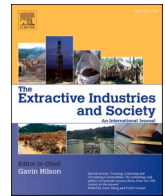




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Accumulation by dispossession: The timber 'salvage' project on Ghana's Volta Lake

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ABSTRACT

In this paper, we analyse how processes of accumulation by dispossession take place and are exacerbated on Ghana's Volta Lake, the largest artificial lake in the world. Drawing on the case of an underwater timber 'salvage' project on the lake, we argue that contrary to dominant discourses in policy circles that the project would boost the local economy, enhance safer lake transport, and help to mitigate climate change, the project led to the commodification of the lake thereby negatively affecting fishers' livelihoods. Following David Harvey, we argue that the underwater timber 'salvage' project on the Volta Lake is just another vehicle of 'accumulation by dispossession'. The study shows that the state and extractive company accumulate profit at the expense of fishers whose livelihoods have been curtailed following restrictions in access to the lake and landowners who are challenging ownership of the timber being extracted from the lake. Global connections are made, and the inequalities and injustice enacted through the execution of the project are amplified.

1. Introduction

In Ghana, the quest to develop an industrial sector was a priority for the government immediately after independence. This led to the construction of the Akosombo hydroelectric dam on the Volta River at the Ajena gorge in Akosombo to provide clean and cheap power for both industrial and domestic use. The damming of the Volta River between 1961 and 1965 led to the submersion of thousands of hectares of forest land belonging to nearby communities and the creation of the Volta Lake, the largest artificial lake in the world by volume and area (Miescher, 2014). It is estimated that nearly half of the 850,000 hectares of the lake contains submerged forest. A few years after the dam was commissioned, Chambers (1970) reported that the initial 2,000 square miles of forest land in the Volta Basin, which at that time, was the estimated area to be flooded, was far exceeded. The state used its power to abrogate property rights of the submerged lands and its resources in the name of what is declared a higher national interest, albeit with some compensation for the displaced communities and residents.

In Ghana, over 80 per cent of the lands are customary lands that are administered by traditional authorities (Ablo & Bertelsen, 2022). The Volta River project was executed through the legislative act (Act 46, 1961) with a constitutional provision for the compulsory acquisition of

land. Compulsory acquisition is the "power of government to acquire private rights in a land without the willing consent of its owner or occupant in order to benefit society. It is a power possessed in one form or another by governments of all modern nations. This power is often necessary for social and economic development" (FAO, 2008: 5). The state asserted this power to forcibly acquire private rights in those lands (Adu-Gyamfi, 2012).

The dam project, which was considered necessary for the industrial transformation of Ghana (Moxon, 1969) nevertheless came with several challenges for surrounding communities and prior resource users of the land and the river. Darko et al. (2019) argued that the various local stakeholders whose livelihoods were going to be affected by the dam were only informed of decisions taken on their behalf by the domestic political elites (local government officials) and that local people were not consulted for their input nor allowed to participate in the process. Over eighty thousand persons were said to have been evacuated and resettled to make way for the lake (Tsikata, 2006). There is consensus among scholars that the Volta River Project worsened the socioeconomic conditions of affected communities, with affected people being either ignored or their properties being significantly undervalued (Darko et al., 2019; Tsikata, 2006; Miescher & Tsikata, 2009). Thus, while the dam project was central to Ghana's industrialisation drive, the uneven

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distribution of the cost and benefits, with local communities bearing the brunt of the project, brings into sharp focus the dynamics of injustice in energy provision.

The inundation of thousands of hectares of land led to a new scramble for land in the nearby communities, accompanied by the emergence of new livelihood systems with the creation of the inland fisheries (Machado, 2018). Fishing on the lake emerged as one of the major sources of livelihood for the new lakeside communities employing fisherfolk, fish processors, and fish traders (Ameyaw et al., 2020). It was indeed anticipated in one of the initial scoping reports conducted by Halcrow (1956) that the creation of the lake would lead to fish catch vastly more than what was being caught from the Volta River and its tributaries before the creation of the lake and would help to address the protein deficiency in the nation's diet. The general principle that guided the execution of the project and trumpeted by the government was that no individual or community would be made worse off by the project. That affected people will share adequately in the benefits of the project (Chambers, 1970). Indeed, while the displacement of communities and livelihoods was enormous, the dam created opportunities for transportation and other livelihood activities in the affected communities and beyond. For instance, the new lake has provided an easy transport route for goods and services from southern to northern Ghana. New livelihood opportunities in fisheries emerged and expanded because of the creation of the lake.

In Ghana, fisheries' livelihood is key to national food and nutritional security. With fish making up about 60% of animal protein in the Ghanaian diet, (Bank of Ghana, 2008), fisheries contribute to 1.2% of the Gross Domestic Product (GDP) and 5.6% of agriculture GDP (Quagrainie & Chu, 2019). In essence, the creation of Lake Volta, despite its negative ramification, plays a vital role in supporting the fisheries livelihoods in Ghana. With a complex value chain, the fisheries sector is critical to the employment of several people. From fishermen, fish processors, transporters and marketers, fisheries is a vital sector in the Ghanaian economy. Thus, the growth in fisheries livelihoods due to the creation of the lake has become a blessing to nearly 72,000 people who found new forms of living stemming from the dam project (Daily Graphic, 2014). Béné (2007) reported that fish landings from the Lake rose from 62,000 tonnes in 1969 to 80,000 tonnes in the late 1990s, with about 17,500 canoes fishing in the Lake from some 1,232 villages along the Lake.

In 2010, however, a Canadian company, Clark Sustainable Resources Development (CSRD), was granted license by the Government of Ghana (GoG) to remove the submerged timber from the lake. This project was referred to in policy circles as the 'Volta River Timber Salvage Project'. The timber salvage project is anchored on the discourse of ecological sustainability and aimed at reducing accidents on the lake to make inland water transport safe. Like the original dam project, proponents of the timber salvage project support their arguments with expected employment to be created and that the project would help to improve the local and national economy.

