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# **The political economy of fisheries co-management: challenging the potential for success on Lake Victoria**

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## **Abstract**

Co-management has been adopted internationally within fisheries, bringing resource users into management decision-making and action with government and other actors. Research into how success of co-management arrangements can be encouraged has identified a plethora of factors, such as leadership, enabling policy and legislation and clearly defined boundaries of co-management structures and locations. Such research reflects findings within wider literature on success factors for natural resource governance, including Ostrom's 'design principles'. Little attention has been paid, however, to how the wider political and economic context affects co-management specifically and governance of renewable natural resources more generally. Drawing on data from interviews with a range of fisheries stakeholders in Kenya, Tanzania and Uganda, and on secondary sources, the article identifies how the wider political economy is reflected in, and influences, co-management, undermining the potential for success on Lake Victoria. The analysis shows how the political context of competitive authoritarianism in the three countries provides an environment for political interference, constrained resources to decentralized government, insufficient economic growth to offer viable alternative employment to fisheries and endemic corruption. The political economies of the three countries produce a constrained environment in which co-management operates, generating significant challenges to delivering on successful outcomes. The analysis demonstrates the relevance of the political and economic context to natural resource governance and how understanding of the political economy could inform governance design, practice and reform.

Keywords: fisheries co-management, political economy, success factors, Lake Victoria,  
natural resource governance, competitive authoritarianism

## **1. Introduction**

Co-management arrangements have been developed and implemented within fisheries throughout the world (Raakjær Nielsen et al., 2004; Wilson et al., 2003), as a form of natural resource governance involving ‘the sharing of power and responsibility between the government and local resource users’ (Berkes, 2009, p. 1692). The approach has largely been adopted with the aim of improving fisheries management and outcomes, for example by increasing compliance with regulations and establishing property rights systems (Raakjær Nielsen et al., 2004). The involvement of resource users in fisheries management is, however, no guarantee that these aims will be achieved. From this recognition, research has been undertaken to identify factors, or conditions, that enhance the chances of success, with success generally being measured in terms of the sustainability of the fisheries, income for fishers and satisfaction and effectiveness of the process of co-management (Whitehouse and Fowler, 2018). Such studies have focused on identifying factors closely related to, or internal to, co-management. Factors that have been identified include the nature and performance of leadership (Gutiérrez et al., 2011; Pomeroy et al., 2001), having legal mandate in place, external agents facilitating co-management design, development and implementation, groups having clearly defined membership (Pomeroy et al., 2001) and there being a perception that benefits from co-management exceed costs of participation (Napier et al., 2005).

There has been little discussion, however, on whether, and how, the wider political and economic context may affect design and implementation, and hence the potential for success, of co-management. This observation is confirmed by d’Armengol et al.’s (2018) systematic

review of the context, attributes and outcomes of small-scale fisheries co-management. d'Armengol et al.(2018) explain that they had to exclude from their analytical framework variables associated with 'related ecosystems' and 'social, economic, and political settings' because 'almost none of the articles reviewed included information on their respective variables (e.g., climate trends, economic development or demographic trends, among others)' (d'Armengol et al., 2018, p. 214).

Within wider literature on natural resource governance, the external context is referred to almost as a 'black box', acknowledged as a variable that influences rules and procedures within a social-ecological system (McGinnis and Ostrom, 2014). Such context may include '*related ecological systems* and *broader social-political-economic settings*' (McGinnis and Ostrom, 2014: 3; original italics), the political economic structures and historical context (Clement, 2010) and the social, political-institutional and physical environment (Agrawal, 2003).

A common theme of the 'external context' is one of reference to the 'political economy'. Whilst this term is widely used in research and beyond, it is not always defined or unpacked. As a result, there is variation in how a political economy perspective or lens is applied. This article draws on Adam and Dercon's (2009) explanation of a political economy perspective as referring to 'how politics and the institutional structures emerging from different forms of political competition shape policy choices and ultimately economic outcomes' (2009, p. 175). In applying this perspective, the article aims to unpack the political economy to identify what it is about the political economy that is reflected in and constrains the practice and outcomes of fisheries co-management. It does this through an analysis of the political and economic context of co-management on Lake Victoria, East Africa. In so doing, the analysis responds to

the overarching research question: how does the political economy of a country influence the practice and outcomes of fisheries co-management?

