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Forests to the Foreigners: Large-Scale Land Acquisitions in Gabon

Danielle D. Legault ^{1,*} and Logan Cochrane ^{1,2}

¹ Global and International Studies, Carleton University, 1125 Colonel by Drive, Ottawa, ON K1S 5B6, Canada; lcochrane@hbku.edu.qa

² College of Public Policy, HBKU, Education City, Doha 34110, Qatar

* Correspondence: daniellelegault@cmail.carleton.ca

Abstract: For the past decade, the land rush discourse has analyzed foreign investment in land and agriculture around the world, with Africa being a continent of particular focus due to the scale of acquisitions that have taken place. Gabon, a largely forested state in Central Africa, has been neglected in the land rush conversations, despite having over half of its land allocated to forestry, agriculture, and mining concessions. This paper draws on existing evidence and contributes new empirical data through expert interviews to fill this critical knowledge gap. We situate Gabon's historic relationship with land, establishing the intrinsic relationship between colonial land tenure systems and present-day land rights. Our findings analyze the macro context of investors and investments, as well as the impacts related to rural–urban linkages and infrastructure development into the forests, civil society, human–environment relationships, and certification programs. While challenges continue to be experienced, the promise of Gabon's first national land use plan—the use of sustainable concessions and mandatory forestry certification—offers a unique opportunity for Gabon to transition towards a future that better benefits its population while also protecting its natural resources.

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1. Introduction

For the past fifteen years, there has been a rush for land in Africa. Much of the attention has been placed on foreign investors acquiring agricultural land, but forests are also rapidly being acquired. Conservative estimates suggest that tens of millions of hectares of African land have been leased or sold to investors. Following the rise in prices of commodities and energy in 2008, as well as the global financial crisis of the same time period (which some have called the “triple crisis”), investors went searching for new opportunities for profit-making. While some investments sought to produce food products for global markets and others aimed to sell biofuels for energy markets, both focused on acquiring land. While the triple crisis meta-narrative helps to situate the rapid rise of investment in land that was experienced across the continent, the corporate acquisition of land in Gabon began long before. Some foreign land holdings in Gabon were granted during the colonial era, which in some cases have been transferred to new investors, obscuring their acquisition histories. Analyzing the land rush from this broader context, and not limiting ourselves to the land rush of the past fifteen years, we find that Gabon has one of the highest percentages of land granted to investors in the world. Of the country's 26.8 million hectares of land, 14.2 million (53%) has been granted as forest concessions and agricultural investments. The lands that have been acquired exist within the broader

Congo Rainforest, wherein Gabonese history and its people's interactions are intertwined and interconnected with the forest.

In the years following the triple crises of 2007/08, journalistic reporting and academic researchers began to provide evidence about the scale and the impact of these changes. While the number of publications has increased substantially, the geography of evidence remains uneven. In a recent book covering the land rush in Africa [1], Gabon was highlighted as one of the most impacted countries of the land rush, but also the least researched. Despite the gravity of the situation in Gabon, with more than half of all land transferred to investors, as far as we are aware, no study analyzes the acquisition of Gabonese land and forests at the macro scale. This paper aims to fill this critical knowledge gap by drawing on all available evidence as well as contributing new empirical data obtained through expert interviews. Before delving into the findings, the following section outlines the methods utilized in this study, which is followed by sections that situate Gabon as a country as well as its land tenure system. The findings of this paper analyze the macro context of investors and investments, as well as impacts related to rural–urban linkages and infrastructure development into the forests, civil society, human–environment relationships, and certification programs.

2. Materials and Methods

This study incorporated both primary and secondary data in an exploratory approach to provide a comprehensive review of the current situation of large-scale foreign land investment in Gabon. The focus of our attention, and of investments, are forest concessions and land leased for agricultural and mining purposes. This study does not include prospect and exploration claims for mining and oil, nor does it include oil concessions; the former (prospect and exploration) appear to involve large quantities of land but do not utilize it in the same way as concessions and leases. In focusing our study to investigate the acquisition of land for forestry, agriculture, and mining by foreigners, we are emphasizing the key uses of the land involved, while also mitigating some of the data challenges related to prospect and exploration claims (as equating them with acquired and utilized). (To see the study's process framework please refer to Figure 1).

The foundation of this paper is rooted in the Land Matrix Database (2020), the largest publicly available assemblage of global land deals. This database is not perfect, with its main limitations relating to its reliance on non-government data contributions and that it only includes deals 200 hectares in size and above. For this reason, the Land Matrix is informative of the larger general trends but is not a complete database of all deals [2]. Additionally, the Land Matrix is predominately agriculture-focused, and most investments in Gabon are forestry-based. Therefore, while we used the Land Matrix as a starting point, we also utilized the Global Forest Watch (GFW) database, which is another open-source database. The data on land concessions presented by the GFW for Gabon are primarily collected through the World Resource Institute for their "Interactive Forest Atlas for Gabon", which appears to have remained static since its creation in 2009. In contrast to the Land Matrix, GFW data are mining and forest-centric and does not list agricultural concessions. To further validate and expand our data set, high-level forestry information was also obtained through the Central African Forestry Observatory (OFAC). In late 2020, OFAC released a new interactive database that was not yet available at the time of this study. We hope that OFAC's emerging dataset will address the challenges related to data accuracy that we encountered when conducting this research.

The Land Matrix and GFW datasets were downloaded in November 2020. Duplicates between the two datasets were removed. Domestic deals and deals that had been cancelled were made note of, but removed from the overall data — this resulted in the removal of 11 deals totalling over 1.1 million hectares. Deals that could not be identified as either domestic or international were retained in the dataset. We identified a range of data challenges when validating the data by comparing the two data sources. For example, the GFW dataset listed the Singaporean firm Olam as Indian. In the validation process, these

8 Olam deals were updated to Singaporean for accuracy and consistency as well as to avoid double-counting. After validation, the resulting dataset contained 71 known deals, totaling 13,305,877 hectares of land.

There exist several limitations in this amalgamation of data. First, while the Land Matrix data for Gabon were reviewed in 2019, the GFW data do not seem to have been updated since 2011. There appears to have been a dataset added in 2018, but the researchers could not confirm this. The period after 2011 is significant as it is when forestry firms reliant on the export of logs felt the weight of the 2009 log ban, resulting in several concession sales during this time. For example, this included Olam’s withdrawal from Gabon’s timber sector, selling their forestry concessions to the Chinese firm KHLL [3]. As well, a large number of deals listed in our dataset had incorrect acquisition years listed, or were missing this information entirely. Therefore, outside of the temporal trends we note in this paper, we are unable to provide a precise periodization of land acquisitions in Gabon, especially pre-2000s. Additionally, these data sources under-represent the scale and deals involved. We know this because our dataset included mining, agriculture, and forestry concessions, while forestry concessions alone are estimated to hold over 14.2 million hectares by OFAC [4]. Another limitation is how data is reported, as some deals in the dataset included the entire amount of land held by a corporation rather than listing them separately.

In parallel to obtaining and analyzing data from the above-mentioned platforms, we undertook a systematic literature review process. The use of Web of Science as a platform for this purpose, however, produced very few results (for example, the combination of “land grab” and “Gabon” results in only one article in the Web of Science database—Feintrenie [5]). The lack of available research prompted us to adopt an exploratory approach, which allowed us to capture a wider breadth of articles on the topic. This included using Google Scholar as well as identifying materials via bibliographies and by recommendations from expert interviews. In total, we identified and reviewed over 50 loosely relevant publications, in English and French. Those materials, however, were biased towards reports (as opposed to peer-reviewed academic literature), which included NGO publications (e.g., by Brainforest, FERN, World Rainforest Movement) and intergovernmental agencies and research centers (e.g., ATIBT, CIFOR, CIRAD, and FAO). We sought to triangulate and verify data using the Land Matrix, GFW, and OFAC databases as well as verify the findings in the expert interviews.

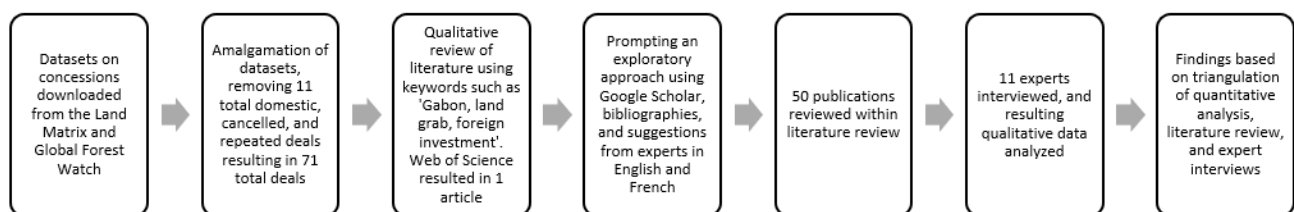


Figure 1. Process of the framework of study.

To complement and expand upon the secondary data, individual semi-structured interviews were conducted with experts (experts referring to individuals who may be directly or indirectly involved in large-scale land acquisitions in Gabon). The interviewees were identified through a purposive sampling methodology where individuals were contacted via online platforms and their professional websites. The pool of experts was expanded using a snowball sampling methodology. To ensure a comprehensive range of expertise and perspectives, three categories of experts were used, namely: (1) Academics—including authors of papers and contributors to academia; (2) Practitioners—including workers and representatives of non-governmental organizations (NGOs) as well as

members of civil society; and (3) Government and Industry Specialists—including representatives of the Gabonese government and companies that are directly involved in land investments in Gabon. Experts were identified through publications and positionality, while additional experts, including specific inquiries for under-represented experts, were identified using the snowball method. We were particularly interested in hearing from young people and women in Gabon, two perspectives that are not well represented in available publications. A total of 73 experts were contacted and invited to participate in a 45-min-long interview in French or English, of which 11 participated. All the interviews took place between September and December 2020. Responses to the requests for expert participation were lower than expected, which we attribute to the time when the study took place (global COVID-19 pandemic). Of the interviews completed; 3 academics were interviewed, 6 practitioners, and 2 government and industry specialists. All interviews were conducted online using teleconferencing platforms. When consented to, these interviews were recorded for analysis purposes only.