But the operations of CSRD raise several conceptual questions: In what ways is the timber salvage project another profit-seeking initiative to commodify and enclose the lake and its resources? How will the project affect fisheries livelihoods? What new forms of contestations and power asymmetry are at play in the execution of the project? Deploying the conceptual lens of accumulation by dispossession, we analyse the resource contestations and violent protestations surrounding the project, paying particular attention to the resource contestations and the livelihood systems under siege. The study uncovered multiple facets of dispossession and resistance from below. We find that while the project has led to restrictions in fishers' access to the lake for the pursuit of their livelihoods, landowners who lost parts of their lands during the construction of the lake are challenging the ownership of the timber that lies depths below the lake, even as the extractive company and the state accumulate profit. We argue that the project is just another vehicle of accumulation by dispossession. Global connections with other

underwater timber harvesting projects are made, and the inequalities and injustice enacted through the execution of the project are amplified.

The rest of the paper proceeds as follows: Section 2 outlines the conceptual frame within which the paper is situated. We follow this with a section on the study area and the methodology while section four presents our findings and discussion. In the final section, we draw some overarching conclusions and make recommendations.

2. Accumulation by dispossession: a conceptual perspective on resource extraction

Across the world, access to and utilisation of resources are structured by different narratives, discourses, and practices. The central underlying assumption behind the prevailing system regulating resource access and use is the promotion of the common good of society. To acquire a natural resource for any national project, political leaders must be able to frame a justification that is consistent with the "common good of society" narrative that underpins the rules of access to that particular resource. In the case of the Akosombo Dam, the justification for the project was the need to promote industrialisation and meet the energy needs of the country. With the greater good of society narrative far outweighing the adverse effects on livelihoods and ecologies, the Akosombo dam was built without much resistance.

But what happens when the interests of powerful elites are projected in the name of the common good? Throughout history, people have been forced from their means of production and communal wealth has been transformed into private properties – a process described as primitive accumulation (Marx, 1976). A central component of primitive accumulation is the use of coercion to dispossess. Thus, in the context of capital accumulation, dispossession is inevitable. On Lake Volta, the first wave of dispossession occurred when communities lost their lands and ancestral homes to make way for hydroelectricity production to drive industrialisation in Ghana (Tsikata, 2006).

In most instances of capital accumulation, Benjaminsen and Bryceson (2012) observed that local lands or resources are used in the long run to the benefit of powerful elites. Actors such as transnational organisations, states, and local elites are often the beneficiaries of resource commodification to the detriment of the poor. Beyond the narrow definition of dispossession as the deprivation or eviction from rightful possession of property or land (Bennett et al., 2015), this paper shows how state-sanctioned timber extraction on a lake can result in dispossession, albeit in a different form. On Lake Volta, the Timber Salvage Project requires the creation of what Hall (2013) considers enclosures, which dispossess previous users, in this case, fishers, from accessing the lake for their livelihood. These enclosures allow for the Timber Salvage Project to be grounded in discourses of improving the aquatic environment for safe water transport. As shown in the paper, these narratives are mere cloaks for what Corson and MacDonald (2012) described as green grabbing. Green grabbing in this context relates to the restructuring of rules of access (Traldi, 2021) and the use of the lake for livelihood activities.

Harvey (2004) argues that 'accumulation by dispossession' is the mechanism of capital accumulation by appropriating land from the peasantry. This process entails the transfer of communal resources into privatised revenue-generating commodities. Rather than equitable access to and use of resources such as Lake Volta, the Timber Salvage Project is expropriating use rights, creating enclosures, and concentrating the lake that was hitherto more equitably distributed or accessible in the hands of investors. We argue that the project is primarily yet another vehicle of "accumulation by dispossession" (Harvey 2003:74). The displacement of local use rights is essential for capital accumulation.

A central aspect of accumulation is using extra-economic forces to create a conducive environment for accumulation. Essentially, the use rights and ownership of communal resources such as the lake changes with an outcome of exploitation in which capital creates enclosures (Harvey, 2004). Deploying the concept of green/blue grabbing,

Benjaminsen and Bryceson (2012) note that in creating enclosures for capital accumulation, traditional and customary ownership of marine spaces are often not recognised. The enclosures that emerge from accumulation processes transform social relations and limit people's access to livelihood resources (Corson & MacDonald, 2012; Kan, 2019), which in the case of the Timber Salvage Project, entails fishers' livelihoods. Dispossession emerging from green-grabbing (Green & Adams, 2015; Traldi, 2021), as in the case of the Timber Salvage Project, includes the privatisation of the lake and prioritisation of timber extraction for the benefit of the capitalist at the expense of local fisheries livelihoods.

A crucial aspect of accumulation is the enrichment of states, investors, and local elites at the detriment of ordinary people. Thus, in the Timber Salvage project, we explore how the costs and benefits of the project are distributed among different social groups. But also crucial in this paper is understanding the gender-differentiated impacts of the project on the community. The forceful expulsion of people from their livelihood sources is another signature of accumulation by dispossession (Krieger & Lerach, 2016). In the study community, we examine new dimensions of expulsion within the context of access to Lake Volta for fishing and other livelihood activities. Benjaminsen and Bryceson (2012, p. 350) argued that irrespective of the context, the "political economic forces and processes, characterised by power constellations, and in terms of contradictions between the rights and interests of people to land, sea and natural resources vis-a-vis foreign investors and state agencies vying to capture control over land and natural resources, are all strikingly similar".

Scholars like Levien (2015) and Krieger and Lerach (2016) argue that the willingness of the state to dispossess for a particular set of economic purposes and a way of generating compliance to this dispossession are intricately linked. Here, we examine the state's role in enforcing community compliance and the mechanisms deployed to defuse community opposition to the project. Dispossession, as will be shown in this paper, pertains to restricting access to the lake to pursue livelihoods. This access restriction enables capital to operate in the name of salvaging timber from the lake. The multiple ways rural communities access the lake and the diverse linkage to the local community are infringed upon to enable capital accumulation. As will be discussed, this process is possible due to the power asymmetry between states, global capital, and local communities. It is also an outcome of the mechanisms of power deployed by the state in justifying and enabling dispossession in the name of national development.

The implementation of neoliberal policies in sub-Saharan Africa in

the early 1980s (Kashwan et al., 2019) saw a more active withdrawal of the state from being a driver of development to providing an enabling environment for global capital. In Ghana, for instance, this has taken the form of a cutback in state expenditure on social services, deregulation of the currency, and liberalisation of the economy. The major outcome of neoliberal policies like structural adjustment was creating the space for capital accumulation. Indeed, a significant proportion of investments in the Ghanaian economy within neoliberalism have gone into the extractive sector. But crucially, these neoliberal policies, which underpin the current timber salvage project, reflect another expression of accumulation by dispossession. In various regimes of accumulation by dispossession, violence is a major character. In this study, we also examine the different manifestations of violence and how state power is deployed to enforce compliance with accumulation processes.