Lake Victoria was chosen as a case study for this research as it provides an example of where co-management has been perceived, to an extent, as failing, particularly in terms of not addressing the prevalence of illegalities or improving fish stocks. Analysis to date has focused on co-management itself, particularly at the community level, identifying factors such as kinship ties and corruption as leading to the failure of co-management to prevent or reduce illegalities and improve fish stocks (Etiegni et al., 2017; Nunan et al., 2018). The case was also chosen because Lake Victoria shares many characteristics of other small-scale fisheries in low-income countries, being situated within three countries – Kenya, Tanzania and Uganda – that reflect Béné et al.’s (2010, p. 348) characterisation of having ‘a severe lack of capacity and resources (worsened by the structural adjustment programmes implemented in the 1990s), poor governance and a weak public and private institutional context’. The case demonstrates the relevance of the political economy to understanding the performance and outcomes of fisheries co-management whilst recognising that the specifics of the political economy and fisheries co-management vary between countries. The paper draws on research undertaken in 2015 in the three countries that border the lake, which included the collection of data on perceptions and experience of co-management, and on secondary sources.

The article begins with a review of how the political and economic context is considered in literature on natural resource governance more broadly and co-management specifically, and what it is about fisheries co-management that may make the political economy context particularly relevant. This is followed by background on Lake Victoria and on the design and

introduction of fisheries co-management, and then sections on methods, findings, discussion and conclusion.

## **2. Fisheries co-management and the political economic context**

The focus on identifying factors, or conditions, associated with fisheries co-management delivering on successful outcomes reflects the prominence of literature on characteristics of successful commons governance. This is particularly associated with the work of Ostrom, who identified eight ‘design principles’ required for longlasting and effective commons governance (Ostrom, 1990). These principles themselves are largely internally-focused, for example establishing clear resource and social boundaries and sanctions on non-compliance. Factors outside of a governance system have tended to be clustered as ‘context’ but not unpacked in detail. Agrawal (2003, p. 248) notes in reviewing several studies on factors for sustainable governance of common pool resources that they ‘attend only cursorily to the social, political-institutional, and physical environment in which commons are situated’ and goes on to advise that ‘the state of contextual variables may affect the impact of variables being studied explicitly’ (Agrawal, 2003, p. 251).

Clement (2010) concurs with this view, observing that ‘most commons scholars have little acknowledged how the historical context and politico-economic structures affect rules-in-use and local people’s decisions on NRM [natural resource management]’ (2010, p. 131). Acting on her critique, Clement (2010) ‘politicises’ Ostrom’s Institutional Analysis and Development (IAD) framework to include analysis of power, history and discourse at multiple levels of governance, from the national to the local. In doing so, Clement (2010) includes ‘the politico-economic context’ as an exogenous variable that affects decision-making and outcomes. Clement (2010) does not, however, specify beyond reference to political and economic

structures what falls within the remit of the politico-economic context. Ostrom herself elaborates on the social, economic and political settings in her social-ecological systems framework, a development of the IAD framework (Ostrom and Cox, 2010). A set of second tier variables elaborate on the wider context to include: economic development, demographic trends, political stability, other governance systems, markets, media organizations and technology (McGinnis and Ostrom, 2014, p. 5).

Within fisheries co-management, there is almost no literature that examines how the wider political and economic context may influence design, practice and outcomes (d'Armengol et al., 2018). However, in a review of fisheries co-management approaches in sub-Saharan Africa, Béné et al. (2009) recommend that recognition of the 'political economy of co-management reforms' is needed to explain why co-management is designed in the way it has been (2009, p. 1944). By this, they refer to generating understanding of 'the current political 'landscape'' (2009, p. 1944) to inform the potential for power sharing and influence. Where politics and politicians have been referred to in literature on success factors for fisheries co-management, it is often in relation to whether there is support for fisheries co-management, for example in the form of enabling legislation and finance (Pomeroy et al., 2001).