3. Gabon Context

Gabon is a resource-rich state in Central Africa home to the ecologically important Congo Rainforest system that it shares with its neighbors: Cameroon, Equatorial Guinea, and the Republic of Congo (see Figure 2). Forested landscapes cover the majority of the country, with an estimated 88.5% (23.5 million hectares) of the total land coverage (26.8 million hectares) enveloped in forests [6], and the remainder being coastal mangroves, central mountains, and savannah regions of the south and east [7]. As a whole, the Congo Rainforest is the second-largest connected forest system in the world (surpassed only by the Amazon), and is of global importance for the regulation of climatic systems through carbon sequestration, in addition to feeding over 60 million people across Central Africa [8].

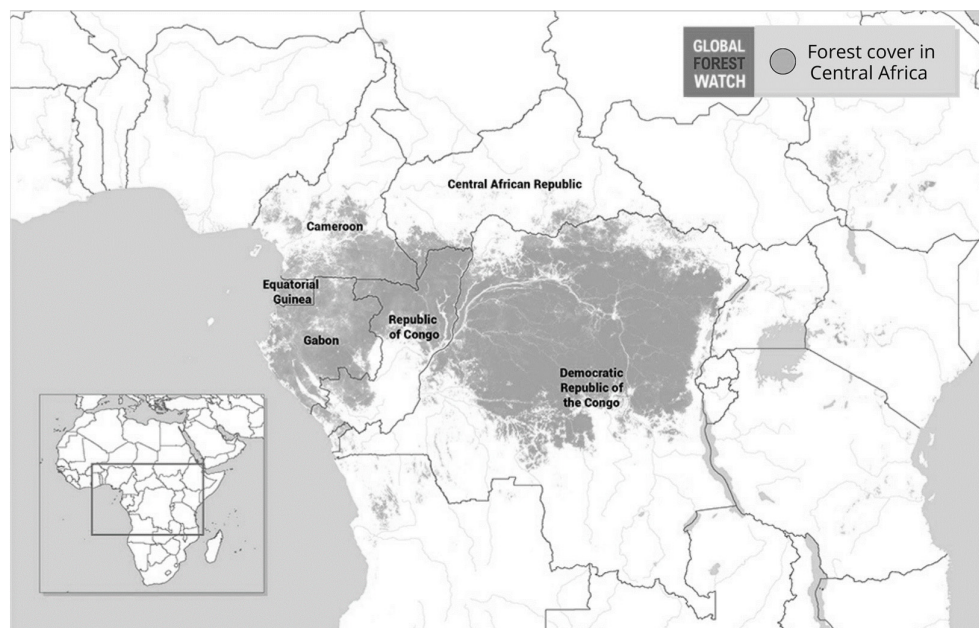


Figure 2. Map of Congo Rainforest system, Source: [2].

Gabon's forests are rich in biodiversity [9], wherein a magnitude of diverse flora and fauna are found, and have more plant species than all the combined forests of West Africa [10]. Gabon is also in the unique position of being one of the only regions in Africa where elephants can still walk from the inner forests to the ocean, a biological process that has been all but eliminated for large fauna globally [9]. Of the flora present in the region, the

Okoume tree (*Aucoumea klaineana* Pierre) is particularly targeted by the Gabonese timber economy [11]. The Okoume tree is found in smaller quantities in neighbouring countries, but in Gabon it can be found in upwards of 80% of forests and is favoured because of its easy peeling quality [12]. However, Gabon has one of the lowest deforestation rates in the Congo Basin, with a net deforestation rate around zero from 2000 to 2010 [6,13] while net forest cover increased by 200,000 hectares from 2010 to 2015 [3].

Gabon is the most urban country on the African continent, with 90% of its 2.1 million people considered urbanites [14]. This population is educated (youth literacy rate of 90%) [14], yet is challenged with a high youth unemployment rate of 36%, with women being twice as impacted as men [15]. This disparity does not exist across all sectors; for example, women are more likely than men to be employed in farming [16]. However, in a country with only 0.08% of its land used for agriculture (2.2 million hectares), a great emphasis is placed on food imports to sustain national demands, with food imports totalling over USD 591 million in 2018 [16].

The extensive extraction of oil, which began after independence from the French (independence was achieved in 1960), has allowed Gabon to rise to become one of the wealthiest nations in sub-Saharan Africa. Gabon has the fourth-highest gross national income per capita (7170 current USD) in Africa and it is one of the few African states to hold upper-middle-income status [14]. Oil contributes to 80% of Gabon's exports and 45% of the GDP annually [14]. The destinations of Gabonese exports have shifted over time, from primarily France to China; the latter now receives 45.7% of all exports (predominantly oil, manganese, and lumber) [17]. However, the export wealth has not reached all Gabonese equally, expressed through a Gini coefficient of 0.38, and with one-third of the population living below the national poverty line [14].

As Mengara indicates [18], Gabon's socio-economic experience is intertwined with the Bongo family regime, which is "the only officially non-monarchical system in the world to have been ruled not only by the same family, but also by the same regime, for fifty-three years (and counting)" p. 67. Omar Bongo, who came to power in 1967, led a government whose legacy lies on claims of patronage, corruption, and fraud [18]. During his reign, presidential term limits were abolished, a one-party political system enforced, the oil industry heavily exploited, and development projects coincided with elections only to be abandoned shortly thereafter [18]. In 1999, a US Senate investigation found that Omar Bongo held USD \$130 million in his personal bank accounts; the source of the money was traced to the "public finances of Gabon" [19]. After Omar Bongo's death in 2009, his son Ali Bongo came to power in a contested election [20]. An attempted coup took place in 2019 after Ali Bongo underwent a long period of absence while receiving medical treatment in Morocco [21]. The coup, which ended after one day, is said to have been the result of misinformation on the president's well-being and overall distrust in the government, and marks an uncommon political uprising in Gabon's history [22]. Internationally, the Bongo government has been reported as a "kleptocratic regime" [23].

In an effort to move away from oil-dependency, which is fraught with price volatility, and to prepare for economic transition as Gabon's oil reserves decline, diversification measures have been introduced over the past thirty years [24]. The most recent of such measures is the 2009 *Strategic Plan for an Emerging Gabon* (Plan Stratégique Gabon Emergent [PSGE]) spearheaded by the Ali Bongo government. The PSGE's overarching goal is for Gabon to obtain emerging market status by 2025 through economic diversification away from oil. Direct actions taken because of the PSGE have included the 2009 ban on unprocessed log exports and the creation of the NKOK Special Economic Zone, led by the Singaporean company Olam. Both initiatives were enacted to promote the transformation of Gabon's secondary sector to increase the value of primary products (such as wood) before export. The PSGE has actively changed the landscape of investments in Gabon, receiving both praise and criticism, but as Aki [25] finds, while there are shifts occurring, the plan further encourages investment in the primary sectors. Moreover, it is the extractive sectors that have continued to expand (except oil); for example, in 2017, manganese

processing rose 78.8% and wood processing 13.7%, while the production of crude oil dropped 7.9% [26].

At the time of this writing in December 2020, the world was impacted by the COVID-19 pandemic in diverse ways. Globally, oil prices, formal employment prospects, and tourism all plummeted, resulting in an uncertain future for many [27]. Gabon enacted several measures to limit the spread of the virus while promoting social security, including: mandating masks in public places, limiting gatherings to 10 people, closing non-essential businesses, and restricting international and domestic travel [28]. By November 2020, an estimated 9214 COVID-19 cases were reported in Gabon, with 60 deaths [29]. Testing capacity reached 10,000 tests a day, allowing Gabon to boast one of the highest per capita testing rates in sub-Saharan Africa—a strategy that has allowed the steady re-opening of the economy [30]. A USD 194.1 million economic relief plan for individuals (including utility subsidies and food supports) and businesses (with direct support to small and medium-sized enterprises) has been implemented, in addition to a USD 375 million program to assist informal and formal businesses, including small and medium-sized enterprises to access commercial bank financing [30]. In this period of COVID-19, relationships between land and people should continue to be evaluated. The International Land Coalition's [31] latest report highlights this point, stating that the pandemic further risks emphasizing the inequalities experienced by land-disadvantaged groups while amplifying existing vulnerabilities. In the case of Gabon, COVID-19 raises concerns for the continued dependency on export commodities during this global slowdown, resultant supply chain disruptions, and the reliance of food imports—challenges that disproportionately impact land-disadvantaged groups.

4. Land Tenure Context

In Gabon, all land, water, and minerals belong to the state. This is not unique in sub-Saharan Africa, where colonial-era land laws were implemented by European states to codify their right over territories and natural resource extraction. However, unlike other countries, Gabon did not participate in the wave of de-colonizing state land ownership (propelled by Structural Adjustment Programs), which occurred up into the 1990s (in countries such as Sudan, Malawi, and Uganda) [12]. In Gabon, these colonial-era laws have been upheld and do not recognize traditional and historic land occupiers, resulting in the discreditation of local and Indigenous people from access to customary land rights. In total, an estimated 85–95% of all land is legally state-owned, with only 14,000 private titles in the entire country as of 2011 [12]. Land tenure security is therefore extremely poor. As of 2021, there exists no national land use plan, making it “impossible to know the exact allocation of the various forest estates”, and outside of use-rights, customary land rights are not recognized [12,32]. This is scheduled to change, as both the PSGE and Central African Forest Initiative (CAFI) plan to create Gabon's first land use plan. The lack of land use plans and lack of acknowledgement of customary tenure is a Congo Basin-wide issue (with a few exceptions), but Gabon ranks amongst the most concerning, with land law expert Liz Alden Wiley [33] finding that the situation in Gabon is among the most “deleterious”. In particular, the lack of a national land use plan has resulted in overlapping oil, mining, and forestry concessions, which, in some cases, also overlap with protected areas (this is also experienced in the Democratic Republic of the Congo, see Huggins [34]). This makes finding the true scale of the land rush in Gabon all the more difficult as each concession is allocated and regulated by their corresponding Ministry, which may “issue permits without prior inter-ministerial consultation” [35], p. 4.

4.1. Colonial Landscapes

In order to contextualize and historize contemporary foreign investment in Gabon, it is important to situate how Gabon came to encourage international investment and the systems and power dynamics that underlie this relationship. Anseeuw et al.'s [35] report propelled research on the African land rush, and notably concluded that the large-scale

investment of rural lands by foreigners are the continuation of colonial practices. This is particularly the case where “colonial tenure norms” and colonial-era land laws are accepted as the status-quo and continue to marginalize rural and Indigenous communities, of which Gabon is an example.