3. Study area and research methods

The field sites for this study comprised two communities along Volta Lake. These are Akateng and Sedorm in the Upper Manya Krobo and Asuogyaman districts of the Eastern Region of Ghana, respectively (Fig. 1). Sedorm was chosen due to its status as the host community for the processing mill of the timber harvesting company and its closeness to the Akosombo dam while, Akateng was selected because of its status as the largest lakeside market town, and the epicentre for mobilisation and protestation against the timber salvage project on the Volta Lake (see Kofi Siaw, 2018). Both communities are located on the eastern shores of the lake and fall within the semi-deciduous forest and savannah agro-ecological zone. The two studied communities form part of the extensive Voltain Basin, where fishing and farming are the main occupations for the local people (Ofori, 2012).

Most of Akateng's lands were inundated during the construction of the Akosombo dam. The VRA constructed the Dedeso Resettlement for them. However, they abandoned the resettlement community and returned to settle on their lands remaining at the banks of the lake. The same story holds for Sedorm. Only part of their lands were submerged as the lands lie vertical to the lake in line with the Krobo Huza system of land demarcation and settlement (see Benneh, 1970). The situation whereby people abandon their resettled towns is not peculiar to these studied communities. Miescher (2014) reported that several villages that were relocated either returned to settle on the shores of the lake, where they were evacuated from or found other fertile farming lands elsewhere. Akateng and Sedorm have attracted migrant fishermen from

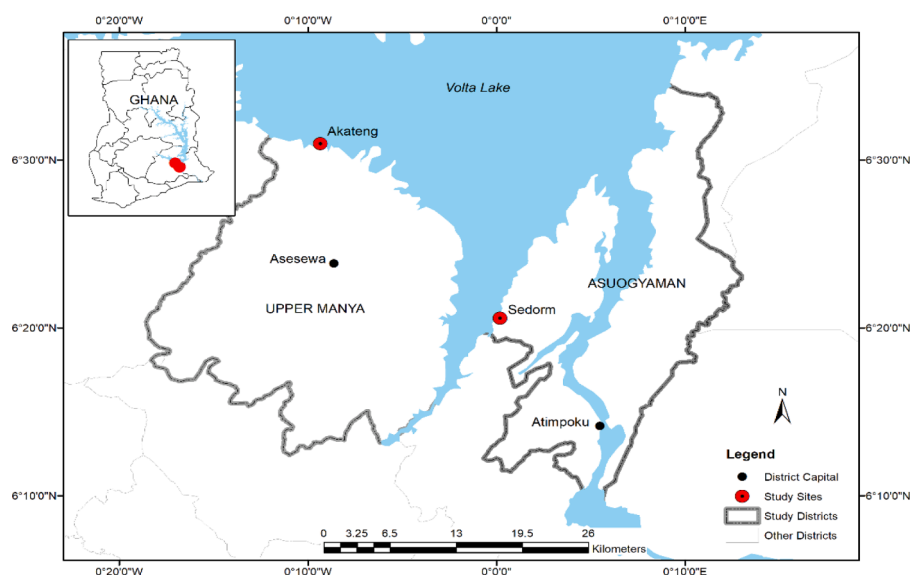


Fig. 1. Map of the studied communities, showing the Volta Lake. Source: UG/IESS.

Table 1

Categories of interviewees and issues discussed.

Category of informant	No.	Topics discussed
Fisherfolk	20	Stakeholder consent processes, livelihood impacts of the project, reasons behind protests, lake access related disputes
Landowners	10	Compensation, ownership of timber, reasons behind protests
Chiefs and community leaders	8	Project within a historical context of the Volta RiverProject, Compensation, Benefit streams, CSR, Negotiations

Source: Fieldwork 2021

different parts of the country as more than 90% of the inland freshwater fish is caught from Volta Lake (Béné, 2007). According to the 2010 Population and Housing Census, Akateng has a population of 3,527 (Ghana Statistical Service, 2010). The exact population of Sedorm is not readily available, but opinion leaders peg it at about 800 people. The two communities are made up predominantly of Krobo and Ewe ethnic groups.

Fieldwork for this study was conducted in December 2021. We interviewed different categories of people (Table 1). Fisherfolk, landowners and community leaders were selected following the purposive sampling technique, where respondents are chosen based on their knowledge about the topic under investigation (see Campbell et al., 2020) and snowballing sampling technique, where interviewees were asked to recommend others that could also be interviewed (see Noy, 2008). We continued recruiting new interview participants in the various categories until we reached a saturation point where there were no significant differences in the responses the new respondents gave, and the interviews were becoming monotonous. Additionally, we drew on three interviews conducted by Fuller (2017) mainly her interviews with the CSRD, the CEO of the new company, Dedeso Holdings Incorporated (DHI) and the Ghana Maritime Authority. Since Fuller's interviews took place just around the transition period between the old and new projects, we believe the responses from the timber companies' officials were more likely to capture the real intentions behind certain decisions they made at the time.

Thus, we draw on empirical material from 38 interviews and two focus group discussions (of fifteen participants) and on secondary materials culled from local and international news publications, relevant literature, and reports on the timber salvage project in specific and the Volta River Project in general. The interviews were transcribed verbatim, coded, and developed into themes. The emerging themes were discussed and interpreted in line with the objectives and theoretical framing of the paper. Table 2 below presents the demographic characteristics of respondents and a summary of the major objections raised.

4. Results and discussion

4.1. Overview of the Timber Salvage project

The underwater logging industry is a novel one, not only in Ghana but across the globe. It is dominated and controlled by corporations headquartered in British Columbia in Canada (Randalls and Petrokofsky 2014). There are approximately 300 million trees buried in reservoirs around the world, worth about USD 50 billion (Crockford, 2008), and this may increase as new areas continue to be flooded. It is estimated that Ghana's Volta Lake contains some 14 million m³ of hardwood trees such as Odum, Wawa, Danta, and Ebony (Fitzgerald, 2008). In 2010, Clark Sustainable Resources Development (CSRD) was granted a license by the GoG to harvest the hardwood trees from the Volta Lake.