Two linked key characteristics of co-management offer clues as to what would be important to look for from the political economy to explain how co-management functions and performs. These are its characteristic of involving power sharing between government and resource users (Berkes, 2009) and co-management involving not just the devolution of power to resource users but to local government from central government (Pomeroy and Berkes, 1997). What the 'sharing of power' means in practice varies, in terms of how involved resource users are in policy-making and where responsibilities for different management functions lie (d'Armengol

et al., 2018; Sen and Raakjær Nielsen, 1996). Too often it has been found that power largely remains with government actors rather than resource users. Examples of ‘elite capture’ have also been observed, where actors in a community who already have more power and resources than others are able to capture decision-making structures such as committees and user groups. Béné et al. (2009), for example, found that traditional chiefs were able to capture fisheries co-management in several countries they studied in sub-Saharan Africa and that power remained largely with government, questioning the degree of power-sharing in practice. These inter- and intra-actor power relationships interact and affect the nature and performance of co-management (Quimby and Levine, 2018).

The degree or nature of power-sharing may also be related to the form that co-management takes. Carlsson and Berkes (2005) identify at least five forms of co-management, reflecting the degree of power-sharing and whether the state or community leads. However, they suggest that in practice co-management tends to appear as a ‘network’ of relationships, reflecting the multiple faces and levels of government involved and the involvement of other actors, such as the private sector, with multiple links between actors generating a web of relationships. They conclude that ‘most instances of collaborative or joint management of natural resources are more complex and sophisticated than might be concluded from the mainstream image of co-management defined as the sharing of power and responsibility between the government and local resource users’ (Carlsson and Berkes, 2005, p. 70). This idea of a complex network of relationships suggests that identifying clear demarcations of power-sharing could be challenging in practice.

Power-sharing is also manifested in delegation and deconcentration of government functions and revenue-raising to lower levels of government. Fisheries co-management generally



involves local government as well as central government, yet decentralisation of government functions has experienced challenges in many parts of the world. Mohmand and Loureiro (2017), for example, observe that decentralisation remains incomplete in many countries in Africa, with a lack of funds transferred from the centre to support effective implementation, inadequate revenue raising powers devolved and many national governments having centralisation tendencies. This affects the capacity of decentralised government to engage with co-management.

The relevance of the wider political and economic context to the potential for natural resource governance, including co-management, to deliver on sustainability has therefore been recognised, but little detailed guidance provided on what this specifically includes. The defining nature of co-management as power-sharing and the role of decentralisation in delivering on co-management provide insights in terms of power relations and the unwillingness of central government to cede control.

### **3. Background to Lake Victoria fisheries and co-management**

Bordered by Kenya, Tanzania and Uganda, Lake Victoria is a transboundary lake covering an area of 68,000km<sup>2</sup>, with three main commercial fisheries: Nile perch, Nile tilapia and the smaller, sardine-like, dagaa. Nile perch and Nile tilapia were introduced to the lake by colonial authorities in the 1950s. By the 1990s, the Nile perch fishery was booming, leading to the development of an export industry, with fish processing plants buying up the majority of large Nile perch. In the early 2000s, concern emerged that stocks and catches of Nile perch were decreasing, with the catch reducing from a peak of 340,000 tons in 1990 to around 250,000 tons each year in the 2000s (LVFO, 2015a), attributed to increasing fishing pressure and the prevalence of illegal fishing practices, involving the use of illegal gears and methods, and

catching and trading undersized Nile perch (LVFO 2015a, 2016). Nile perch remains the most economically important fishery (Mkumbo and Marshall, 2015), though the Nile tilapia and dagaa fisheries are important for food security and livelihoods (LVFO, 2015a).

There are estimated to be around 200,000 fishers (boat owners and crew) on the lake (LVFO, 2015b), with many more people highly dependent on the lake fisheries for their livelihood, through activities including processing, trading, transport and providing fishing inputs. People strongly identify with their occupation, with occupational groupings reflected in the design of the co-management system brought in from the late 1990s and early 2000s.