The region constituting modern Gabon has historically exported resources in international trade systems for profit. Coastal groups such as the Kingdoms of Loango (16–19th centuries) and Orungu (18–20th centuries) particularly benefitted from these systems through their control of inland trading routes and waterways. They sourced commodities including hardwoods, ivory, cacao, rubber sap, and people as slaves in exchange for cloth, firearms, and alcohol to fulfill demands from neighbouring kingdoms and Europeans, with the slave trade most intensified from the end of the 17th century into the end of the 19th century. The expansion of the slave and commodity trade entrenched dynamics of power and control of land by empowering elite classes and creating a dynamic of communal territoriality and land ownership [12]. This point, which Alden Wiley [12] highlights is important to engage with, emphasizes that these trade systems encouraged the development of territoriality, class formation, and the foundations of export-reliant capitalist trade; a point that Samir Amin [36] asserts has been carefully and intentionally maintained during colonization and independence.

These international relationships were amplified with the arrival of French colonial occupation in 1885, transitioning from the trade of peoples after the slave trade was banned in 1848, to an emphasis on commodities—particularly forestry. The land decree of 1899 saw the French become the sole owner of all land and water, codifying the legal dispossession of land from Africans to Europeans [12]. At this point, “virtually the entire country was then allocated to French logging companies” [12], p. 5, with concessions being encouraged to mitigate the colony’s operation costs. Timber sales were exclusive, and the Gabonese population was effectively banned from engaging in the industry due to permit limitations and high fees (outside of, and was thus a market controlled by foreigners (the French)) [37]. French companies required more labour than was locally available, marking demographic shifts: (1) *locally*—communities were often forcibly relocated near roads leading to concessions and plantations to facilitate taxation and labour in a process known as *regroupement* (also referred to as villagization), and (2) *externally*—with migration of foreign labour from other regions of French Africa, such as the Chadian road builders of the 1930s [12]. Local and external labour was not always voluntary or remunerated, workers were often treated violently, and the surge of populations in rural regions led to malnutrition and starvation [37]. These demographic patterns related to the labour requirements of foreign firms continue to this day [5, 38]. A trend noted by the World Bank [39] and several experts we spoke with was the contemporary prevalence of foreign labour working in Gabon, with foreigners occupying 1/5th of all formal private-sector jobs. Experts we spoke with confirmed that Gabonese employees tend to occupy lower-level job positions, while foreigners often work in skilled and high-level positions; a result of limited-skilled training programs and Gabon’s colonial history.

The foreign acquisition of land via colonialism not only put in place the legal parameters, but some of the land that was grabbed during this period has remained in foreign hands since that time. In particular, a number of French firms that are still active in Gabon began operations from the decades after 1910 up until independence. For example, Rougier Gabon, one of the largest forestry concession holders in Gabon today began operations in 1952 [40]; Total Gabon, a French oil company, began operations in 1949 [41]; and the French mining corporation Compagnie minière de l’Ogooué (COMILOG) was founded in 1953 [42]. This experience of colonial-era enterprises continuing to maintain significant presence to the present is also experienced elsewhere (e.g., Huggins [34]).

4.2. Legal Landscapes

When independence was achieved in 1960, very little changed between the newly formed state's relationship with land and that of the previous colonial occupiers. The Gabonese Constitution was created in 1961, with the most recent version being enacted in 1991 and edited in 2018. Constitutionally, land occupiers on unregistered plots are not offered protection, and compensation is therefore not always provided when their land is granted for public use [12]. Gabon's laws are pro-foreign investment, including the 1998 law which guaranteed non-discrimination between citizens and foreigners regarding the right to buy and lease land [12].

Given the extent of Gabon's forests (covering 88.5% of land), Forestry Codes are important legal bodies that shape land access, of which the 2001 Forest Code is particularly influential. This code divided all of Gabon's forests into two categories (1) *Permanent Forest Estates* (which include areas demarcated for conservation as well as forestry concessions) and (2) *Rural Forest Domains* (forests allocated for customary use rights, and community forestry). As of 2010, 14 million hectares of land were allocated as Permanent Forest Estates, and 8 million hectares as part of the Rural Forest Domain. Notably, the Code created four types of forestry concessions, including the Sustainable Forest Management Concession (CFAD) which is granted to large foreign firms. CFADs require mandatory 30-year sustainable forest management plans and are typically leased for 20–25-years, and follow strict 25-year rotational cutting cycles. Additionally, CFAD concession holders can obtain up to three concessions totalling 200,000 hectares each (600,000 hectares in total). However, this restriction is not always observed, with the Central African Forest Observatory (OFAC) noting that there exist three concessions that are each greater than 700,000 hectares in size [4]. Unlike other forested states such as Liberia (see Roesch [43]), community forests in Gabon are not plentiful, perhaps because there exists no legal definition of a community forest [44] combined with the high registration fee of 3 million Central Africa CFA (roughly USD 5500). The result is that every existing community forest has been created through external funding [45] (such as the Ebyeng–Edzuameniène Forest, the first community forest in Gabon, which was funded by WWF and Nature Plus).

In 2007, the National Parks Law was enacted, codifying the necessary steps required for the creation of national parks, of which thirteen were created in 2002 (representing 11% of the country's land) with a further 2% of land dedicated to wildlife reserves [46]. Additionally, the Law saw to the cancellation of 1.3 million hectares of legal logging concessions. This was followed shortly afterwards by the launch of the 2009 Strategic Plan for an Emerging Gabon (PSGE), with the primary objective of diversifying the economy away from oil and to obtain the status of an emerging economy by 2025. Investments are channelled through the Plan's three pillars, a *Green Gabon (le Gabon Vert)*, an *Industrial Gabon (le Gabon Industriel)*, and *Services Gabon (le Gabon des Services)*. These pillars ensure an investor-friendly climate centred on the sustainable development of, but not limited to, the tourism, manufacturing, forestry, mining, and industrial agriculture sectors. The PSGE includes the goal of improving food self-sufficiency and food exports through the agriculture sector, particularly industrial agriculture, with the objective of allocating a total of one million hectares for agriculture (Gabon is estimated to have the potential of farming 5 million hectares of land) [47]. As stated, the PSGE also prompted the creation of the NKOK special economic zone and the raw log export ban; both aimed to promote the expansion of the secondary sector. The unprocessed log ban was particularly surprising, as Gabon was the largest exporter of logs in Africa. However, Gabon's transformed wood products (veneer, plywood, furniture, etc.) were not seen as internationally competitive due to high production costs and an unprepared domestic industry [3]. This caused challenges for investors engaged in log exports, including Olam Gabon, which, according to the FAO, "retired from forest activities and sold its business to a (new coming) Chinese company" [3]. Cameroon has since taken over as the largest exporter of wood products in Africa [17].

In 2014, the Sustainable Development Law was introduced, allowing corporations to “purchase sustainable development credits” to compensate for the environmental and social damages they cause. There exist four categories of credits that corporations can purchase: biodiversity, carbon, eco-systems, and community credits [48]. The Law, which was backed by EU partners, was criticized by organizations such as FERN and World Rainforest Movement, who particularly questioned the vague introduction of the “community credit”, which included no details about how or if impacted communities would be its beneficiaries [49,50].

5. Findings

In the aggregate, the land rush discourse has focused on the recent mass acquisition of agricultural land in the Global South, most often by foreign actors [1,51,52]. Forestry concessions are not always considered a part of this “land rush”; Anseeuw [53] acknowledges and suggests that these acquisitions often pre-date the 2007/08 period. This is one reason why Gabon has been under-researched, combined with its position as a Francophone state and its small population, amongst other geographic biases, as per Cochrane and Thornton [54]. All these factors contribute to Gabon’s invisibility in the global land rush discussion.

As a forest country, most foreign land acquisitions are forestry concessions, of which a noticeable number have changed holders as investors sell concessions to other investors. These transfers are not well documented in any of the available databases. Regardless, the sheer magnitude of land leased in Gabon makes it worthy of attention and research. In some ways, Gabon *has* experienced the more strictly defined land rush post-2007/08, with agriculture concessions increasing by 370% since 2008 (from 112,000 hectares to 526,191 hectares), the majority for palm oil, rubber, and cattle. These, however, remain a fraction of the overall land allocation (Table 1), with forestry concessions being the dominant investment purpose.

5.1. Landscapes of Investments

If we look at the macro perspective regarding total land allocation in Gabon, we find that two-thirds of the entire country (17.3 million hectares) is allocated for the purpose of forestry, agriculture, mining, and national parks (see Table 1). Foreign investments typically engage in this allocation through three core industries: (1) *forestry*, such as logging and the production of wood products, but also for forestry management and carbon sequestering; (2) *agro-industrial plantations*, primarily of rubber trees and palm oil; and (3) *mining*, mostly of iron ore and manganese. The most prominent of these three industries is the forestry sector (see Table 1). As of December 2020, OFAC lists 14.2 million hectares of land allocated to forestry concessions (this total does not differentiate domestic and international investors) [4], but this number varies, with some sources stating it to be as high as 16.1 million hectares as of 2019 [55]. This is an enormous amount of land—roughly the combined total land masses of Ireland and the Czech Republic, the same size as Malawi and Rwanda combined, or equivalent to the size of Bangladesh. Of the 97 total forestry concessions listed by OFAC, the average concession is 146,361 hectares in size, slightly above the Congo Basin region average of 133,000 hectares [4].

Table 1. Our findings of land allocation in Gabon.

Land Allocation Purpose	Amount of Land Allocated	Percentage of Total Land in Gabon
National Parks	2.9 million hectares (estimate)	11%
Forestry Concession	14.2 million hectares (OFAC)	53%
Agriculture Concessions	356,291 hectares (Land Matrix)	0.01%
Mining Concessions	8801 hectares (Land Matrix)	0.0003%
TOTAL	17,265,092 hectares	64%

Aggregating investors by nationality, those from China have acquired the largest amount of land, followed by France, Lebanon, Malaysia, and Switzerland (see Figure 3). Given the disproportionate role of forest concessions, these nations also represent the largest investors in the forestry sector. Chinese investments are typically in forestry, but they are also engaged in mining. France and Lebanon’s large land acquisitions can be accredited to the fact that two of the largest colonial-era forestry firms, Rougier and Leroy–Gabon, are held by investors from these two countries. According to the Land Matrix, the French corporation Rougier holds the largest total amount of land in its combined forestry concessions, totalling 934,000 hectares (this number differs from the Rougier Gabon website, which states that they “exploit some 895,500 hectares” [40]). This is not one large investment, but rather multiple concessions across various regions of the country, which is commonplace in the forestry sector. However, a 2016 FAO [3] report found that the combined deals of the Malaysian firm Rimbunan Hijau were actually greater than the total amount of land acquired by Rougier. Our data does not capture this, which may, in part, be due to Rimbunan Hijau owning multiple concessions under various names, as was acknowledged in a 2009 CIFOR report [56]. At the time, Rimbunan Hijau reportedly leased 2.5 million hectares in Gabon under the various branch names of IFK, SFIK, and Bordamur [56], with IFK (131, 297 hectares) not appearing in our dataset. Ultimately, the nature of Rimbunan Hijau remains unclear.