CSRD is a Canadian company with the technology and capital to 'salvage' underwater logs. During interviews with landowners and community leaders, it emerged that at the time of the submersion of the trees in the 1960s, the value of timber was relatively low compared to its rising value today. As such, the GoG and the Volta River Authority (VRA), which now legally own and manage the lake, see the timber

salvage project as an opportunity to extract profit from the lake infrastructure aside from its core mandate of generating hydroelectric power from the dam. Owusu et al. (2013) found that timber extracted from the lake is of very high quality and market value. Because the trees are preserved in the freshwater, they are much stronger and preserved from decay by the lake's bog-like conditions and have started to fossilise (Akinyemi, 2019).

Pre-project negotiations took place mainly between the CSRD, GoG, and VRA with a later approval by parliament. In 2006, a preparatory agreement was signed between CSRD and the VRA to harvest wood from underwater forest in the Volta Lake. The preparatory agreement allowed for the project's economic viability and other related studies to be carried out (Ablodepey, 2009). In 2010, a commercial agreement was signed between the same entities for harvesting and processing to start. In November 2010, Ghana's parliament ratified this agreement, and CSRD was given a 25-year concession to operate on the Volta Lake (Daily Graphic, 2014). Commercial extraction, however, started in 2011. We refer to this concession as the 'initial project' in this work. As would be seen, the initial project was violently protested, leading to its folding up after two years of operation. Subsequently, a new company, Dedeso Holdings Incorporated (DHI), took over the operations in 2017. The main actors who planned and implemented the initial project were the GoG, the Volta River Authority (VRA), Ghana's Parliament and the CSRD.

The CSRD is a wholly owned subsidiary of Triton Timber Group¹, with former Canadian prime minister Joe Clark as a major investor. The agreement granted exclusive rights to CSRD to access, harvest, process, and market timber from the Volta Lake. CSRD employed a combination of technologies for its operations, mainly the use of barges, boats, and sonar equipment, as well as the Sawfish and SHARC harvesters, which are remotely operated machinery guided by video, sonar, and GPS navigation used to identify and extract timber from the lake (Akinyemi, 2019). The harvested timber is carried with barges to the mill processing plant located at Sedorm, one of the study communities, for processing. The processed timber is mainly exported to markets in the United States of America, Europe, South Africa, Asia, and the Middle East, except for roundwood (small logs used for furniture), which is sold to the Ghanaian market. It is estimated that each hardwood harvested from the Volta Lake could be worth up to US\$ 2,500, with the total harvest value of all the trees in the lake estimated to be US\$ 3 billion (York, 2009).

4.2. Elitist stakeholder consent processes

There was little or no consultation with communities along the lake. Like the main dam project in the 1960s, local and national elites conceived and negotiated the timber salvage project. Local concerns raised at the implementation stage of the initial project were dismissed by the timber harvesting company. A community leader from Sedorm, the host community for the project, noted: "even we as community leaders were not consulted. They [CSRD] came here one day only to tell us that government and VRA have given them permit to remove the logs in the lake so they were here to tell us they will be starting work soon" (Interview,

¹ See Triton (2011) for more information about this company.

Table 2
Demographic characteristics and summary of major objections raised.

Variable	Group	n	%
Gender	Male	24	63.16
	Female	14	36.84
Age	<30	5	13.16
	30-60	21	55.26
	>60	12	31.58
Occupation	Farming	13	34.21
	Fishing	20	52.63
	Trading (Charcoal, fish, foodstuff, animals)	5	13.16
Ethnic group	Krobo (Dangme)	20	52.63
	Ewe	10	26.32
	Other	8	21.05
Major objections against the timber salvage project	Little or no consultation with lakeside communities before start of project	38	100.00
	Deception of contract	28	73.68
	Local elites facilitated work of timber companies	19	50.00
	Fishers' access to the Lake has been restricted	20	52.63
	Proposed shared use of the Lake between fishers and logging operations did not work in practice	26	68.42
	Project allows capital to accumulate to timber company and government	38	100.00
	Fertile breeding grounds for fish altered	24	63.15
	Reduced fish catch and dwindling incomes of fishers	20	52.63
	Women and children (with less swimming skills) exposed to harm during thunderstorm	19	50.00
	Oil spills and water quality issues	17	44.73
	Low employment opportunities for locals	38	100.00
	Children dropping out of school as fishers cannot afford school fees	30	78.94
	Landowners claim ownership of timber under the Lake	33	86.84
	Demonstrations organised, but respondents do not trust the use of the law court to get justice	31	81.57
	Communities' not made shareholders in the project	88	100.00
	Military used to enforce communities' compliance against their wish	38	100.00
	Communities have already been compensated during dam construction.	2	66.66
	Timber companies have no responsibility to engage communities.	2	66.66
	Less than 20% of the estimated 300 million submerged trees would be salvaged.	1	33.33
	Project will create direct employment opportunities.	3	100.00
	Protests by locals were not legitimate, government must maintain law and order.	2	66.66
	Tree stumps are the cause of accidents on the Lake. Their removal will make navigation safe.	3	100.00
	Fewer fishing nets and boats would be damaged after logs are removed	2	66.66

Table 2 (continued)

Variable	Group	n	%
Environmental permits from state agencies means project is ecologically sustainable.	Fish habitat will not be destroyed	2	66.66
		2	66.66
Bamboo fishing cause of reduced fish stock. Project will end bamboo fishing. Fish stock will increase.		2	66.66
		2	66.66

Sources: Field work 2021; Fuller 2017; Daily Graphic 2018.

Sedorm). This claim was confirmed during a Focus Group Discussion (FGD) with fisherfolk in Akateng where participants agreed to a response given by one of the participants: *"to be sincere with you, we knew nothing before the start of the project. There were no engagements with fishing communities along the lake. So, when we started seeing them on the lake, we called our colleagues in Ketepa and Sedorm and we had a series of meetings. We told them we are not in agreement with what they were doing"* (FGD, Akateng, 24.12.2021).

