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Social and Environmental Impacts of Maryland Oil Palm Plantations on Forests, Biodiversity, and Community Livelihoods in Liberia

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Abstract: Liberia holds 44.5% of the remaining portion of the Upper Guinean Rainforest in West Africa, which is home to critically endangered forest elephants and western chimpanzees. The forests are of vital importance for the livelihoods of millions of West Africans and provide key ecosystem services of local and global importance for food systems transformation and agroecology. Liberia's efforts toward land reform through legislation and policies recognise communities' rights to own and manage their customary lands and resources. These include the National Forestry Reform Law of 2006, the Community Rights Law Concerning Forest Lands of 2009, and the Land Rights Act of 2018, and more. In May 2022, a program team from the Sustainable Development Institute (SDI)—Friends of the Earth Liberia researched the social and environmental impacts of Maryland Oil Palm Plantations (MOPPs) in Liberia. Twenty-three (23) key informant interviews (KIIs) and 10 focus group discussions (FGDs) were conducted in seven communities in and around the MOPP. They included farmers, contract workers, MOPP staff, local authorities, women and youth leaders, the Environmental Protection Agency (EPA) Inspector, the Civil Society Head, and the Gender Coordinator of Maryland County. The team cross-checked information with formal documents as much as possible and took photographs and global positioning system (GPS) locations of areas of deforestation, pollution, and conflict. The team also used observation to monitor environmental pollution, such as affluent into water bodies and planting oil palm in wetlands. The team used narrative analysis and geospatial landscape analysis to analyze the data. The research finds that land conflict and deforestation have several negative impacts on communities. MOPP has not respected land tenure rights or followed Free Prior and Informed Consent (FPIC) standards, including resettlement without reparation and destruction of farms and old towns without (sufficient) compensation or restitution. During MOPP land acquisition and clearance, communities experienced the loss of their farms and the identification of villages as "village de squatters", leading to restricted access to farmland, heightened food insecurity, and reduced income from cash crops to support families. MOPP destroyed high conservation value areas and destroyed secondary forest regrowth, which affected important biodiversity areas. MOPP is one of the four large-scale industrial palm oil plantations in Liberia in Maryland County. It has a palm oil mill in a joint venture with Golden Veroleum Liberia (GVL). Its 2011 concession agreement includes 8,800 hectares for industrial palm oil plantations.

Key words: Biodiversity, climate change, community rights, deforestation, ecosystem services, food security, human rights, land rights, forest rights, livelihood.

1. Introduction

Liberia holds 44.5% of the remaining portion of the Upper Guinean Rainforest in West Africa. The forests are home to critically endangered forest elephants and western chimpanzees and vital for the livelihoods of millions of West Africans and Liberians for food, cultural purposes, medicine, and environmental protection [1].

Liberia has made substantial efforts toward land reform through legislation and policies such as the National Forestry Reform Law of 2006 [2], the

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Community Rights Law concerning Forest Lands 2009 [3], and the Land Rights Act of 2018 [4]. These laws recognize communities' rights to own and manage their customary lands and resources. They also affirm communities' rights to provide or withhold their free, prior, and informed consent (FPIC) for any development on their customary lands. The Land Rights Act of 2018 provides legal certainty regarding customary land rights. Communities with land in concession agreements legally still have their land rights protected in line with the constitution and the land Rights Act 2018, even if the state licensed it to a company.

The expansion of concession areas, including land acquired for palm oil plantations, has exacerbated tensions between local communities, companies, and the State. The government designates approximately 10% of Liberia's land area for palm oil concessions, and concession agreements cover 17% of the land. This includes a lack of respect for customary land rights and failure to consult adequately or secure community consent on the one hand, and the failure to meet the requirements under Liberia's existing laws and policies on concession allocation has been at the heart of the complaints against the oil palm companies. The scale and impacts of landgrab range include rights abuse, affecting community food sovereignty, biodiversity loss, among others. This situation is critical and creates the need for an alternative approach within the oil palm commodity supply chain to improve governance and environmental sustainability.