The data challenges related to the Malaysian firm Rimbunan Hijau are not exceptional; obtaining accurate data is extremely complex, particularly in capturing updated information on concession ownership from recent sales. This is also true for newer deals, which are not reflected in the sources we relied on. For example, there are deals advertised but not yet included such as the Grande Mayumba investment, a joint venture between a South African agency and the Gabonese state which recently leased five concessions totalling 727,000 hectares under 50-year and 83-year renewable leases in Nyanga Province [57], as well as India’s Nouvelle Gabon Mining’s 25-year concessional lease of 83,500 hectares [58] (however, the exact nature of this deal—as an exploration or mining concession—remains unclear). These examples highlight the types of challenges that exist when seeking accurate and up-to-date data; however, we were able to verify many deals using multiple databases, academic reports, and journalistic reporting, suggesting that much of the evidence reported in this article is accurately representative of the trends taking place.

One such trend, also noted by the FAO [3], is the transition of a landscape of investments dominated by European investors (primarily French) to Asian investors (China, Malaysia, Singapore), occurring since the 1990s [3]. Examples of this include Société des Bois de Lastourville (325,059 hectares, according to GFW), which was a French forestry concession purchased in 2014 by Sun Company, a Chinese firm [3], as well as the transfer of the Makouke oil palm plantation from the Belgian company SIAT to Singaporean Olam [59]. Chinese investment in forestry has particularly increased. A 2011 CIFOR [60] report found that 25% of all forestry permits were allocated to Chinese firms, and by 2016, WWF [61] identified 6 million hectares of land allocated to the Chinese (about 50% of concessions at the time). By 2019, this percentage had grown again and 74% of the surface of all

forestry permits were allocated to Chinese companies, as confirmed by a forestry expert we interviewed. The FAO [3] noted that while Asian investors have more effective international trading partners, in Central Africa, they are often less likely to follow forestry regulations.

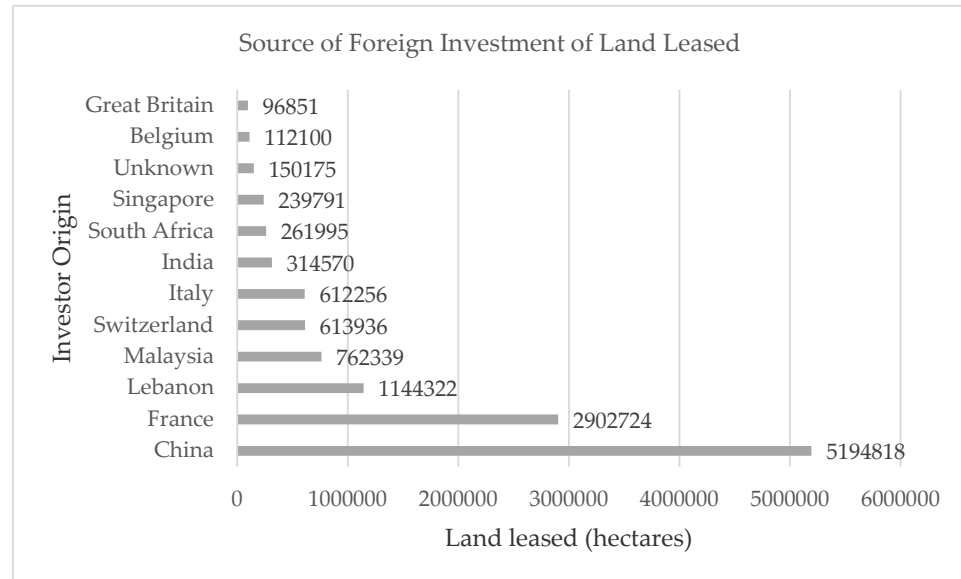


Figure 3. Source of foreign land investment in Gabon. (Note: A few changes were made to adjust for the age of the data—after 2011, OLAM Bois sold their forest concessions to Chinese KHLL [3], this was updated in our dataset acquired from GFW. We did not verify the accuracy of every deal listed in GFW’s dataset.)

Agriculture is the second-largest sector engaged in foreign land investments (356,291 hectares), with the 2009 *Strategic Plan for an Emerging Gabon* (PSGE) having served as the springboard to intensify industrial agriculture. There appears to be four major firms participating in this sector (see Table 2). Olam is the most prominent of these firms and is primarily engaged in palm oil and rubber production [62,63], and due to Olam’s influence, Gabonese crude palm oil production rose 65.8% in 2017 [26]. Commonly, the agriculture sector operates through joint ventures between the foreign investors and the state, in addition to also typically receiving financing through various development banks. A representative from the Land Matrix we interviewed noted this as well, stating that public-private partnerships (PPP) are exceptionally prevalent in Gabon in comparison to other countries, perhaps more than any other state in sub-Saharan Africa. These PPP operations offer potential gains for Gabon and Gabonese people, as key sectors can be developed or strategic aims worked towards, such as reducing the reliance upon food imports. On the other hand, if PPPs are implemented in environments where rule of law and good governance are weak or absent, these operations may be plagued with issues of corruption, politicization, or favoritism. Olam is an example of a firm cooperating with the state through PPPs, including Olam Palm Gabon and Olam Rubber Gabon, each owning 60% while the state holds 40% [64]. SOTRADER is another example of a PPP initiative made between Olam and the State of Gabon, funded by the African Development Bank and linked to food security initiatives through the PSGE strategy promoting smallholder plantations through the creation of cooperatives. The results of this program are mixed [65, 66]. However, there are currently said to be 800 cooperatives with a total of 16,000 smallholders working on 7000 hectares of land [67]. Outside of rubber production, the majority of agricultural outputs appear to be intended for domestic consumption.

Table 2. Known agriculture concessions in Gabon.

Company	Agriculture Concession Size (Hectares)	Primary Products	Origin
Olam	239,791 *	Palm oil, rubber	Singapore
Grande Mayumba	282,000 **	Cattle, sugar, rubber	South Africa
SIAT	112,100	Cattle, rubber	Belgium
SUCAF (SOMDIAA)	4400	Sugar	France

Note: all data was acquired through the Land Matrix except for the Grande Mayumba deal. * Olam deal includes SOTRADER concession. ** Grande Mayumba deal includes the concession designated to community agriculture. Figure 3, and other totals reported in this article, do not include this investment because at the time of writing, it was not included in the databases utilized.

The available data indicate that mining is occurring but not affecting large areas of land in the same way forestry and agriculture concessions are (as would be expected). An example of a mining investment is COMILOG, founded in 1953 as a joint venture mining firm between the French corporation ERAMET (63.7%) and the Gabonese state (28.9%), and operates on four sites totalling 427 hectares [42]. They are the second-largest global producer of manganese ore, which is processed then transported by rail from Moanda to Libreville [42]. We know of three other active foreign firms engaging in mining not included in our dataset: AREVA (French), NGM (Indian), and CICMHZ (Chinese). While the Land Matrix's only listed failed deal in Gabon is COMIBEL's Belinga mine (7224 hectares—possibly the exploration permit), another PPP between the state and a Chinese firm. This investment was cancelled by the Gabonese state in 2013 due to pressure from civil society organizations once it was revealed that the project would cause severe environmental damages and planned to dam a waterfall in Ivindo National Park [68]. The Belinga mine is estimated to be one of the largest global reserves of iron ore, but continues to await investment due to its remote location. Our data does not include recent mining acquisitions, of which there have been a growing number. By 2024, the PSGE aims to develop the country's mining capacity enough to fully replace oil's contribution to GDP [69].

Conservation is another avenue of land acquisition that has been steadily increasing, and we have found it to encompass three unique scenarios (conservation allocations, conservation concessions, eco-tourism), which we present in the following examples. Firstly, there are existing concessions that allocate areas of their land as a conservation area, such as Olam Palm, which has allocated 50% of their oil palm concession to conservation (99,000 hectares) [70]. Second, Grande Mayumba contains a "conservation concession" of 201,000 hectares of marine, savannah, and mountain region of ecological significance [57]. The NGO World Rainforest Movement articulated to us that examples such as these (not specific to the Grande Mayumba example) represent a new wave of corporate conservation, where "corporations are becoming conservators to appease international communities at the cost of local communities". Thirdly, Grande Mayumba's parent company, the African Conservation Development Group (pre-cursor was SFM Limited), has been awarded concessions in three national parks to develop Gabon's eco-tourism sector [71,72]. Eco-tourism is a sustainable development strategy targeted in the PSGE. Using conservation as a mechanism of development has been found to directly benefit local communities through increased cash flows but is also reliant on international tourism [73], of which our current global realities of COVID-19 will definitely slow the success and development. Conservation initiatives also include the country's 11% of territory allocated to national parks, some of which had overlapping territory with logging concessions before their creation (such as Ivindo National Park, which used to be part of a Rougier forestry concession totalling 115,000 hectares) [74]. While these national parks provide an immense refuge for Gabon's flora and fauna, they have also been found to increase land insecurity, such as through the direct displacement of Indigenous communities and the expropriation of traditional land use titles with the park's creation [75]. Communities who continue to

live near parks or within their 5km buffer-zones may be severely restricted in terms of access to forest resources, with the sole livelihood activity permissible in the buffer-zone being firewood collection [74].