Officials of CSRD did not educate nor explain to lakeside communities whose livelihoods directly depend on the lake their modus operandi and the technologies they would use. Wayne Dunn, the then CEO of CSRD who later became a founding partner of DHI², argued that the CSRD had *"zero responsibility to engage with communities, other than to tell the fishermen where to remove their nets out of wherever they were going to be harvesting [the logs]."* (Fuller, 2017: 68). The CSRD had underestimated the importance gaining the support of local communities who would be affected directly by the harvesting of timber, and this led to the erosion of community goodwill for the project. The CEO of CSRD himself acknowledged in 2017 that one of the major mistakes they made was that *"CSRD as a company, had no appreciation for the importance of and the ability to work effectively with the communities. And that coupled with (...) some unfortunate choices of leaders of the project led to a total erosion of the goodwill that (...) created a larger goodwill liability of the project"* (Fuller 2017: 68). CSRD, in this regard, failed to deliver societal value along with shareholder value which eventually led to the collapse of the project.

The stakeholder consent discourse holds that companies must have effective engagements with people whose lives would be affected directly or indirectly by their activities, what is now termed as a social license to operate. Studies in the extractive sector in Ghana show that the lack of effective community involvement in planning and implementing projects leads to frustration and conflicts (Ovadia et al., 2020). The initial project was therefore violently protested by fishermen, which eventually led to it being forcibly shut down just two years after it started. Fisherfolk in lakeside communities, particularly Sedorm, Akateng and Ketepa protested through several organised demonstrations and acts of civil disobedience that the lake is the only resource they have got, and that removing the trees would harm their livelihoods. They marched through the streets of Sedorm and pitched camp at the processing plant. The protests continued for weeks until the deployment of the military to the area led to uneasy calm. CSRD had to shut down the project due to their inability to compromise with the fisherfolk.

The stakeholder consent process did not change much when DHI, through its subsidiary Kete Krachi Timber Recovery (KKTR), took over the concession in 2017. CEO of DHI, Elkin Mpianim contended that its predecessor, the CSRD left the project because the GoG failed to maintain law and order. For him, the protests by locals that led to the

² Dedeso Holdings Incorporated (DHI) is the new company that currently has the permit to harvest timber from the Volta Lake through its operational subsidiary, Kete Krachi Timber Recovery. Three prominent officials of CSRD became part of the Board of Directors of DHI.

shutdown of the initial project in 2013 were simply acts of violence that went unpunished by the state: "... this essentially is a law-and-order issue. If you are not willing to maintain law and order as the government, what are you there for? You have people committing acts of violence, and you refuse to step in" (Fuller, 2017: 60). Thus, for DHI, the protests were criminal offences that should have been punished by law.

Although the official said DHI did some engagements with lakeside communities before starting work to avoid the mistakes of CSR, fishers in the studied communities say they were side-lined in the process: "As fisherfolk, it was as if Dedeso [DHI] had no respect for us, or they felt the fact that government gave them permit for the work means they do not need anybody's support to make their work successful." (Interview, Akateng). Respondents in Sedorm, the host community revealed that DHI dealt with only few people in the community: the district chief executive, a landowner from whom the company leased the land for the siting of the milling plant, and a local liaison, who helped and led DHI in the land acquisition process. They say DHI failed to engage extensively to gain their consent because the ruling government empowered it: "the president embraced their work because it fits under his one district, one factory policy and so he did everything possible to promote it and accord it the needed legalities to function. He even came here to launch it himself." (FGD, Sedorm, 22.12.202). The One-District-One Factory policy is one of the current government's flagship initiatives to promote industrialisation and add value to natural resources in all districts (particularly rural and peri-urban) to change their economies and create jobs.

The findings above show that local consent processes were unclear and messy. It shows that elite engagement was prioritised over broader community engagement. It corroborates Roche et al.'s (2019) argument that poor access to information and the use of elitist modes of engagement in extractive sector deal negotiations are crucial factors that drive accumulation by dispossession.

4.3. Opposing discourses and perspectives on the project

As previously mentioned, the commencement of the timber salvage project came with protestations. The project was protested initially by fishermen and later landowners, which eventually led to the initial project being forcibly shut down. While DHI has since 2017 taken over the concession, which is now being promoted under the government's flagship One-District-One-Factory initiative for a concessionary period of 20 years, local communities are contesting: (a) the ownership of the timber resource that is being harvested, (b) the economic, social and environmental benefit claims or storyline espoused and trumpeted by the timber harvesting companies and government, and (c) the restriction of fishers access to the lake to make way for uninterrupted extraction of timber and its ramifications on fishers livelihoods.

While officials of the initial and current timber harvesting projects argue that the land and trees that have been inundated as a result of the construction of the Akosombo Dam have already been paid for through compensations to affected individuals and communities by the state in the 1960s, respondents from the studied communities are contesting this claim in the strongest possible sense, arguing that they were not compensated enough compared to the value of timber today. They blame the use of 'unjust laws and state power' to abrogate their customary use rights, which has led to the commodification of the lake and its resources. As noted by a landowner in Sedorm, "government has bullied us and used unjust laws to take what rightfully belongs to us [timber]. VRA has placed its hands on the lake, and the timber and now the timber harvesting companies have removed all the trees right from here to Yeji." (Landowner, Akateng). Interviewed landowners who lost land as a result of the creation of the lake argue that the execution of the timber salvage project made them lose out on two counts. First, they say their ancestors were evicted from their ancestral homes with meagre compensation to allow electricity generation for the national benefit. Second, they say the current timber salvage project failed to make them shareholders in the benefits of the project as the resource (timber) is being treated as a

government resource "...when the dam started evicting us from here in the 1960s, it was for crops like maize, cassava etc. and tree crops like oranges that we were compensated for and not the land or the trees. Anytime there is any development initiative on the lake, whether fishpond or whatever, it is the VRA that claims ownership" (Landowner, Sedorm).

Corroborating this point, a 72-year-old landowner from Akateng stated: "Since the dam displaced us, nothing has been done for us by VRA and the government, apart from the construction of the Dedeso resettlement quarters, which we don't even live there. So, if our trees that got stacked in the lake are to be removed, communities that lost lands to the lake should have been consulted, and a formula about how the benefits would be shared should have been done. The timber in the lake is for us." (Landowner, Akateng). A 68-year-old community leader in Akateng further contended that: "... Nkrumah's desire to build the dam clouded his judgement. And so, things were done without any proper documentation. The places where they had earmarked that the water would displace us went far beyond. Those submerged lands and tress belonged to us. We do not understand why they are extracting it without giving us anything. We feel a lot of injustice, but what can we do? If we want to go to court, it is the same government officials that we are going to face. They will manoeuvre the system." (Community leader, Akateng).