## *2.1 Design of the co-management system*

The national fisheries departments adopted a co-management approach from the late 1990s, influenced by international adoption of this approach as well as concern about reduced capacity within fisheries departments resulting from structural adjustment and the narrative that involving resource users in management will increase compliance with regulations. The design and implementation of co-management began on a national rather than lake-wide basis, with slightly different approaches taken between the three countries, reflecting the design of the initial project that supported co-management and the different systems of government in place. At the time, both Tanzania and Uganda had decentralized government in place, with multiple levels of local government and fisheries staff at decentralized levels employed by local rather than central government. In Kenya, there was a devolved system in place, with fisheries officers employed by central government working at lower levels but reporting straight to the Department of Fisheries. Following the new Constitution in 2010 and passing of the *County Governments Act of 2012*, County Governments were formed. Fisheries officers at devolved

levels may be employed by a County Government or by the centre and responsibilities between the two levels of government were still being worked out at the time of the fieldwork.

The initial design and implementation of co-management was supported with funding from the first phase of the Lake Victoria Environmental Management Project, funded by the World Bank. This involved the development of guidelines in Tanzania and the formation of a few Beach Management Units (BMUs) in each country. In 2004, funding from the European Union through the Implementation of a Fisheries Management Plan (IFMP) project initiated the process of developing a more coordinated, harmonized approach to co-management across the lake, working through the Lake Victoria Fisheries Organisation (LVFO), an organisation of the East African Community.

Members of the fisheries departments in each country formed a Co-management Working Group which drafted a set of harmonized BMU guidelines (Ogwang et al., 2009). These guidelines determined that a BMU is an ‘organization of fisher folk at the beach (boat crew/baria, boat owners, managers, charterers, fish processors, fish mongers, local gear makers or repairers and fishing equipment dealers) within a fishing community’. Each BMU is composed of an Assembly of all members, which should meet every three months, and an elected Executive Committee. Everyone working in fisheries at a landing site is required to register with the BMU, and members elect a committee of between nine to fifteen members every few years, with the frequency of elections set out in national guidelines. The harmonised and original national BMU guidelines (DFR, 2003; Republic of Kenya, 2006; United Republic of Tanzania, 2005) required a certain composition of the Executive Committees based on occupation and gender. This was a reaction to the previous dominance of various forms of landing site committees and leadership by male boat owners and belief that an arrangement

that brought in representation from other occupational groups would be perceived as fairer and as potentially more effective. The Guidelines required 30% of committee members to come from the boat owner category, 30% from boat crew, 30% from the ‘other’ category (including processors, boat and gear makers and repairers and those selling fishing equipment) and 10% of fishmongers/traders. Within the 9-15 members, at least 3 should be women. The national and regional BMU guidelines and regulations set out the functions of BMUs as including participation in enforcement patrols with government fisheries officers and police, keeping a register of people working in fisheries at the beach, receiving newcomers, ensuring that the beach and fish-handling areas are kept clean and developing plans and budgets that feed into local government development plans.

Implementation of the guidelines was supported through the IFMP project in the form of funding fisheries staff and NGOs to raise awareness about the purpose and composition of BMUs, facilitating elections of BMU committees and providing training of committee members in what a BMU should do, financial management and in fisheries management. Since the IFMP finished in 2010, following a two-year extension largely focused on infrastructure development, support to fisheries staff and BMUs in maintaining awareness, training new committee members and monitoring performance has been limited. As discussed in more detail later in the article, the national BMU Guidelines in Uganda were subsequently revised in 2016, reverting back to a dominance of leadership by boat owners.

#### **4. Methods**

The article draws on qualitative research undertaken in 2015 and on secondary sources. The qualitative research involved semi-structured interviews at six fish landing sites in each country bordering the lake, Kenya, Tanzania and Uganda. The landing sites were chosen from different

regions of the lake to capture different experiences related to administration, local politics and location in relation to towns and borders. In Tanzania, three regions border the lake and so two landing sites were selected in one district of each region, Kagera, Mara and Mwanza. In Uganda, two sites were selected within one district each of the west (towards the border with Tanzania), central and east areas (towards the border with Kenya). In Kenya, a similar selection was undertaken to sample from different geographical and administrative locations. The landing sites and districts are not named as sensitive data was collected, particularly in relation to illegalities and corruption, and confidentiality of data was committed to during the process of gaining informed consent for the interviews. Table 1 sets out key characteristics of the landing sites and the number of people interviewed from the different occupational groups and positions of authority. As well as varying in terms of geographical location, the landing sites offered variation in the main fisheries targeted and the number of boats located there.