Therefore, this research aimed to assess the social and environmental impacts of Maryland Oil Palm Plantation (MOPP) considering a violation of community rights, food security, environmental pollution. To get a first overview of historical deforestation and deforested areas since 2011, when the concession agreement was signed, the team evaluated the impact on forest biodiversity and communities, and identified the financiers of MOPP to address or halt the environmental, social, and economic impacts.

2. Research Areas and Methods

2.1 Research Areas (MOPP)

MOPP is one of the four large-scale industrial palm oil plantations in Maryland County, Liberia. It has a palm oil mill in a joint venture with Golden Veroleum Liberia (GVL). Its 2011 concession agreement includes 8,800 hectares for industrial palm oil plantations as well as 6,400 hectares of out-grower plantations for communities. Community Development Fund documents show that, by 2018, MOPP developed 7,714 hectares of plantations. MOPP had to rehabilitate the old DOPC plantations that were abandoned in 1990 because of the onset of Liberia's civil war. MOPP went beyond that to plant on the abandoned sugar cane plantation (Libsuco) and community customary lands. According to the agreement, the parties must fulfill all obligations in order to have the possibility of extending the duration for an addition of ten years, besides the initial 25-year period. The government ensures the land is free of land claims and conflicts, which are the root of land conflict over Liberia's concessions, as customary claims are disregarded.

MOPP is 100% owned by SIFCA, a leading Ivorian Agribusiness group. Wilmar, a Singapore-based palm oil giant, owns 27.06% of SIFCA and almost half of SIFCA's refinery (Sania) in Ivory Coast, where MOPP palm oil products are being processed. Wilmar has the following investors, including US pension funds BlackRock and Vanguard and banks such as DBS in Singapore, Crédit Agricole in France, Barclays in the UK and various US and Asian banks. Communities impacted by MOPP's activities in 2018 urged financiers to stop a $1.5 billion loan to Wilmar due to human rights violations and criminal harassment communities faced.[5].

Wilmar is a member of the Roundtable of Sustainable Palm Oil (RSPO) but resigned as a High Carbon Stock Approach (HCSA) member in 2020. Neither MOPP nor SIFCA is RSPO or HCSA members, but they do have to comply with the Wilmar "No

Deforestation, No Peat, No Exploitation” policy. The African Development Bank provided USD 20 million in 2015 to SIFCA for MOPP’s plantation, nursery, and mill projects. A consortium of European development banks (FMO, Proparco) and the bank Société Générale provided an EUR 90 million term facility signed in 2018. FMO visited MOPP in November 2018 and provided technical support as well as formulating an environmental and social action plan for SIFCA, focusing high on MOPP [6]. In addition, the International Finance Corporation and ECOWAS Bank for Investment and Development are identified as investors by the African Development Bank [7].

2.2 Method and Research Design

The researchers used a scoping research approach to assess, analyze, and document key human rights violations and environmental harms, including deforestation and the level of food insecurity in affected communities within MOPP’s Concession areas. According to Dr. Kalanta and Hollier [8], scoping research maps specific concepts, issues and challenges and investigates related thematic topics, and narrows down the broad scope of a research topic. It is not an in-depth study but to assess if there is enough evidence or the need to conduct full research.

2.3 Secondary Data (Literature Review)

The research firstly begins with secondary data (literature review) by reviewing field reports, meeting notes, and review of the MOPP’s concession agreement, a review of MOPP’s shape files of the concession areas, Theory of Corporate Social Responsibility, Social Impact Assessment framework, and the Land Rights Law of Liberia 2018, among others. The secondary data were used to analyze thoroughly to give an understanding of MOPP’s case and comparatively contribute to the analysis of the primary data.