Indeed, records concerning compensation for the Dam project were not great, as the project was done on a compressed time scale, making it difficult to verify if someone was compensated or not. Kalitsi (2004) argue that compensated lands, for example, were of lesser quality to the lands lost while in some cases, lands and resources were not replaced. He argued further that households that lost less than 20% of their lands were not entitled to livelihood enhancement programmes. This corroborates Tsikata's (2006) argument that one of the main challenges of the Akosombo dam project and its by-products was that the government downplayed the value of community resources at the time. Her analyses of several committee reports revealed that the consideration and focus of government at the time was geared towards those to be resettled and that 'riverine forests to be affected were judged not to contain trees of serious value' for compensation such that the loss was deemed acceptable for the greater good of the public (Tsikata, 2006: 81).

The argument by landowners and community leaders for a shared percentage of revenues from the timber salvage project is legitimate. It is evident from the above that landowners in the studied communities were not necessarily against the project per se but against the fact that the government and VRA have appropriated rights over the timber in the lake. Elsewhere in Nechako reservoir in Canada, the underwater timber harvesting project was jointly managed by the company, the local community, and the government (Randalls and Petrokofsky, 2014: 219). Gilani and Innes (2017), in their study on best practices for underwater timber operations, proposed that local communities and indigenous groups with legal or customary resource use rights should have some degree of control and say in underwater logging deals to avoid commodification and conflicts.

The study, however, found that local elites, particularly the municipal chief executives of three districts along the Volta Lake (i.e., Upper Manya Krobo, Asuogyaman and Lower Manya Krobo districts), which are the most affected by the timber salvage project, have facilitated the work of the companies as they pledged to them their support. These elites maintained that the project was crucial to their respective districts' economic development and that the project's benefits were greater than any other considerations earlier imagined, such as effects on fisheries (Daily Graphic, 2018).

The central argument has been that the project aligns with the national development agenda to promote industrialisation and employment in their districts. These narratives indeed resonate with Traldi (2021, p. 9) description of green grabbing as the "appropriation from the material aspect of land and resources which occurs on the pretext that economic and environmental crises demand adjustments to the capitalist mode of production." Meanwhile, the chief executives of districts are political positions appointed by the president. They receive

conveyance and royalty payments into their internally generated funds to run their assemblies from such projects.

The Lakeside community leaders we interviewed say the government and the companies used the district chief executives as conduits to facilitate the project: *“one day (...) a few other leaders were invited by the DCE. He told us about the project. We objected. We explained how this will affect our work. They said we are lying. That the fishes do not lay eggs in the trees (...). They told us the project cannot be stopped. That it has been approved from above.”* (Community Leader, Akateng). Fisherfolk say local elites and the government supported the project because it benefits them financially than artisanal fishing: *“government is supporting powerful interests as against thousands of fisherfolk. They feel we do not pay tax and so they find the companies extracting the trees more useful”* (FGD, Akateng).

A major argument by proponents of the project was that it would boost the local economy through employment. However, respondents say less than five percent of people employed by the CSRD and later the DHI in both the initial and ongoing timber harvesting projects are local people. Respondents further argue that the few people employed at the milling plant occupy low-grade positions such as security guards and operational assistants. Fishers say top positions have been given to outsiders (people from abroad and elsewhere other than lake-side communities). This, they say, is because they do not have the required skills for underwater operations and the companies involved have also been reluctant to give them skills training to make them employable. The above shows that contrary to claims that the timber harvesting project would boost local employment and expand the local economy, local people are yet to see those benefits. This corroborates Fuller's (2017: 44) argument that DHI's claims that it will create about 1000 direct local employment opportunities (including the expansion of aquaculture) and invest 2% of its revenues into social responsibility projects as contained in one of its widely circulated brochures has been exaggerated. Community leaders interviewed say these claims by DHI were to make them appear as a responsible organisation in the eyes of their investors and government.

Besides the economic argument is environmental. DHI argue that their operations could help Ghana's required 240,000 cubic tonnes of timber a year without cutting a single living terrestrial tree. DHI and its capitalist supporters use terms such as 'rediscovered wood', 'salvaged wood' to make a point that its work is different from terrestrial lumbering activities and, as such a sustainable one that must be supported. DHI argues that this would save the forests on the surface of the earth as concerns of deforestation and Climate Change are major issues on the policy agendas of governments across the world. The company also says removing the trees would help clear navigation channels, reduce accidents, and make lake transport safer. Indeed, Boadu et al. (2021) reported a decline in the number of accidents and death recorded on the lake between 1995 and 2020. Besides the tree stumps, the Ghana Maritime Authority cited bad weather, poor safety checks, and indiscipline on the lake, including drunkenness among boat operators, as other major causes of accidents on the lake (Anim, 2021).

On the contrary, fishers and landowners say the company has invested in the project because the lake has rare species that have been preserved and are now difficult to find in large quantities on the surface of the earth. They say hardwood trees which have been submerged in the lake for more than 50 years are considered one of the most expensive and highly sought after in the wood processing industry. Liking the submerged trees in the lake to terrestrial forests, fishers and landowners questioned why underwater logging is framed as having ecological benefits by proponents of the project in contrast to terrestrial logging which is generally considered ecologically harmful. For them, the underwater logging project was driven mainly by economic reasons rather than environmental and social benefit claims being trumpeted. They also argue that the submerged timber cannot be treated like minerals such as gold under the earth that the government can lay claim to. They say that unlike mineral resources under the earth, the submerged forest

that is now being 'salvaged' were nurtured by their ancestors and that the government and VRA cannot lay claim to it.

Similarly, while officials of the DHI and government argue that the removal of the trees would bring social benefits, including facilitating safer transportation on the lake, fishers and environmental NGOs say the project will lead to the death of more women and children as they would have no place to run to in times of thunderstorm while on the lake: 'because women and children are those who have less swimming abilities, they are ten times likely to die than men in the event of any disaster on the lake. To save more lives, fishermen rush to these trees for safety whenever there is a storm or disaster' (GNA 2011). Fishers say that although the central government and DHI would gain revenue from the project, the transaction is at the expense of women and children who work on the lake and who, without these tree stumps, stand the risk of losing their lives.