**Table 1 Key features of landing sites and number of interviewees**

	Kenya	Tanzania	Uganda	Total
Number of landing sites	6	6	6	18
Target fishery				
Mixed	6	3		9
Nile perch only		2		2
Nile perch and Tilapia			4	4
Nile perch and dagaa		1	1	2
Dagaa			1	1
Number of boats at each landing site	72 37 46 130 104 66	21 47 409 135 31 42	48 49 97 314 29 64	N/A
Number of BMU Leaders interviewed	6	6	6	18
Number of boat owners interviewed	12	10	12	34
Number of boat crew interviewed	12	12	12	36
Number of fish processors/traders interviewed	9	12	12	33
Number of government staff interviewed	4	2	6	12

Sampling was undertaken on an occupational basis at the landing sites following the key occupations identified in BMU guidelines, however it did mean that few of the participants were female. 22% of the interviewees were women, which is close to the estimation of female BMU membership in the mid-2000s of 25% (LVFO, undated). Women tend to be more involved in the fish processing and trading activities, rather than going out to fish in a boat, reflecting gender norms within many fishing communities (Weeratunge et al., 2010). Sampling was undertaken using purposive and convenience sampling, reflecting the intention to interview people of certain occupations and positions and the need to sample people present at the landing site at the time, given that long distances were travelled in many cases to get to the landing sites and so sampling could not take place on a random basis using the register of fishers, which may not be up-to-date in all cases anyway.

The data used in this article came from a research project which was primarily concerned with investigating personal networks and experiences and perspectives on co-management. The data on personal networks is not reported on in this article. The semi-structured interviews with fisherfolk had five sections: knowledge of BMU structures, activities and performance; compliance and legitimacy; social groupings; occupation, wellbeing and trust; and, future plans, informed by knowledge of, and attitudes to, the condition of the fisheries. This paper draws on data from several sections, particularly on knowledge of BMU structures, activities and performance, and on compliance and legitimacy.

At the end of the data collection and analysis, a workshop was convened at the LVFO headquarters, at which tentative findings were discussed with national fisheries departments, local government fisheries officers and fisherfolk representatives. This gave the research team

the opportunity to share findings, test conclusions and discuss the implications of the findings for fisheries management.

As well as drawing on this research, the article draws on secondary sources such as fisheries policy and legislation and newspaper articles in relation to fisheries co-management. For the analysis of the political economy context, peer-reviewed journal articles, reports from international organisations, such as the African Development Bank Group and the United Nations Economic Commission for Africa, are drawn on and secondary data on corruption and perceptions of democracy used. Data on perceptions and experience of corruption in the public sector was taken from Transparency International-Kenya (2014). Data on perceptions of corruption of public servants and perceptions of aspects of democracy were taken from Afrobarometer, with the latest data collected in Kenya in 2016 and in Tanzania and Uganda in 2017.

## **5. Findings**

This section presents the findings by analyzing key characteristics of the political and economic context within the three countries and identifying how those characteristics are reflected in the design and practice of fisheries co-management on Lake Victoria. The analysis is presented in four parts: political regimes, nature and performance of decentralised government, the national and local economies, and corruption. These themes were identified in part by the literature review and reflection on the defining characteristics of co-management, and emerged from the fieldwork data as factors external to fisheries co-management effecting practice and outcomes.

### *5.1 Political regimes*

#### *5.1.1 The national level*

The political systems of Kenya, Tanzania and Uganda are ostensibly multi-party democracies yet are broadly characterised by there being limited space for opposition politicians and parties, entrenched patronage systems and a prevalence of corruption. The political regimes have been described as being ‘competitive authoritarianism’ (Kagoro, 2016; Levitsky and Way, 2010), referring to situations where ‘parties use democratic institutions to contest seriously for power, but they are not democratic because the playing field is heavily skewed in favor of incumbents’ (Levitsky and Way, 2010, p. 5). Maintaining power involves clientelism, where systems of patronage secure votes and support, as well as the adoption of multiple strategies to rig the outcomes of elections (Cheeseman and Klaas, 2018), all of which affect the design and implementation of government policy.