The PSGE and the Central African Forest Initiative (CAFI) are framing future land allocation through the creation of Gabon's first national land use plan. CAFI is a joint initiative amongst international organizations such as the UNDP, FAO, World Bank, willing donor countries, and six Central African states meant to promote the sustainable use and conservation of the Congo Forests, namely through REDD+ activities. In 2019, Gabon was awarded USD 150 million from Norway (through CAFI) as a reward for past initiatives, and to prevent future deforestation in support of global carbon sequestration [76]. The Gabonese state and CAFI's goal through the creation of the first national land use plan (referred to as PNAT) will be to guide "the possible expansion of agricultural activities, forestry, infrastructure development and mining activities, in order to directly and indirectly mitigate the drivers of current and future deforestation", in addition to clarifying "land rights through the mapping of village lands" [77]. The South African Grande Mayumba concession is actually the state's first pilot project taking place in preparation for the PNAT [78]. Having laid out the landscape of land investment in Gabon, the following sections analyzes its impacts.

5.2. Impacts of Foreign Investments

One of the greatest impacts of large-scale land acquisitions in Gabon has been the movement of people, the infrastructure required to enable that mobility, and the resulting impacts of changing land use patterns. With a low population density (6.8 people/km²) [79] and the highest urban population rate on the African continent [14], few people live in remote regions accessed by resource-extracting firms. This argument is used by corporations as justifications for large-scale land acquisition, with the mentality that Gabon is empty and no one is displaced by new investments. However, expert Liz Alden Wiley has emphasized the importance of remaining critical of these sentiments, noting that current population trends are a direct result of forced relocation during the colonial era. Urban people in Gabon are deeply connected to and identify with their rural communities [12], frequently returning for holidays and acting as beneficiaries to their communities once they become successful, such as by providing job placements, constructing buildings, and providing medical assistance [80]. People may also not live in the same location all year, contributing to the belief/justification that the land is unoccupied. The framing of empty, unused, and unoccupied land has been prominent in the land rush discourse in Gabon, as it has been elsewhere across the continent.

5.2.1. Rural-Urbanization and Infrastructure Development

When investments are created in remote regions, employment becomes reliant on the movement of workers from larger villages or cities, and entire communities are created around the company. As Feintrenie [5] points to, camps that are established in the early stages of a new concession quickly become a village—creating new communities for the employees and their families. The movement of people to concessions is historically significant and spans temporal, geographic, and industry boundaries. For example, in the 1960s, the arrival of Shell Gabon saw the town of Gamba develop from a couple of families to a town of over 9000 [81]; COMILOG's presence in Moanda is credited to the growth of the city from 500 to 60,000 people in the past five decades [82]; and when Olam Rubber announced the creation of a rubber plantation in Woleu-Ntem, it was estimated that upwards of 45,000 people (including 7000 employees) would migrate to the region [38].

Establishments are soon equipped with medical centres, schools, and places of commerce, providing a multitude of services which may not have been previously available in the region. However, their sudden and poorly planned growth can negatively impact the welfare of a community, in addition to the health of forests through increased demand for natural resources [5]. Strains are put on local prices, augmenting casava, fuel, and

bushmeat costs for all, including local Indigenous people who lived in the region before the investment [83]. Food stores may be run by the investor company themselves, which can be seen as a way for the corporation to “recover a portion of wages paid to labourers” [84], p. 59. Messi Me Nang [84], who uses the example of a Rougier forestry camp, found that these communities experience intense levels of social and racial stratification. Houses constructed for high-level (often European) employees are significantly better quality than, and physically separated from their African colleagues. This is in addition to the large social and economic gaps experienced by community members who do not work for the reining corporations, such as in Moanda, where families who do not work for COMILOG are reported to not have the same access to or quality of services offered through corporate social responsibility initiatives as COMILOG employees are [82].

Not all forest developments exhibit the same patterns of development, nor are all investments implemented in this fashion. As a recognized sustainable development concession, the Grande Mayumba is taking a different approach from these previous examples in preparation for labour migration. In accordance with the Sustainable Development Law, the Grande Mayumba has allocated 14,000 hectares of land to an “urban and infrastructure development” concession. This project has yet to break ground, but there is hope that decision to allocate land specifically for social infrastructure development can address and learn from the social inequalities and environmental degradation that have been experienced in other investor communities, as witnessed by Feintrenie [5], Tonneau and Gueneau [38], and Messi Me Nang [84].

The economic success of these concessions, as well as the movement of people, is founded on the jobs they create. Job creation is often cited as a positive impact of large-scale land acquisitions despite not always translating into permanent, full-time, non-seasonal employment. In Gabon, sectors where foreign firms operate were found to contribute to 30.5% of formal employment (see Table 3) [39]. Of this percentage, agriculture and forestry contribute to the largest number of jobs (18.5%); however, this number climbs to 72.2% of all formal employment in rural regions [39]. This was confirmed by a forestry expert we spoke with, who outlined the positive significance of forestry concessions and locally-based wood industries (such as wood processing factories) in providing employment opportunities to rural communities that might otherwise consider moving to an urban centre, allowing rural people the option to stay rural. The entire forestry sector is reported to employ roughly 8500 people at a minimum part-time (this number rises to 15,000 employees if indirect employment is included) [3]. Despite contributing to 45% of the GDP, oil, mining, and quarrying combined contribute to only 4.6% of the workforce [39].

Table 3. Formal employment by sector in Gabon 2017 *.

Sector	Percentage of Workforce
Agriculture, forestry, and fishing	18.5%
Oil, mining, and quarrying	4.6%
Agribusiness	1.5%
Wood manufacturing	1.9%
Other manufacturing	4.0%
Other (public admin., services, retail, and construction)	69.5%

* Graph data retrieved from the World Bank [39].

For people to access the investment sites where they work, infrastructure and roads are constructed by concession holders to areas that were previously difficult to access. These roads provide a flow of resource outputs from the concession (lumber, minerals, rubber, etc.), as well as the inward flow of people to the forest, enabling this migration of people. Indirect impacts of increased road access include illegal logging and poaching as remote areas become easier to access [38]. With regard to the risks infrastructure plays in

furthering deforestation, the FAO includes road infrastructure as one of the most impactful current and future threats of Central African forests [85]. However, at the same time, a study by Kleinschroth et al. [86] found that logging roads are only a transient threat to the forest landscape, capable of recovering and enabling tree diversity in the regrowth. Upwards of 88% of logging roads in the Congo Basin are abandoned between their cutting cycles, and are therefore only temporary elements of the landscape, which can recover and become impenetrable by vehicles after 10 years of forest growth and may even limit poaching in concession areas as effectively as protected areas [86].

However temporary or permanent, roads, the concessions they connect to, and the deforestation it results in do contribute to forest fragmentation. A conservation expert we spoke with emphasized the risk fragmentation poses for mega-fauna like elephants and gorillas, resulting in increased confrontation between animals and people—putting both at risk. In reference to the town of Gamba, Johnson et al. [87] found that these concession communities magnify human–elephant conflicts, especially as elephant habitats are encroached upon and land for agriculture is expanded. Increased human–elephant conflict also risks fostering negative relationships with wildlife, leaving people feeling “powerless to stop the loss of their labor and food” [88], p. 2. Several initiatives are being taken to limit these confrontations, including using beehives to keep elephants away from crops [88]. However, with increased activities, these interactions are expected to continue rising.

Roads also serve as an avenue for communities to protest against foreign concessions holders. An example of such occurred in 2018, when a community blocked a logging road when no school or health centre had been built despite requests [89]. In Gabon, social unrest and protests surrounding foreign investments are not as commonplace as in other countries (e.g., Ethiopia, Madagascar, Senegal), but the experts we interviewed assert that they do take place. One reason for the lack of protest, as per a member of civil society we spoke with, was that people fear the government and do not want to risk political repercussions. In fact, individuals that we spoke with in Gabon were often very selective of their wording when speaking of the government, and requested we leave comments out if they mentioned something in disfavor of the government. We are not the only ones to make note of government distrust; Mengara [18] states that during Omar Bongo’s reign, it was nearly impossible to maintain a private sector job while “remaining visible and vocal opponents to the Omar Bongo regime”, leading people to “avoid open opposition to the Bongo regime altogether, for fear of becoming *fichés* (having a political record with the repressive Gabonese secret service)”. Internationally acclaimed environmental activist and founder of the NGO Brainforest, Marc Ona Essangui (who in 2007 received the Goldman Environmental Prize for his work exposing a predatory deal between the Omar Bongo government and a Chinese mining firm CMEC at the Belinga mine [90]), has experienced these consequences first-hand; in 2013, he was found guilty of defamation and served a prison sentence for stating that Olam Gabon was controlled by President Ali Bongo’s chief of staff [91]. An expert we spoke with from an environmental NGO shared that they feared for their own wellbeing, and explained that “as environmental activists in Africa, we have already accepted our deaths”, but that protecting the nature and people of Gabon’s forests outweigh the negative risks.

Of all the investments taking place in Gabon, none were as polarizing as that of Olam. Olam’s close relationship with the state, operating together through joint ventures in agro-industries and the NKOK special economic zone, has led to skepticism of the true reasoning behind Olam’s prominence in the country. A few of the experts we spoke with were skeptical of the government’s close partnership with Olam—referring to it as the “president’s personal project”. As the largest active agri-producer, Olam has received considerable international media criticism concerning their oil palm plantations (explored in the next section). However, a representative that we spoke with at ROSCEVAC, Central Africa’s largest environmental civil society organization, argued that the media sensationalizes the negative impacts of Olam. ROSCEVAC has recently set up an office near the Mouila plantation to monitor the activities of Olam, in addition to encourage community

capacity-building [92]. This expert stated that while Olam's past is controversial, they are taking steps towards collaborating with their communities to provide an agricultural system that works while also benefiting the people. Regardless, civil society is weak in Gabon, and the implantation of satellite offices such as in Mouila offer an opportunity towards cooperation between communities, the investors, the international community, and the government.