4.4. Livelihood implications: winners and losers

Nearly 72,000 people make a living directly from fishing on the Volta Lake (Daily Graphic, 2014). In Akateng and Sedorm, farming, fishing and fisheries-related activities such as fish mongering and fish trading are the most important sources of livelihood for about 90 percent of residents (Field Work). A primary concern raised during the interviews and FGDs was the impact of the removal of trees from the lake on fishers' livelihoods. Fisherfolk told us that the forest in the lake is a major ecological infrastructure that supports and sustains their livelihood. They explained that trees in the lake support fish reproduction and that the ongoing timber salvage project will disturb fish production which is inimical to their livelihoods. A fisher from Akateng told us that: *“for us as fishers, the trees in the lake are the most important infrastructure that supports our livelihoods. It is just like a forest. That is where the fish lays eggs. That is where its fingerlings grow. That is where the fish eats. That is where they hide.”* (24 December 2021). This was a common opinion expressed by most fisherfolk in the studied communities. It was explained that fishers swim down to attach bamboo traps to the submerged standing trees, where fish is attracted by algae and food particles on the stem such that removing the logs had jeopardized their livelihoods.

The importance of the submerged trees to fishers' livelihoods is not peculiar to Akateng and Sedorm. Machado (2018) reported that in other communities surrounding the Volta Lake, fishermen use the submerged trees to support various fishing practices in pursuit of their livelihoods.

Fisherfolk further expressed worry over what they described as deceit about the actual details of the project and its effect on fish catch: *“... we were told that only a few stumps were going to be removed to facilitate easy and safe navigation. This turned out to be a lie. (...) they have removed everything here and have now moved to other areas.”* (FGD, Akateng). And as another fisher told us: *“as they cut the wood from the lake, the fish also left”* (Fisher, Sedorm). Fishers explained that the logs in the water provided fertile breeding grounds for fish and that it was the reason behind the bumper harvest they recorded in the past. An official of DHI however says they are not removing all the trees: *“At full capacity, it would take around 200 years to remove every single tree from the Volta Lake. (...) We are selective about the trees we choose to remove, and there are a number of criteria. One of which is the diameter. So in terms of percentage of trees we will remove, it is probably less than 2%”* (Fuller, 2017: 60-61). But fishers have rejected this claim arguing that no tree has been left in areas of the lake where the timber salvage operations have taken place so far.

Fisherfolk also say oil spills from DHI's operations is killing fish stock. Apart from fishers, some environmentalists have also complained that the project will alter the lake's biodiversity and pose significant risks to its habitat conditions and fish stock (York, 2009) besides water quality issues. DHI, however maintained that the project is environmentally sound and that if it were not, the Environmental Protection Agency of Ghana (EPA) would have raised an alarm. It must be noted that Ghana now does not have a specific law governing underwater logging operations and its activities. DHI did not conduct any new

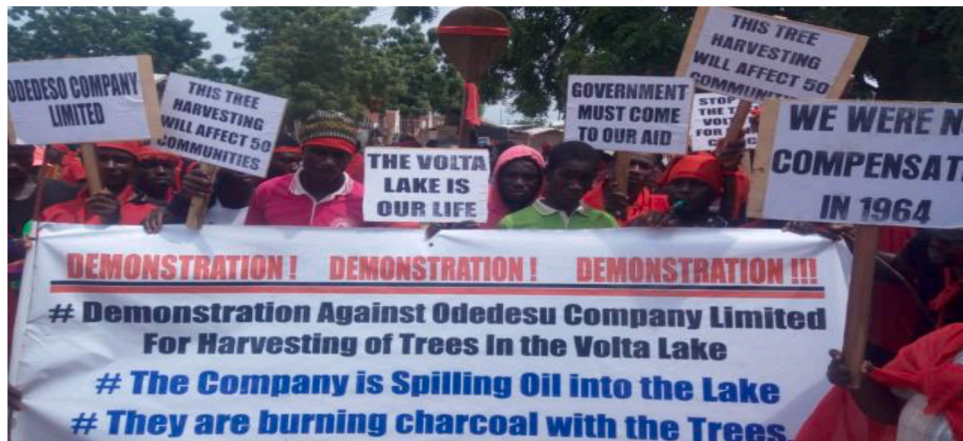


Fig. 2. Placards capturing sentiments of the demonstrators. Source: Kofi Siaw (2018).

environmental impact assessment but had that of CSRD renewed. Neither the government nor the harvesting company had released the environmental impact assessment for the project for public scrutiny (Fuller 2017; Ofose-Boateng, 2012). Elsewhere, underwater logging has led to the pollution of water and decline in reservoir biodiversity (Gilani and Innes, 2017; Tenenbaum, 2004).

While there are currently no known studies documenting the project's actual effects on water quality and fish stock in Ghana, fishers say their fish catch has drastically reduced and their incomes and profits have been eroded. A fisher from Sedorm revealed that he earned about US\$ 350 in a month from fishing on the lake before the start of the project in 2011. However, this has reduced to about US\$ 100 at the time of the interview in December 2021. The interviews and FGDs we held revealed that currently, the average monthly incomes of fishers in the studied communities ranged between US\$ 100 – USD 150 a month, a situation they bemoaned and blamed on the removal of the trees and their (temporary) displacement from the lake during logging operations. Underwater activities have at various times since the start of the project led to the displacement of fishers on the lake. As a fisher from Sedorm stated “we are not allowed to fish near or close to areas where they are removing the trees. Sometime when we set our traps, they [company and navy officials] remove them and destroy our nets. This has almost collapsed our work.” (22 December 2021). A shared use of the lake by the DHI and fishers did not work in the strict sense of the word, as fishers have been displaced from fishing at places they used to fish, leading to complaints of reduced fishing space and fish catch. Fisheries scientists who study inland fisheries in Ghana of which the Volta Lake accounts for about 90% of fish catch have observed a gradual decline in the quantity of fish stocks harvested over the past decade (Abobi and Wolf, 2020; Asiedu et al., 2019). While factors such as unsustainable fishing practices and climate change have been cited as major reasons for the decline, York (2009) argued that underwater timber operations pose a significant risk to fish stock. As the trees served as a safe breeding ground for fish species, the impacts of their removal on fish production cannot be underestimated. Reduced fish catch further poses a non-economic impact on communities, including protein needs, fish diets and cultures.