The results from national surveys by Afrobarometer (2019) support the picture set out above, with only half of the respondents across Kenya, Tanzania and Uganda believing that there is ‘a democracy, but with minor problems’, being fairly satisfied with how democracy is working in their country and believing that the president never ignores parliament. Only 40% reported that they felt that elections were free and fair. The responses from the survey in Uganda consistently presented a more sceptical view of how democracy is performing in the country compared to Kenya and Tanzania. For example, 44% of the respondents reported that they are not very or are not at all satisfied with the way democracy is working, compared to 18% in Tanzania and 21% reported that they believe the president often ignores parliament compared to 7% in Tanzania and almost 9% in Kenya. Data from elsewhere, such as given in the Economist Democracy Index, which is not based on perception surveys, suggests that all three countries can be described as having a ‘hybrid regime’ (The Economist, 2019), referring to having both authoritarian and democratic elements, supporting Levitsky and Way’s (2010) description of such regimes as competitive authoritarianism.



361

362 The political economy of Kenya has been described as there being an ‘inextricable link between  
363 political and economic interests’, with politicians heavily involved in business affairs and  
364 regimes using business connections to support certain ethnic communities and shore up their  
365 power (Booth et al., 2014: 14). Political parties are fluid, with new parties forming for each  
366 election along ethnic lines. In Tanzania, the ruling party, Chama cha Mapinduzi (CCM) has  
367 dominated national Tanzanian politics since independence in 1962, though with several  
368 changes in leadership and hence President. The most recent incumbent, John Magufuli, was  
369 elected in 2015 on a strongly anticorruption platform. Since his election, however, CCM has  
370 adopted a number of repressive measures to reduce political space for the opposition, with  
371 newspaper suspensions, legislation such as requiring a licence for uploading content online and  
372 prohibiting political rallies; CCM has therefore been described as having taken a ‘sharp  
373 authoritarian turn’ (Paget, 2017, p. 154). Kagoro (2016) argues that competitive  
374 authoritarianism is exemplified in Uganda by the strategies employed by President Museveni  
375 since 1986 of limiting electoral space for opposition parties and crushing opposition through  
376 military violence. President Museveni’s dominance over the military and the ruling National  
377 Resistance Movement has stifled opposition, assisted by the military’s involvement in election  
378 rigging, such as ‘harassment of the opposition, manning of polling stations, staffing ballot  
379 boxes, and directing people on how to vote “wisely”’ (Kagoro, 2016, p. 166).

380

381 Patronage systems enable public sector and political appointments to be made based on  
382 political, social and economic relations rather than being based on merit and democratic  
383 systems. These are often associated with the need to maintain political support but also to grant  
384 favours in exchange for payments from economic actors. Of course, there are complexities  
385 within each political system over time and space, but these broad characterisations provide the

context for analysing how politics has interacted with fisheries co-management on Lake Victoria.

### *5.1.2 Politics and fisheries co-management*

Patronage is the characteristic of political practices described above that was most apparent from the fieldwork. Patronage is demonstrated through interference of politicians in fisheries management, largely in the form of politicians stopping, or preventing, enforcement by government fisheries staff of fisheries regulations. This happens particularly around election times, when politicians are concerned about the voting intentions of their constituents and seek favours from their electorate in return for their vote. Politicians at the village, district/county and national levels were reported to engage in this behaviour. Fisheries staff reported that they are told that they must stop any enforcement action to prevent complaints to local politicians. Local politicians were also reported to intervene in cases where fisherfolk had been arrested, securing their release without any investigation.

Political interference is also manifested through competition between local government and BMUs in some locations over collecting fees from fisherfolk and through conflicting messages regarding which bodies have responsibility for enforcement. BMUs were granted the right to raise revenue to support their work, which some have done, through a membership fee or through a fee to land or sell fish. Fisherfolk are reluctant to pay multiple fees and so this situation has led in some places to conflict over which structure is raising money through such fees and for what purpose. Village level government has also become involved with enforcement at times, with cases reported of village councils stopping BMUs from enforcing regulations.