5.2.2. Human–Environmental Relationships

When analyzing data about agricultural and forest products, it is easy to focus on their material and commodified aspects. However, forests and forest products have other meaning and value. The Gabonese experts we spoke to all discussed the importance of forests as sentient entities deeply interconnected with the human experience, with one expert eloquently describing the forest as “our living companion”. Forests are spaces where transgenerational knowledge is shared, sustenance obtained, and entire lives lived. This expert stressed that corporations, foreign or not, inherently alter forest–human relationships. This issue arises when foreign firms are unaware of the significance of these spaces as being more than just a place of monetary value. An example of this is the direct degradation of the forest. Some Chinese firms have been accused of—and sentenced to jail time for—illegally cutting sacred Kévazingo trees (which, according to OFAC [4], is term used for a variety of African Rosewood trees in the genus *Guibourtia*), which are highly sought-after for furniture building across Asia [93,94]. A Gabonese expert we spoke with explained that once a sacred tree is cut, the significance of that space is forever altered. As well, the banning of traditional practices as a result of land investments can also impact relationships with Gabon's landscapes, such as through fire bans. Fire has been an important ecological and cultural component of traditional land management, especially in regions such as the Bateke Plateau (see Walters [80]). However, a 2020 report by Muyissi Environnement and the World Rainforest Movement [62] found that Olam's no-burn policies, which were implemented to limit deforestation in forest spaces, also had the negative impact of preventing communities in savannah regions from engaging in controlled burns, putting their mushroom harvests at risk [62]. The arrival of Olam to the village of Guidouma marked the overall end to many traditional practices, such as agriculture (as the soil quality has degraded due to fire bans and elephants began destroying crops more frequently), access to hunting (forest access became limited), and fishing (as waterways were blocked or polluted, also causing women to travel further for potable water) [62]. These experiences were confirmed by a local environmental NGO we spoke with.

The Muyissi Environnement and World Rainforest Movement report [63] also found that women are substantially more negatively impacted than men by the environmental consequences and changes to livelihoods caused by these large-scale land acquisitions. These changes to livelihoods and ways of life have begun to limit and slow the transfer of knowledge, stating that “before Olam, children were also taught traditional activities such as food gathering and fishing”, but this no longer happens to the same degree [63], p. 30. Furthermore, the report finds that overall food diversity and quality has suffered, putting food sovereignty at risk. Access to cash to purchase food and goods is now the norm. Ultimately, the tensions related to the shift in more intensive agricultural practices as it relates to the environment, deforestation, and that of non-traditional models of agriculture need to be further explored, and perhaps alternative methods offered, such as through agroforestry.

Digging into mining, we find the example of COMUF as perhaps the most socially and environmentally damaging example of foreign investments in Gabon. COMUF was a uranium mine that operated in Mounana from 1957 to 1999 and owned by the French government; it now operates through the multinational group AREVA in partnership with the Gabonese state. Hecht [95] finds that workers of the now-closed mine continue to experience high levels of cancer, were never formally trained on radiation risks, and the mine's medical doctors were never trained in uranium-related occupational health.

This investment poisoned both the environment and the people of the region, and committees organized by the corporation have not included community representatives, nor have they resulted in improved circumstances for previous employees [95].

5.2.3. Certification as an Opportunity for Success

While visiting a Rougier forestry concession in 2018, Ali Bongo announced the state's next plan to improve the sustainable management of Gabon's forests: by 2022, all forestry concessions will need to be Forest Stewardship Council (FSC) certified [96]. At its core, forestry certification acts as a regulatory body to ensure that social, economic, and environmental values are sustainably aligned to benefit present and future generations [96]. Forestry certification has been linked to an overall increase in social well-being for workers and neighbouring communities, increased environmental protection, provides proof that legal fulfilments are being met by the concession holder, and can contribute to overall greater land tenure security [96]. Currently, as of 2020, OFAC lists that 14% of all forestry concessions (2 million hectares) are certified, while 9.5 million hectares (67% of concessions) are under a sustainable management plan [4]. It is worth noting that the initial call for FSC certification was met with a lack of clarity, as some concessions have already become certified through other internationally recognized bodies, such as the Programme for Endorsement of Forest Certification (PEFC)/Pan African Forest Certification (PAFC), which van Dijk et al.'s [96] 2020 report provides greater insight into certification types. Certification also exists outside of forestry, such as the Roundtable on Sustainable Palm Oil Certification (of which Olam is currently under investigation by the FSC for deforesting high conservation value trees while clearing for an oil palm plantation [97]).

When asked what made an investment successful, five of the experts we interviewed mentioned certification status as one of the most distinguishing features of a beneficial concession. Justification for this argument was most often that certified concessions have a higher standard of care for the environment, their employees, and neighbouring communities. Additionally, some experts we spoke to expressed the importance of certification for bringing international pressure to a company's reputation to uphold these environmental and social standards—firms that are not certified are more likely to be lumped together into a category of predatory extraction. In particular, the negative outcomes of Chinese forestry concessions were mentioned by almost every person we spoke with. An expert from an environmental non-profit in Gabon advised us that “there exists only two types of forestry concessions in Gabon; certified logging and uncertified Chinese logging”. A representative from the International Tropical Timber Technical Association (ATIBT) informed us that despite being in possession of upwards of 70% of all forestry concessions in Gabon, not a single Chinese corporation by the end of 2020 had been certified, while one Chinese firm that was earlier certified for legality had actually lost their certification status. This raises concern of what will happen to Chinese investments come mandatory certification in 2022—as Gabon's greatest destination of wood exports, will we see a wave of mass certifications, an exodus of the Chinese from the forestry sector, or an acceptance that Chinese firms are above the rule of the law? On a positive note, ATIBT informed us that several Chinese companies have committed to the certification process and a few firms are progressing rapidly, providing hope that they will also join the ranks of “successful” concessions.

At large, certification initiatives across the Congo Basin appear to be met with optimism, including a 2014 study in Cameroon that found forestry certification facilitated the creation of multi-stakeholder platforms of exchange between communities and corporations [98]. At the same time, Doremus [99] discovered that certified concessions in the Democratic Republic of Congo have also been found to promote food insecurity through increased hunting regulations, which most negatively impact women and Indigenous people. Certification is thus one aspect of a global timber industry making strides to increase transparency, strengthening legal timber markets while dismantling illegal logging and improving forest governance—issues which continue to be faced across countries of

the greater Congo Rainforest system. Nonetheless, this is an area which deserves continued attention as certification initiatives continue to unfold in Gabon and the entire Congo Basin, especially if they can provide the opportunity to facilitate positive outcomes for communities and their forests.

6. Conclusions

In the past decade, scholarly insight has greatly contributed to understanding the experience of large-scale foreign land acquisitions in the Global South. Despite being one of the most heavily impacted countries in sub-Saharan Africa in terms of hectares leased and as a percentage of overall land involved, Gabon's experience has been largely ignored. Gabon's relationship with land is intrinsically intertwined with the colonial continuity of land grabbing and land laws which saw the state become, and continue to be, the sole owner of all land in the country. In some countries, domestic and diaspora investors are key drivers of the land rush (recent policy shifts across the continent are restricting foreign investment in agriculture, as in Ethiopia and Ghana, for example, resulting in greater roles of domestic and diaspora investment, see [1]); this is not the case in Gabon. The majority of the concessions that have been allocated to forestry firms, in addition to a growing number of agriculture and mining investments, are foreign firms. Unlike the experience of some other African nations, the land rush in Gabon has not been tied to the "triple crisis" of 2007/08; indeed, the land rush for forests began during the colonial era and has experienced a continuity since. However, while the rush for land has deeper roots, it is not static; leases are shifting in ownership with European (French) investors transitioning to Asian (Chinese, Malaysian, Singaporean) investors. At the same time, the state has taken a more interventionist stance, seeking to enhance the value-addition processes within the country before export and by setting in motion a requirement for all forest concessions to be certified. These initiatives are part of a broader economic objective to diversify the economy and shift away from a dependency on oil. The economic transition is especially relevant given the current realities of COVID-19, which highlights the concern of dependencies on export commodities and global supply chain disruptions, as well as the changing opportunities with the January 2021 introduction of the African Continental Free Trade Agreement, to which Gabon is party to.

The impacts of foreign land investments vary, providing the positive outcome of employment opportunities to rural people, while simultaneously contributing to poor urban development in concession communities, causing unprecedented environmental strains. Large-scale land acquisitions alter human–environmental relationships, spiritually and culturally, as well as change the relationships between animals and people as increased confrontation occurs from the expansion of settlements and roads due to concessions. While Gabon has kept deforestation rates low, and certification requirements may put in place regulations to ensure this continues, the expansion of infrastructure throughout the forests has other forms of impacts, such as those on lives, livelihoods, migration and settlement patterns, and the environment. We have attempted to capture the diversity of these impacts, but further research is needed on these under-studied issues. At large, this paper aimed to present evidence on a topic and country that is under-researched and present an analysis of the impact aspects of the land rush. We have presented a foundational evidence base to address a key data gap and offered a critical analysis of some of the impacts of the land rush. However, there are areas that need to be further researched to extend and complement this work, which includes exploring issues of land governance, including alternative options and frameworks such as assessing experiences with community-based initiatives.

As national land use plans are consolidated in the coming years, it is crucial that Gabon provides tangible land rights to communities before it gives all of its forests away to foreigners. The initial indications are positive. Gabon is taking steps towards envisioning a future that is not reliant upon oil, nor one that is measured only through economic

means. New directives that are being put in place or are under development seek to address inequalities and environmental concerns, such as through mandatory forestry certification and the implementation of sustainable development concessions. These changes coincide with Gabon's exploration of encouraging new forms of investment that are not primarily extractive in nature, such as the movement towards corporate conservation, whereby investors take hold of concessions without the intention of traditional natural resource extraction and may instead pursue other aims, be they conservation or ecotourism. Based on this premise of conservation, the work and attention of CAFI proves that although Gabon may have been ignored from the scholarly discussions of land, the world has not forgotten its ecological importance and value.