Besides the displacement and perceived decline in fish stock which fisherfolk said had negatively affected their livelihoods, is the issue of the destruction and loss of their fishing properties and equipment: “I lost more than ten nets through this [the timber salvage project]. They lied to us that they will pay for any fishing equipment they destroy. But they never did”. (FGD, Sedorm). Explaining what has happened in the ten years since the removal of the trees started, a fisher remarked “our work has been destroyed. Our children are now out of school.” (Fisher, Akateng). This suggests that besides the dispossession that took place during the dam formation and now during the timber salvage project, the inability of fishers to take care of their children's educational needs shows the

successive and multi-generational impacts of accumulation by dispossession. However, the CEO of CSRD and founding partner of DHI feels the companies cannot be blamed for the woes of fishers and lakeside communities. He argued “... our little underwater logging project isn't causing (all) that, and we're not going to fix it all on our own, but we are also in a prime position to be blamed for it (because we are harvesting the trees).” (Fuller 2017: 68). Attempts by fisherfolk to protest (Fig. 1) against DHI's operations and its impacts on their livelihood was met again by the deployment of the military to the area to support the company in its operations and to ensure uninterrupted removal of the trees. The state (government) has used the military to police the timber harvesting project, enforce community compliance and diffuse their opposition to the project against their will.

In effect, the willingness of the state to dispose for economic purposes and the ways it generated compliances are linked (Levien 2015; Leroch, 2016). Dispossession was enacted by restricting access to the lake for the pursuit of livelihoods and accumulating capital from the extracted timber at the expense of prior customarily right holders. This restriction of access is done to enable capital to operate in the name of salvaging timber from the lake. Lakeside communities' access to the lake is infringed to enable capital accumulation that largely benefit powerful actors. This corroborates Benjaminsen and Bryceson's (2012) finding that transnational organisations, states, and elites are often the beneficiaries of resource commodification. Beside a few and scattered Corporate Social Responsibility (CSR) projects across the communities



Fig. 3. Hardwood harvested from the Volta Lake
Source: DHI (Dedeso Holdings Incorporated) (2018)



Fig. 4. Hardwood harvested from the Volta Lake
Source: Triton (2011)

(including the funding of a borehole at Sedorm-Yeti for water supply), these communities have nothing to show as benefits from the project even as the associated adverse impacts are enormous. See Fig. 2 showing a photo highlighting the sentiments of demonstrators, and Figs. 3 and 4 showing photos of hardwood harvested from the Lake.

5. Conclusion

The Timber Salvage Project on Ghana's Volta Lake was anchored on the trilogy of ecological sustainability, expansion of the local economy and providing social benefits such as safer lake transport. Contrary to claims that it would boost the local economy and create employment opportunities for local communities, the project led to dispossession – i. e., the restriction of fishers' access to the lake for the pursuit of their livelihoods while the extraction companies accumulate capital. It is a case of double agony for local communities. The banks of the Volta Lake in the Voltain basin have been a site of multiple dispossessions. First communities lost lands and ancestral homes to the construction of the dam (Miescher, 2014; Tsikata 2006). And now fisherfolk are dispossessed of vital fishing grounds, while landowners are denied a share of the benefits of extracting the trees.

The extractive companies involved in the project did not see local communities as direct stakeholders. For them, local communities were already compensated during the first wave of dispossession because of the creation of the lake. As such they should have no say in how the lake, or the submerged timber are managed and utilised. The lack of transparency concerning the project details implies the use of deception as a tool to dispossess. The Ghanaian government (state) and local elites (mainly appointed officers of the president) aligned themselves with the extraction companies instead of protecting community interests. This facilitated the dispossession of fishers fishing space and the appropriation of landowners' customary rights over the timber in the lake. Fishers have fished on the river Volta even before the creation of the lake and have continued to do so after its creation. The timber salvage project has however led to enclosing the commons, a situation that has become an impediment to fishing. The state executed this by summoning its security apparatus – the military to enforce community compliance and diffuse community opposition, even against their will.

Although lakeside community groups that depend on the lake for their livelihoods exercised their agency and adopted measures such as mobilising themselves to protest and register their displeasure against the project and, in some instances, pursued civil disobedience by refusing to remove their nets to allow timber extraction on the Lake, the

deployment of the military by the state and the destructions caused to their fishing nets without any compensation affected their momentum. At the same time, fishers and landowners did not believe the use of the courts will get them justice as they did not believe there is a separation of powers between the government and the judiciary. These power asymmetries ensured that the interest of the state and its capitalist collaborators prevailed while fishers and landowners faced the brunt of the project.

Thus, while the timber extraction companies and the state accumulate wealth from the extraction of submerged timber that lies in the depths of the Volta Lake, the project has proved a great source of disappointment for fishers and landowners in communities along the lake. While the project has created some benefits for a few local elites, most residents of local communities are gnashing their teeth as their livelihoods are under siege. Transnational organisations, states and local elites have become the beneficiaries of the commodification of the lake to the detriment of the poor. The findings raise questions about the treatment of prior resource users' rights in resource development processes. This project primarily functions as another vehicle of "accumulation by dispossession" whereby powerful actors seek to sustain the wheels of capitalism.

In sum, the major outcome of neoliberal policies and the notion of providing enabling environment for foreign investment in Ghana created space for capital accumulation. The lake building and subsequent timber salvage project have created successive and multi-generational impacts where communities continue to be dispossessed to allow capital accumulation.

The study recommends the need for a benefit distribution and management framework that is more capable of capturing multiple actors that lay claim to resources in such complex situations and fairly distributing the benefits of underwater logging projects. This could include making local communities' shareholders in projects where the ownership of the resource to be extracted is historically contested like the timber salvage project on Ghana's Volta Lake. A similar framework has been applied in the Nechako reservoir in Canada where the underwater timber harvesting project is jointly managed by the company, the local community, and the government (Randalls and Petrokofsky, 2014: 219). Secondly, to gain the support of local communities and ensure the sustainability of the current project, DHI should take CSR more seriously. If done well and in collaboration with local communities, CSR can potentially offset the negative impacts extractive projects impose on local communities. Thirdly we recommend that future projects should, at the outset, engage affected communities meaningfully to address all potential conflict triggers such as unresolved compensation issues for different stakeholder groups affected by the project. The maltreatment and intimidation of fishers' using the military should cease going forward if the government and DHI want to regain their trust and cooperation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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