An extreme case of political interference is provided by the consistent undermining of BMUs in Uganda from their formation on Lake Victoria through political decision-making and, in 2015, by the dissolution of BMUs by President Museveni in the middle of an election campaign. Intervention in the fisheries sector in Uganda initially came about in the belief that BMUs were not a sufficient mechanism to address illegalities. The State Minister of Fisheries between 2006 and 2011, Fred Mukisa, formed an armed unit separate to the fisheries department to enforce regulations. This was undertaken without the support of the Department of Fisheries Resources (DFR) and the police, leading to clashes between the Minister and civil servants (Daily Monitor, 2010).

In the field research, this separate unit known as the Special Enforcement Unit was consistently reported as being under-resourced and not trained in fisheries management. This situation reportedly led to the Unit demanding bribes so that fuel used to travel over land and water could be paid for and money shared between officers. Bribes were demanded from fisherfolk whether fishing legally or illegally. One boat crew explained that ‘Special Enforcement Officers were not given engines, food and boats so they have to gamble and get all the above. So if he borrows fuel and goes to make patrols at the lake and does not come across any fisherman, anyone whom he comes across whether he is involved in illegalities or not has to be made to pay a bribe in order for him to be able to pay the fuel that he has used’. Other interviewees observed how the actions of these officers had undermined the activities of BMUs, with one boat owner explaining that ‘the BMU has failed to fight illegal fishing and this is attributed to the interference of the enforcement officers who claim to be in control/charge of fighting practices of illegal fishing’ and a boat crew observed that ‘the ones who made BMUs to lose track are the special enforcement officers sent by the Minister for Fisheries...When they go on the lake to make patrols, they just confiscate illegal gears and sell them without BMUs knowledge.

They don't report to BMUs at all and they disrespect BMU leaders'. Whitfield et al. (2015) report that the Special Enforcement Unit had been formed as a way of providing income for some of the army, with debates in Parliament on their role in fisheries enforcement. This made it difficult for fisherfolk and the Department of Fisheries Resources to challenge the activities of the unit.

By 2015 the fisheries situation in Uganda had not improved, with illegalities and corruption believed to be rife. During the election campaign in 2015-16, President Museveni abruptly suspended the activities of fisheries officers and BMUs (New Vision, 2015). A press release from the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) issued in December 2015 formally put the ban in place. Museveni's letters reported on in the New Vision newspaper and the MAAIF press release refer to corruption and connivance being rife, with the newspaper article referring to the President also calling for the suspension of police involved in fisheries enforcement. The press release established a three-month suspension of BMU and fisheries officer involvement in enforcement, replacing BMUs with 'fish landing site committees', to be established by the district local governments and authorized by the Chief Fisheries Officer (MAAIF, 2015). The suspension was extended through a press release issued in May 2016 until the end of July 2016 which also reported on a proposal to form a collaborative Fisheries Enforcement Task Force and revise BMU regulations (MAAIF, 2016).

The Special Enforcement Unit was disbanded along with other enforcement authorities in 2015, but subsequently a similar unit was created in 2016 by the then State Minister for Fisheries, allegedly without the support of the President (Daily Monitor, 2016). This initiative led to the training of army officers at the Fisheries Training Institute to form the Fisheries Protection Force (Daily Monitor, 2017). The army continues to be involved in fisheries enforcement, with

much controversy about their actions. Reports of violence and destruction of nets and boats (see, for example, Mudliar, 2018) led to the Speaker of Parliament to call on the Prime Minister to report on what action was being taken to address the actions of the army within fisheries (Parliament, 2018). The involvement of the army in cracking down on illegal fishing activities formed part of a regional approach to enforcement, supported by a regional fisheries programme SMARTFISH, funded by the European Union. Burning of illegal fishing gears took place in both Uganda and Tanzania as part of this programme (Stop Illegal Fishing, 2016).

Following the 2015 political intervention, the national BMU guidelines in Uganda were revised. Rather than an equal number of boat crew, boat owners and members from the ‘other’ category, the new guidelines provide for greater representation of the boat owner category, with 5 of 9 Executive Committee members to come from the boat owner category, 2 from the boat crew, 1 fishmonger and 1 from the ‘other’ category. Although these new guidelines have been approved in Uganda, they had not been implemented by the time of writing, with Fish Landing Site Committees still in place following the dissolution of BMUs in 2015.