In the primary data collection, we used the ethnographic method. This method is most efficient in social science research because it aims at researching people in their everyday environment to better understand reality and its relations with the people [9]. In May 2022, program staff of the Community Rights and Corporate Program, the Sustainable Development Institute (SDI)—Friends of the Earth Liberia conducted 23 key informant interviews (KIIs) and 10 focus group discussions (FGDs) in seven communities in and around the MOPP plantation. They included farmers, (contract) workers, MOPP staff, local authorities, women and youth leaders, the Environmental Protection Agency (EPA) Inspector, Civil Society Head and Gender Coordinator of Maryland County. The team took photographs and global positioning system (GPS) locations of areas of deforestation, pollution, and conflict. Observation was used to monitor environmental pollution, such as affluent into water bodies and planting oil palm in wetlands.

Researchers employed various data analysis methods to analyze the qualitative data obtained from the KIIs and FGDs. They initially cleansed the data and compiled an internal report that included all the critical information and facts. Subsequently, they conducted a narrative analysis to examine these data and gain insights into the stories and implications they conveyed. This method was most efficient in understanding the analysis from data collected from the KIIs and FGDs, since the data were qualitative. According to SAGE Research Methods, this method involves four different narrative forms which are structural, functional, thematic, and dialogic/performance [10]. Therefore, analyzing the data structurally and functionally, considering different themes such as land rights violations, human rights violations, livelihood and food security, deforestation and biodiversity loss, was useful for the research.

In addition, to analyze deforestation in High Carbon Stock forests and High Conservation Values forests caused by the construction of Golden Sifca Oil Palm Mill, remote sensing such as geographic information system (GIS) solutions integrated with satellite imagery was used to identify and detect the deforested areas. Furthermore, we collected GPS points and conducted ArcGIS analysis to analyze the extent and size of farmlands taken and currently occupied by MOPPs. This analysis allowed us to produce maps of the different plantations, enabling us to visually analyze the data. According to Remotely360 [11], geospatial & landscape analysis is essential in assessing deforestation and ecological impacts of development projects on people and the environment. Besides, it is helpful in designing and planning restoration interventions. To quantify the deforestation rate, identify and evaluate habitat fragmentation, and estimate biodiversity loss, the team used this method.

In line with the recommended approach for evaluating corporate social responsibility, MOPP had the chance to address the report's findings by sharing it with their management. Unfortunately, the company did not take any action. For security reasons, the community respondents remained anonymous unless they wished to be named.

3. Results and Discussions

3.1 Land Conflict and Lack of FPIC

In the south-eastern part of Liberia, specifically in Maryland County, lies the MOPP. On March 4, 2014, the MOPP plantation began its operations after reaching a Concession Agreement with the Government of Liberia. Previously, the Decoris Oil Palm Company (DOPC) owned and managed the core estate in the concession area in the Pleebo Sodoken District in Maryland County. However, the onset of Liberia's civil war in 1990 led to the abandonment of production and development of the plantation. The government owned and established the old DOPC in the mid to late 1970s with support from the World Bank.

The community participants in the FGD stated that they reclaimed their land and resumed farming on land previously developed by Decoris after the plantation was abandoned [12]. The situation changed when communities lost their farmlands again when MOPP came in. In 2015, research conducted by the Forest Peoples Programme (FPP) and Social Entrepreneurs for Sustainable Development (SESDev) finds that the old Decoris plantation had several negative impacts on communities which aligned with findings of this research and confirmed community testimonies. Findings reveal historical human rights violations, deforestation, and biodiversity loss since the old DOPC did not respect land tenure rights or follow FPIC standards, including resettlement without reparation and destruction of farms and old towns without (sufficient) compensation or restitution. Same practice was carried out by the MOPPs. These findings are in violations of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security [13].

The research team found that all the affected communities do not have a formal memorandum of understanding or any other agreement that shows they have given consent for their customary land to be leased to the plantation. In Gbolobo, five families have a tribal deed certificate for their land, but MOPP took their land and cleared it. Losing farmlands has adverse impacts on local community food production system and livelihoods, leading to shortage of food. Bethoux and Bouhey [14] further emphasized that local communities are the most adversely affected by the economic, political, social, and environmental impacts of land grabs, such as leading to the loss of farmlands for families and smallholders.

