel. It is common knowledge that water is a critical environmental resource in sub-Saharan Africa and its deviation from the agri-food sector and daily use of the local communities creates a significant number of problems warranting the applicable legal and regulatory framework to be particularly sensitive to this conflict and potential tension. Unfortunately, there is typically a great legislative gap in this regard, leaving water use for biofuels projects without adequate legal support. Without effective and balanced regulations, access to water is often a source of conflict and a major challenge that investors and lenders have to face up to.

One must also note that deforestation in favor of biodiesel-related cultures has in the past led to the significant depletion of plant species. Hence, most of the forests have disappeared and have been replaced by general non-forest species with low conservation importance. Moreover, it has been argued that the replacement of high biodiversity forests with oil palm, soybeans or sugar cane monocultures has accelerated climate change and biodiversity loss. We can take as an example the case of Gabon where Olam International and SIAT Gabon are involved in the large-scale development of palm oil and rubber plantations in locations spread out around the country. The development of the plantations involved the clearing of large areas of tropical forest that communities depend on for their livelihoods.



Jatropa curcas flower is a common crop for biofuels

Source: Smithsonian Tropical Research Institute

In this regard, it is essential to create regulations that are able to harmonize the economic interests of the State and investors with environment protection, the ecosystem and the affected local communities.

There is a Light at the End of the Tunnel

Notwithstanding the above, it is important to note that the production of biofuels contributes to the development and improvement of infrastructure needed for economic growth, social development and sustainable job creation. The development of a biofuels industry has the potential to improve the living conditions of local communities, insofar as it creates new jobs and often makes available important equipment and infrastructures, such as roads, schools and medical care facilities.

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Because the implementation of a biofuel project entails the access to resources used by local communities and their allocation to other economic activities, it is necessary to put in place different types of compensation mechanisms – not only monetary but also social and environmental. Affected local communities need to be provided with tangible benefits – be it at the level of jobs creation (clearance of the land, planting and subsequent industrial processing of raw materials) or social infrastructure (schools, hospitals, irrigation, sanitation) – to bring them to the side of the project, supporting, encouraging and seeing it as an added value and a development catalyst. In fact, and paraphrasing Sunny Verghese, co-founder and CEO of Olam, it is relatively easy to obtain from the government permits and licenses to develop a project. What is truly difficult is what we may call a “social license”, i. e. the authorization and support of the project by local communities affected by it. Without this social license, a project of this nature is almost inevitably doomed to failure. **P**

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