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References

1. Cochrane, L.; Andrews, N. *The Transnational Land Rush in Africa*; Palgrave Macmillan: London, UK, 2021.
2. Central Africa Regional Program for the Environment. Trees of Life: Stories of Struggle, Courage and Hope in The Congo Basin Global Forest Watch. Available online: <https://carpe.umd.edu/content/stories> (accessed 21 December 2020).
3. Karsenty, A. *Forestry Policy and Institutions Working Paper: The Contemporary Forest Concessions in West and Central Africa: Chronicle of a Foretold Decline*; FAO: Rome, Italy, 2016.
4. The Central African Forest Observatory (OFAC). 2020. Available online: <https://www.observatoire-comifac.net/ofac/observatory> (accessed 21 December 2020).
5. Feintrenie, L. Agro-Industrial Plantations in Central Africa, Risks and Opportunities. *Biodivers. Conserv.* **2014**, *23*, 1577–1589.
6. Sannier, C.; McRoberts, R.; Fiche, L.-V. Suitability of Global Forest Change data to report forest cover estimates at national level in Gabon. *Remote Sens. Environ.* **2015**, *173*, 326–328.
7. Makanga, J.D.M. Forest-savanna mosaic and exploitation of Gabon's forest resources. *Geo-Eco-Trop* **2011**, *35*, 41–50.
8. Bayol, N.; Bodin, B.; de Wasseige, C.; Dessard, H.; Doumenge, C.; Atyi, R.E. Forests in the Congo Basin: Forests and Climate Change, the Central African Forests Observatory of the Central African Forests Commission. *Weyrich* **2015**. Available online: <https://agritrop.cirad.fr/578900/1/Forets%20du%20bassin%20du%20congo.pdf> (accessed 21 December 2020).
9. *United Nations, World Heritage in the Congo Basin*; UNESCO World Heritage Centre: Paris, France, 2010. Available online: <https://whc.unesco.org/document/106622> (accessed 21 December 2020).
10. Nasi, R. Integration of Biodiversity into National Forest Planning Programmes: The Case of Gabon. In *Integration of Biodiversity into National Forest Planning Programme*; CIFOR Headquarters: Bogor, Indonesia, 2020; p. 34.
11. Rana, P.; Sills, E.O. Does Certification Change the Trajectory of Tree Cover in Working Forests in the Tropics? An Application of the Synthetic Control Method of Impact Evaluation. *Forests* **2018**, *9*, 98.
12. Wily, L.A. *Land Rights in Gabon: Facing up to the Past and the Present*; FERN: Brussels, Belgium, 2012.
13. Tchatchou, B.; Sonwa, D.J.; Ifo, S.; Tiani, A.M. *Deforestation and Forest Degradation in the Congo Basin: State of Knowledge, Current Causes and Perspectives*; CIFOR: Bogor, Indonesia, 2015.
14. World Bank. The World Bank in Gabon. 2020. Available online: <https://www.worldbank.org/en/country/gabon/overview> (accessed on 21 December 2020).
15. World Bank. Gabon's Unemployment Conundrum: Why Economic Growth is not Leading to More Jobs, 31 March 2015. Available online: <https://www.worldbank.org/en/news/feature/2015/03/31/gabons-unemployment-conundrum-why-economic-growth-is-not-leading-to-more-jobs#:~:text=The%20unemployment%20rate%20is%2035.7,for%20women%20as%20for%20men> (accessed on 21 December 2020).
16. FAO. *World Food and Agriculture-Statistical Yearbook*; FAO: Rome, Italy, 2020.

17. The Observatory of Economic Complexity (OEC). Gabon. 2020. Available online: <https://oec.world/> (accessed on 21 November 2020).
18. Mengara, D. The Making of a Monarchical Republic: The Undoing of Presidential Term Limits in Gabon Under Omar Bongo. In *The Politics of Challenging Presidential Term Limits in Africa*. Palgrave Macmillan, Cham; Palgrave Macmillan: London, UK, 2020; pp. 65–104.
19. Perry, A. Gabon Faces Bongo's Disastrous Legacy, *Time*, 10 June 2009. Available online: <http://content.time.com/time/world/article/0,8599,1903805,00.html> (accessed on 10 January 2021).
20. Ali Bongo Wins Gabon Election Interior Minister says Son of Late Leader is Victor in Presidential Election. Al Jazeera, 3 September 2009. Available online: <https://www.aljazeera.com/news/2009/9/3/ali-bongo-wins-gabon-election> (accessed on 10 January 2021).
21. Gabon Coup Attempt: Government Says Situation under Control, BBC News, 7 January 2019. Available online: <https://www.bbc.com/news/world-africa-46779854> (accessed on 10 January 2021).
22. Cahlan, S. How Misinformation Helped Spark an Attempted Coup in GABON, *The Washington Post*, 13 February 2020. Available online: <https://www.washingtonpost.com/politics/2020/02/13/how-sick-president-suspect-video-helped-sparked-an-attempted-coup-gabon/> (accessed on 10 January 2021).
23. Who is Ali Bongo, President of Gabon? BBC, 7 January 2019. Available online: <https://www.bbc.com/news/world-africa-46074728> (accessed on 10 January 2021).
24. Ndala, P.D.I.; Moussone, E. The opportunities of foreign direct investment in Gabon. *Marché Organ.* **2011**, *2*, 57–95.
25. Aki, H.M. Economic Governance in Gabon: Assessment of the Plan Stratégique Gabon Emergent on the Business Environment. *Open J. Political Sci.* **2019**, *9*, 17–37.
26. Gabon's Ministry of Economy. *Prospects and Development Programming in Charge of Promotion of Public and Private Investments*; Gabon's Ministry of Economy: Libreville, Gabon, 2019.
27. Schiex, E.; Sondo, R.; Niamkey, A. Gabon's oil-dependent economy reels from Covid-19, *France 24*, 26 October 2020. Available online: <https://www.france24.com/en/tv-shows/focus/20201026-gabon-s-oil-dependent-economy-reels-from-covid-19> (accessed on 10 January 2021).
28. Kanganga, J.-T. Anti-Covid-19 Measures: The Basics of the Changes, *Gabon Review*, 16 October 2020. Available online: <https://www.gabonreview.com/mesures-anti-covid-19-essentiel-des-changements/> (accessed on 10 January 2021).
29. Mwai, P. Coronavirus: What's happening to the numbers in Africa? BBC News, 26 November 2020. Available online: <https://www.bbc.com/news/world-africa-53181555> (accessed on 10 January 2021).
30. International Monetary Fund. Policy Responses to Covid-19. 2020. Available online: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> (accessed on 10 January 2021).
31. Anseeuw, W.; Baldinelli, G.M. *Uneven Ground: Land Inequality at the Heart of Unequal Societies*; International Land Coalition and Oxfam: 2020. Available online: https://d3o3cb4w253x5q.cloudfront.net/media/documents/2020_11_land_inequality_synthesis_report_uneven_ground_final_en_spread_low_res_2.pdf (accessed 21 December 2020).
32. Sartoretto, E.; Henriot, C.; Bassalang, M.; Nguiffo, S. *How Existing Legal Frameworks Shape Forest Conversion to Agriculture*; FAO: Rome, Italy, 2017.
33. Wiley, L.A. Customary Tenure: Remaking Property for the 21st Century. In *Comparative Property Law*; Global: Cheltenham, UK, 2016.
34. Huggins, C. The Land Rush in the DRC. In *The Transnational Land Rush in Africa: A Decade after the Spike*; Palgrave: New York, NY, USA, 2020.
35. Anseeuw, W.; Wily, L.A.; Cotula, L.; Taylor, M. *Land Rights and the Rush for Land-Findings of the Global Commercial Pressures on Land Research Project*; ILC: Rome, Italy, 2011.
36. Amin, S. *Unequal Development: An Essay on the Social Formations of Peripheral Capitalism*; Harvester Press: Hassocks, UK, 1976.
37. Rich, J. Savage Frenchmen: Masculinity and the Timber Industry in Colonial Gabon, ca. 1920–1960. *Afr. Hist.* **2009**, *7*, 235–264.
38. Tonneau, J.; Gueneau, S.G.E. Quels modèles de gestion des plantations agro-industrielles tropicales ? Réflexions à partir d'une étude de cas au Gabon. *Nat. Sci. Soc.* **2016**, *24*, 386–389.
39. World Bank, Gabon Increasing Economic Diversification & Equalizing Opportunity to Accelerate Poverty Reduction: Systematic Country Diagnostic Report No: 150048-GA, 2020. Available online: <https://openknowledge.worldbank.org/handle/10986/34108> (accessed on 21 December 2020).
40. Rougier Gabon. Rougier Gabon. 2020. Available online: <http://www.rougier.fr/en/rougier-afrique-international/484-rougier-gabon.html>.
41. Total Gabon. Historical Reminder, Total Gabon. 2020. Available online: <https://www.total.ga/lentreprise/historique>.
42. ERAMET COMILOG. 2020. Available online: <https://comilog.eramet.com/comilog/comilog-en-un-clin-doeil/histoire/>.
43. Roesch, R. Under the Disguise of Participation: Community Forestry as a New Form of the Landgrab in Liberia. In *The Transnational Land Rush in Africa: A Decade after the Spike*; Palgrave: New York, NY, USA, 2020.
44. Client Earth. Framework Analysis. 2018. Available online: <https://www.documents.clientearth.org/wp-content/uploads/library/2018-03-01-analyse-du-cadre-juridique-relatif-aux-forets-communautaires-au-gabon-ce-fr.pdf> (accessed on December 2020).
45. Lescuyer, G.; Tsanga, R.; Mendoula, E.E.; Engone, H.-C.N. *Stock Taking of Community Forestry Enterprises Involved in Commercialization of Timber in Central Africa*; CIFOR FAO: Roma, Italy, 2015.