The negative impacts of the company span across many towns and villages in Maryland County. Hudukudi, Baraken and Gbaken communities and the Gbolobo clan, which comprises 5 towns (Gewloken, Kaken, Besseken, Tunuken, Tambo) narrated during the FGD that MOPP took their land without their consent. They further said, MOPP did not compensate them for their lands or only with tiny payments for community farm crops that were destroyed by MOPP in the process of developing the plantations such as cassava or cash crops like rubber trees. One farmer said:

"MOPP cut my rubber trees and never paid for them. We were ten people altogether that were demanding our money. MOPP in November 2010 jailed ten of us. And up to now we have not received our payment."

Unfortunately, instead of local authorities helping communities to protect their lands, they were involved in convincing communities to give up their land. They argued that the government had given it to MOPP, stating: "You cannot refuse because the president gave the land to MOPP". The communities perceived this as a threat. A political representative also failed to act after community complaints, effectively facilitating the landgrab.

3.2 Farmland Grab with Impact on Community Food Security and Livelihoods

From 2010 to 2013, the Liberia government signed four major oil palm concessions with foreign investors, including the MOPP. The total size of the concession area is 15,200 hectares and is being exploited by MOPP in two stages. The first 8,800 hectares of land are to be cultivated for industrial palm plantation by rehabilitating the old Decoris (SESDev, 2016). Table 1 below shows the number of plantations in the past and present occupying community lands in Maryland County.

Table 1 shows that Pleebo/Sodoken District in Maryland County had three large plantations between 1926 and 1980. These include the Cavalla Rubber Plantation established in 1926, the Liberia Sugar Company (LIBSUCO) established in 1973 and Decoris Oil Plan Plantation, established in 1980 [15]. It is important to note that Cavalla Rubber Plantation is still in operation. LIBSUCO and Decoris Oil Plan Plantation were converted to the current MOPP (Figure 1). It is worth mentioning that these large concessions took most community farmlands and living space without their consent, legal agreement, and economic benefits exacerbating poverty in these communities.

MOPP further grabbed the community lands by expanding its plantations into former Liberia Sugar Company (LIBSUCO) plantations and community land. MOPP cleared forests, sacred places and shifting cultivation of farmlands belonging to communities. The area between Barraken and Hudukudi was forest previously, not plantation. Also, near Old Sodoken, Pedebo, and Kaken communities claim that someone cleared the forest and farmland. "My family land they took was a forest. We used to farm there and practice our culture there too. They cleared everything and today we do not have food. We must buy rice from the market and other places. MOPP destroyed five of our ancestral graves while they were clearing our lands," a farmer from the Gbolobo clan said.

3.3 The Prevalence of Food Insecurity in Maryland County, Liberia

Rural food security, essentially, in Liberia depends on the cultivation of food crops and export commodities while including livestock farming to meet local demand for meat [16]. Land and forests have always played an essential role in the livelihood of local communities. Results of a joint research by World Bank and the Government of Liberia conducted in 2018 with a focus on the contributions of forests to the livelihood of communities reveal rural households depend on forests' resources for income generation. These communities generate an annual income of US$783, which is equivalent to $0.54 per person per day.

Table 1 Past and current plantations established across Maryland County.

#	Name of Planation	Size hectare	Year established	Description
1	Cavalla Rubber Plantation	20,000 ha	1926	Rubber
2	Liberia Sugar Company (LIBSUCO)	Unknown	1973	Sugar cane
3	Decoris Oil Plan Plantation	8,800 ha	1980	Oil palm
4	Maryland Oil Palm Planation (MOPP)	15,200 ha	2011	Oi Palm

Besides, for self-consumption and for sale, these community members collect fuelwood, bushmeat, fruits, honey, meat, nuts, which accounts for about 70% of the households [17]. Plants serve medicinal purposes, while community members gather poles and timbers from the forest for shelter, among other purposes.

A United States Aid for International Development (USAID) report on Liberia food security situation pointed out that though Liberia has good soils and climate for crop production, but it has a long history of extreme poverty and food insecurity which is attributed to inefficiencies in the food and agricultural sector of the country [18]. In 2018, the Government of Liberia [4], with support from partners, conducted the Comprehensive Food Security and Nutrition Survey across the country. Maryland County stood out as the most food insecure with 35.5% (see Fig. 2), because of low agricultural activities and production of staple food and marketable quantities [19]. Losing farmlands and deforestation are major contributors.

These findings also support or align with that of the findings of the research conducted on MOPP. Findings disclosed that communities have reduced access to farmland, which has increased food insecurity and led to less cash crops to support family incomes. It is very challenging for local communities when they find oil palm plantations on their doorsteps. Community living space is even shrinking more while MOPP still intends to grab more land from them. "The oil palm plantations have increased hunger and poverty by pushing us from our lands and damaging our crops." MOPP has left us with swamps, and we cannot plant in the swamps. "The little farmland that we secured is no longer good because we have used it repeatedly," said a farmer from Hudukudi. In the FGDs, communities expressed their grievances about having less access to hunting, fishing, firewood, and medicinal plants because of deforestation and water pollution, causing further negative impacts on their livelihoods. In addition, people face reduced access to clean drinking water because of pollution and changes in hydrology.

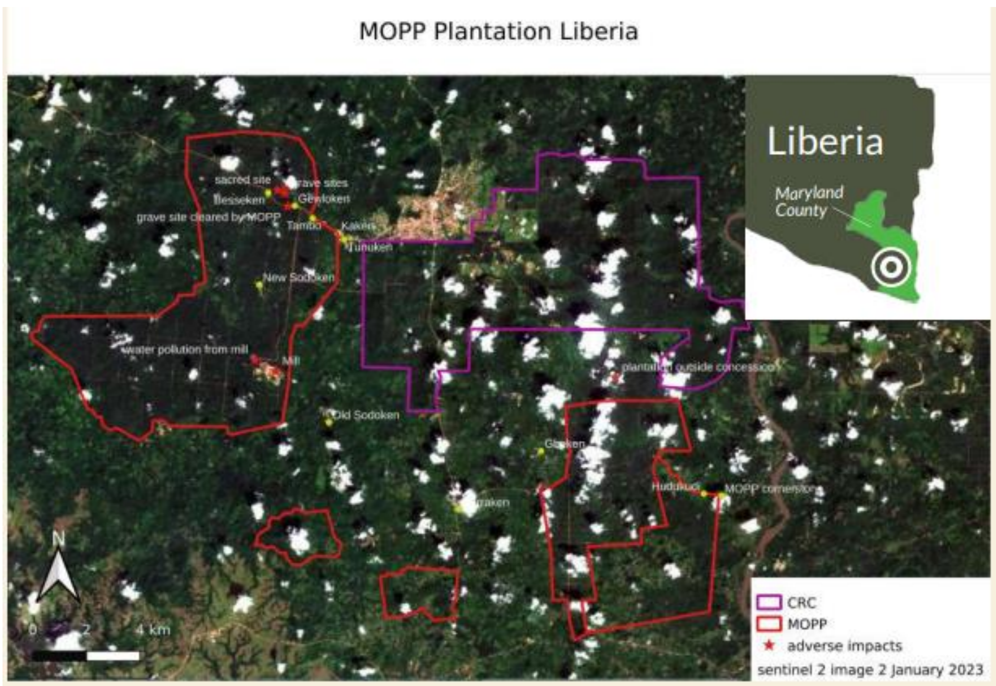

Fig. 1 Map showing the different plantations and adverse impacts of MOPP.
Source: GIS Team, Community Rights & Corporate Governance Program, Sustainable Development Institute (SDI).