46. Gabonese Republic. *Gabon's Investment Framework For The Central African Forest Initiative (CAFI) -Submission of the Gabonese Republic to the CAFI Secretariat For the Board of Directors*; Gabonese Republic: Libreville, Gabon, 2017.
47. African Development Bank. Technical Support to the Green Gabon Initiative for the Preparation of a Graine Program–Phase 2-Appraisal Report. 2017. Available online: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/GABON_-_Approved_GREEN_GABON_PRI_PAPG2.pdf.
48. Gabonese Republic, Law N'OO2/20L4, 2014. Available online: <https://www.a-mla.org/masteract/download/880> (accessed January 2021).
49. World Rainforest Movement. Trading Communal Rights in Gabon: The 'Sustainable Development' Law, 15 March 2015. Available online: <https://wrm.org.uy/articles-from-the-wrm-bulletin/section1/trading-communal-rights-in-gabon-the-sustainable-development-law/#:~:text=The%20government%20of%20Gabon%20adopted,Development'%20Law%20in%20August%202014.&text=The%20new%20Law%20establishes%20that> (accessed on January 2021).
50. FERN. Offsetting Community Rights in Gabon, January 2015. Available online: <https://www.fern.org/es/recursos/offsetting-community-rights-in-gabon-553/> (accessed on January 2021).
51. Cotula, L. *The Great African Land Grab? Agricultural Investments and the Global Food System*; Zed Books: London, UK, 2013.
52. Cotula, L. The International Political Economy of the Global Land Rush: A Critical Appraisal of the Trends, Scale, Geography and Drivers. *J. Peasant Stud.* **2012**, *39*, 649–680.
53. Anseeuw, W. The rush for land in Africa: Resource grabbing or green revolution? *S. Afr. J. Int. Aff.* **2013**, *20*, 159–177.
54. Cochrane, L.; Thornton, A. The Geography of Development Studies: Leaving No One Behind. *Forum Dev. Stud.* **2018**, *45*, 167–175.
55. Ngoya-Kessy, A.M. Study of the state of play of private sector actors in the forest-wood sector. 2019. Available online : https://www.atibt.org/wp-content/uploads/2020/02/RAPPORT-FINAL-Etat-des-lieux-acteurs-fili%C3%A8re-bois_AT_final.pdf (accessed on December 2020).
56. Kwack, E.; Nadège, J. *Involvement of Asian Industrialists in the Mining and Forestry Sectors in Cameroon, Gabon and the Democratic Republic of Congo*; CIFOR: Jawa Barat, Indonesia, 2009.
57. African Conservation Development Group. Integrated Sustainable Land Use Planning: Grande Mayumba. Available online: <https://africanconservationdevelopmentgroup.com/project/> (accessed on December 2020).
58. Nouvelle Gabon Mining, Mine. Available online: <https://www.nouvellegabonmining.com/activities-and-projects/mine/> (accessed on December 2020).
59. Olam Palm Gabon. Olam Palm Gabon. Available online: <https://www.olamgroup.com/products-services/olam-international/olam-palm-gabon.html> (accessed on December 2020).
60. Putzel, L.; Mvondo, S.A.; Ndong, L.; Banioguilla, R.; Cerutti, P.; Tieguhong, J.; Djeukam, R.; Kabuyaya, N.; Lescuyer, G.; Mala, W. *Chinese Trade and Investment and the Forests of the Congo Basin: Working Paper*; CIFOR: Bogor, Barat, 2011.
61. WWF. 12 Chinese Forestry Companies Commit to Responsible Forest Management in Gabon, 22 June 2016. Available online: https://wwf.panda.org/wwf_news/?271391/12-Chinese-Forestry-Companies-Commit-to-Responsible-Forest-Management-in-Gabon#:~:text=Gabon%2C%20with%2085%25%20rainforest%20coverage,is%20rich%20in%20forest%20resources (accessed on December 2020).
62. Muyissi Environnement and World Rainforest Movement. Communities Facing Zero Deforestation Pledged: The Case of Olam in Gabon. 2020. Available online: <https://wrm.org.uy/wp-content/uploads/2020/03/Communities-facing-Zero-Deforestation-pledges-case-Olam-Gabon.pdf>.
63. Fair, J. Palm oil giant Olam under scrutiny again over Gabon plantations, Mongabay, 25 March 2020. Available online: <https://news.mongabay.com/2020/03/palm-oil-giant-olam-under-scrutiny-again-over-gabon-plantations/> (accessed on December 2020).
64. Olam Gabon. Gabon. Available online: <https://www.olamgroup.com/locations/west-and-central-africa/gabon.html> (accessed on December 2020).
65. International Monetary Fund. *Gabon: Selected Issues*; IMF: Washington, DC, USA, 2019.
66. Kombila, Y.N. Debate rages over intensive oil palm farming in Gabon, Mongabay, 1 November 2019. Available online: <https://news.mongabay.com/2019/11/debate-rages-over-intensive-oil-palm-farming-in-gabon/> (accessed on 7 January 2021).
67. Ministry of the Economy and Finance of the French Republic. Gabon: the GRAINE program, 2020. Available online: <https://www.tresor.economie.gouv.fr/Pays/GA/le-programme-graine> (accessed on December 2020).
68. National Committee of the Netherlands. Belinga Iron Ore Mine, Gabon: Taking Civil Society Input Seriously, N.d.
69. Presidency of the Gabonese Republic. *Operational Plan Green Gabon Emergence Give a Sustainable Path Horizon 2025*; 2015. Available online : https://www.undp.org/content/dam/cafi/docs/Gabon%20documents/French/Gabon-_2015_Gabon-vert.pdf (accessed on December 2020)
70. Olam, Our Palm Plantations. 2020. Available online: <https://www.olamgroup.com/products-services/olam-international/olam-palm-gabon/palm-plantations.html> (accessed on December 2020).
71. African Conservation Development Group. African Equatorial Safaris. Available online: <https://africanconservationdevelopmentgroup.com/african-equatorial-safaris/> (accessed on December 2020).
72. Gabon Signs Conservation Concession. [Film]. Youtube Video: CNBC Africa, 2017.
73. Alpert, P. Integrated Conservation and Development Projects. *BioScience* **1996**, *46*, 845–855.
74. Ndong, S.S.A. *Human-Wildlife Conflict: Comparing Pongara and Ivindo National Parks in Gabon*; 2017.

75. Schmidt–Soltau, K. Conservation–related Resettlement in Central Africa: Environmental and Social Risks. *Dev. Chang.* **2003**, *34*, 525–551.
76. Central African Forest Initiative (CAFI). Gabon: First in Africa to Receive Payments for Preserved Rainforests, September 2019. Available online: <https://www.cafi.org/content/cafi/en/home/all-news/gabon--first-in-africa-to-receiving-payments-for-preserved-rainf.html> (accessed on February 2021).
77. (CAFI) Central African Forest Initiative. SNORF and PNAT: Gabon Starts Its Program, 24 July 2018. Available online: <https://www.cafi.org/content/cafi/fr/home/all-news/le-gabon-demarre-son-programme.html> (accessed on December 2020).
78. African Conservation Development Group. *Climate Smart Land-Use*; 2020.
79. UNDP. About Gabon. Available online: <https://www.ga.undp.org/content/gabon/fr/home/countryinfo.html>. (accessed on August 2020).
80. Walters, G.M. *The Land Chief's Embers: Ethnobotany of Batéké Fire Regimes, Savanna Vegetation and Resource Use in Gabon*, PhD Dis; University of College London: London, UK, 2010.
81. Alonso, A.; Dallmeier, F.; Korte, L.; Vanthomme, H. The Gabon Biodiversity Program: A Conservation Research Collaboration. *Afr. Today* **2014**, *61*, 3–15.
82. France 24, In Gabonese city, the two faces of a mining boom, 21 January 2021. Available online: <https://www.france24.com/en/live-news/20210121-in-gabonese-city-the-two-faces-of-a-mining-boom>.
83. Feintrenie, L. Opportunities to Responsible Land-Investments in Central Africa. In *Annual World Bank Conference on Land and Poverty*; The world bank: Washington, DC, USA, 2013.
84. Nang, C.M.M. *Foresters Building of Gabon: survivals and breaks. The example of La Foreex de Mitzié (1995-2014)*; Department of History and Archeology, Université Omar Bongo de Libreville: Libreville, Gabon, 2015.
85. FAO. *Living in and from the Forests of Central Africa*; Food and Agriculture Organization of the United Nations: Rome, Italy, 2017.
86. Kleinschroth, F.; Healey, J.R.; Sist, P.; Mortier, F.; Gourlet-Fleury, S. How persistent are the impacts of logging roads on Central African forest vegetation? *J. Appl. Ecol.* **2016**, *53*, 1127–1137.
87. Johnson, M.B.; Parker, L.D.; Vanthomme, H.; Tchignoumba, L.; Deichmann, J.L.; Maldonado, J.E.; Korte, L.; Alonso, A. Patterns of genetic diversity in African forest elephants living in a human-modified landscape in southwest Gabon. *J. Soc. Conserv. Biol.* **2019**, *1*, e76.
88. Ngama, S.; Korte, L.; Bindelle, J.; Vermeulen, C.; Poulsen, J.R. How Bees Deter Elephants: Beehive Trials with Forest Elephants (*Loxodonta africana cyclotis*) in Gabon. *PLoS ONE* **2016**, *11*, e0155690.
89. Agence France-Presse (AFP). In Gabon, Villagers Claim Their Rights Against Foresters, GEO, 24 October 2018. Available: <https://www.geo.fr/environnement/au-gabon-les-villageois-revendiquent-leurs-droits-face-aux-forestiers-193142>. (accessed on January 2021).
90. Mistiaen, V. African rainforest activist wins international Goldman prize, The Guardian, 20 April 2009. Available online: <https://www.theguardian.com/environment/2009/apr/20/rainforest-activist-goldman-prize> (accessed January 2021).
91. MONGABAY, Gabon Convicts Environmentalist of Defamation in Palm Oil Case, 15 May 2013. [Online]. Available online: <https://news.mongabay.com/2013/05/gabon-convicts-environmentalist-of-defamation-in-palm-oil-case/> (accessed on January 2021).
92. Mikomba, F. ROSCEVAC Announces Its Establishment in Mouila By Organizing An Awareness-Raising Workshop On Climate Governance, Gabon Initiatives, June 2019. Available online: <https://www.gaboninitiatives.com/roscevac-annonce-implantation-mouila-organisation-dun-atelier-de-sensibilisation-sur-la-gouvernance-climatique/>
93. Essone, L.M. Gabon: A Chinese Businessman Sentenced to 6 Months in Prison for Illegal Exploitation of Kevazingo, Gabon Media Time, June 2020. Available online: <https://www.gabonmediatime.com/gabon-un-homme-daffaires-chinois-condamne-a-6-mois-de-prison-pour-exploitation-illegale-de-kevazingo/>
94. Jeune Afrique. Gabon: Kevazingo that Sparked Scandal to be Auctioned off, August 2019. Available online: <https://www.jeuneafrique.com/817835/economie/gabon-le-bois-precieux-a-lorigine-dun-scandale-va-etre-vendu-aux-encheres/> (accessed on February 2021).
95. Hecht, G. 2012: An Elemental Force: Uranium Production in Africa, and what it Means to be Nuclear. *Bull. At. Sci.* **2020**, *76*, 431–437.
96. van Dijk, S.; Stas, S.; van Benthem, M. *Providing Insights in Certification Schemes for Sustainable Forest Management in Gabon*; Stichting Probos: Wageningen, The Nederland, 2020.
97. Forest Stewardship Council. Olam International. Available online: <https://fsc.org/en/unacceptable-activities/cases/olam-international>.
98. Tsanga, R.; Lescuyer, G.; Cerutti, P. What is the role for forest certification in improving relationships between logging companies and communities? Lessons from FSC in Cameroon. *Int. For. Rev.* **2014**, *1*, 16.
99. Doremus, J. Unintended impacts from forest certification: Evidence from indigenous Aka households in Congo. *Ecol. Econ.* **2019**, *166*, 106378.