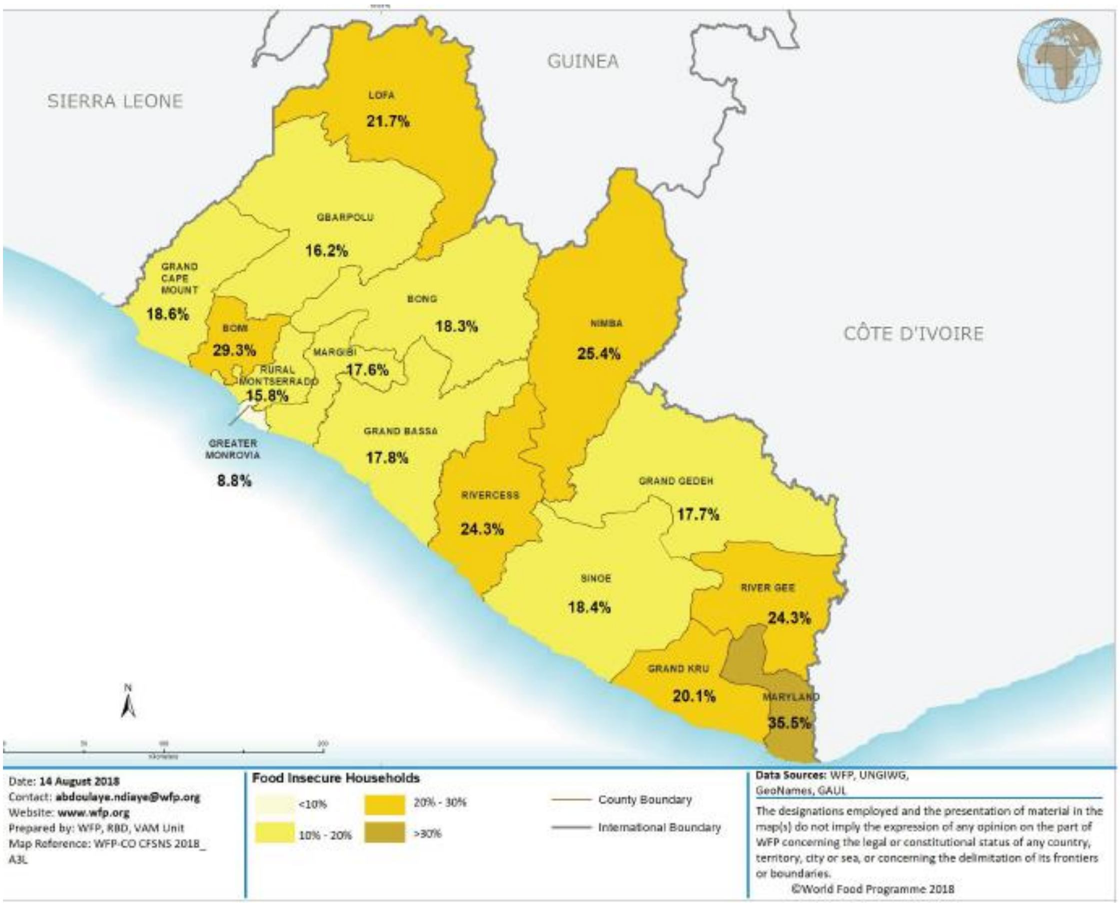

Fig. 2 Prevalence of food insecurity in Maryland County.

Even though the Environmental Social Impact Assessment (ESIA) identifies a risk of loss of access to land and fallow for local communities and an increase in land conflicts as land for communities has decreased, the research did not find any evidence of MOPP supporting agriculture with increased productivity to mitigate this impact.

3.4 Financiers of Deforestation-Risk Products with Impact on Forest Biodiversity and People

All financiers of foreign direct investment (FDI) including banks, pension funds, and large corporations should ensure that their investment chains are sustainable and clean, recognizing and respecting the rights of affected communities, protecting the environment, and reducing deforestation, being economically viable, and complying with laws, policies, and standards for the benefit of people and the planet.

Wilmar International has 50% ownership in Nauvu, while Nauvu owns 27.06% of SIFCA, an Ivorian agribusiness company that is developing the 8,800-hectare MOPP in Liberia. And then SIFCA owns 100% of the MOPP. This ownership structure exposes several global financial institutions to risk due to the adverse impacts caused by the MOPP plantation. These are Wilmar's investors, including US pension funds BlackRock and Vanguard and banks such as DBS in Singapore, Crédit Agricole in France, Barclays in the UK and various US and Asian banks that are providing fundings [20].

Fig. 3 Golden agri-resources and Wilmar's impact on forests and biodiversity.
Source: Forest & Biodiversity Program, Milieudefensie-Friends of the Earth Netherlands.

A newly constructed Golden-SIFCA Oil Palm Mill, where the fresh fruit bunches (FFB) are being processed in Pleebo Sodoken District, Maryland County. Golden-SIFCA Oil Palm Mill is a joint venture between GVL, and MOPP, both oil palm companies operating in the Southeastern part of Liberia with GVL in Sinoe and MOPP in Maryland counties. The Mill is a 28-year investment incentive agreement with the Golden-SIFCA firm and worth US$34 in Pleebo Sodoken District, Maryland County [21].

The construction of the Golden-SIFCA Palm Mill has destroyed high conservation value forests, fragmentation of bird and animal habitat, and biodiversity loss (Figure 3). Since the establishment and operations of oil palm plantation pose serious environmental and social harms, it takes strict mitigation measures to curb these impacts. Therefore, to prevent water pollution, soil erosion and forest & biodiversity loss, MOPP's ESIA requires buffers along all permanent rivers and creeks, protecting habitat, planting of timber and wood fuel sites along river bodies. Proper waste management and treatment from the operation of the mill and prevention of runoff are so essential for environmental sustainability and communities' livelihoods.

However, the research reveals that MOPP leaves no buffer zones around water bodies and plants inside the wetlands, which goes against the Environment Protection and Management Law of 2002. "They planted palms in all the swamps around here. And when the palm started growing, they used to apply fertilisers and it really affects our water," a paramount chief said. While there was pollution in water bodies from chemical runoff, another current issue is waste from the mill. "They are still dumping the palm butter in the Swanpken River and people downstream are finding it difficult to use the water now," a member of the Community Development Fund committee said.

4. Conclusion and Recommendations

4.1 Conclusion

In conclusion, this research assessed the social and environmental impacts of MOPP considering a violation of community rights, food security, environmental pollution. The researchers assessed the deforestation of areas since the 2011 Concession Agreement was signed. Assessing the impact on forest biodiversity and communities, the research team identified the financiers of the MOPP to address or halt the environmental, social, and economic impacts.

Several land conflicts, disrespect for community tenure rights, and human rights violations with negative impacts on livelihoods, including inadequate compensation or restitution, were found to result from implementing inadequate FPIC during the acquisition of community lands, as concluded in the paper. Also, because of farmlands grab, communities now have limited access to lands which are a major driver of food insecurity and limited living space for communities. The destruction of primary and secondary forests, planting of oil palms in wetlands, and use of agrochemicals have led to deforestation, biodiversity loss, and adversely affected aquatic biodiversity and community livelihoods.

4.2 Recommendations

With the passage of the 2018 Land Rights Law which gives community bundles of rights over their customary lands (such as use, management, benefit rights, etc.), there is an urgent need for MOPP to consider addressing the human and land rights violations and biodiversity crisis by adopting a new approach to its model of plantation development. Therefore, MOPP and its financiers should take the following actions.

- Respect customary land rights and FPIC by halting further expansion and supporting communities in formalizing their customary land. Halting further expansion will protect the remaining forests and biodiversity. There is a need for MOPP to start a new process of legally binding land lease agreements between communities and the company after the concession agreement has expired under provisions in the 2018 Land Rights Law.
- As provided in the concession agreement, MOPP should support communities in developing community oil palm plantations, essentially, provide reparation and fair compensation for farmland grabbed.
- MOPP should start active communication and engagement with affected communities and relevant stakeholders through quarterly meetings in a multi-stakeholder dialogue to collectively develop solutions for addressing environmental damages, human rights violations, and pursuing sustainable alternative livelihood opportunities, as well as achieving food sovereignty and security.

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