Whilst Museveni’s motivation for suspending the BMUs and the work of fisheries officers and the police in enforcement may not be fully known, it is possible that the voting outcomes of the 2011 election influenced Museveni’s action. It is reported that 52 percent of voters in fishing constituencies around Lake Victoria voted for Museveni in 2011, compared to 69 percent on average throughout the country and over 90 percent in the President’s home area of the southwest (Kjær et al., 2012). These figures may have caused concern for Museveni about the voting intentions of fisherfolk around the lake and led him to take action to punish apparent opposition supporters. Kantel (2019) supports this view from fieldwork in Uganda, arguing that the abolition of the BMUs and the introduction of the army to enforce regulations in

2017/18 ‘can be interpreted as efforts by the government to secure an increasingly authoritarian hold on state power’ (2019, p. 452). Kantel (2019) further argues that this is achieved through portraying parts of the fishing population as criminal and illegitimate and as a threat to peace and security.

This long example from Uganda is significant for at least two reasons. Firstly, it demonstrates the lengths that Museveni would go to in practising ‘competitive authoritarianism’. Secondly, the measures Museveni took have had a long-lasting effect on fisheries co-management and will do into the future.

## *5.2 Decentralized government*

### *5.2.1 National systems and practice of decentralized government*

In all three countries, a decentralized system of government is in place, most recently introduced in Kenya following the 2010 Constitution. District (Uganda and Tanzania) or County (Kenya) governments, and government structures below this level, have elected members and administrative officers, including officers with portfolios that relate to specific ministries, such as fisheries officers and assistants. The power and effectiveness of decentralized government has, however, been found to be limited, with local government dependent on central government for resources and policy direction. In Uganda and Tanzania, it has been shown that central government retains much control over local government through limiting revenue generation (Awortwi, 2011; Kakumba, 2010; Venugopal and Yilmaz, 2010) and making appointments to senior positions (Hulst et al., 2015; Venugopal and Yilmaz, 2010). Due to reliance on central government for funding, local governments are more concerned about upwards rather than downwards accountability. Hulst et al. (2015, p. 369) reports that in Tanzania, ‘central government control over local politics and administration is tight’.

511

512 As well as local government being dependent on central government for funding, power is  
513 manifested in the creation of new districts. In Uganda, Awortwi and Helmsing (2014) report  
514 that at least eight new districts were formed per year between 2005 and 2010 and that their  
515 analysis on the motivation for forming new districts demonstrated that President Museveni  
516 drove the process to maximise the potential for support to keep himself in power.

517

518 Although County government is quite recent in Kenya, several concerns have already been  
519 raised about the system and its performance. The County government system presents a parallel  
520 system to national government, with sectoral officers, including fisheries, appointed in some  
521 areas by both County and national government (Cheeseman et al., 2016). In addition, d'Arcy  
522 and Cornell (2016) found that decentralisation in Kenya has not reduced corruption, rather a  
523 situation has evolved where it is seen as "'everyone's turn to eat'" (2016, p. 271).

524

#### 525 *5.2.2 Capacity and role of fisheries staff in decentralized government*

526 The lack of power and effectiveness within decentralized government is reflected in the  
527 fisheries sector, including in the adoption of co-management itself. One of the motivations for  
528 introducing co-management in the region was to address the lack of capacity in government to  
529 manage the fisheries, in terms of staff and resources to reach all parts of the lake and enforce  
530 regulations (Ogwang et al., 2009). One fisheries officer observed that 'our staff is lean, so we  
531 do collection of data through the BMU, they also help us in doing MCS, security at the beaches,  
532 conflict resolution at the beaches and cross border issues. They are very useful in that'. A BMU  
533 leader supported this view, explaining that 'the fisheries staff alone could not manage the  
534 lake...the fisheries officer at the landing was one but the BMU Committee has many...we are

535 the resource users, whereby we could be even more interested than somebody who...is not  
536 even a resident or a settled man in this place’.

537

538 Despite this, not all fisheries officers were supportive of this ‘additional capacity’, believing  
539 that the formation BMUs was a threat to their jobs: ‘it is like some officers who were in the  
540 system before looked at co-management as something that is taking power ... some bit of power  
541 from them, and which they never liked. So they worked against that. They worked tirelessly to  
542 ensure co-management fails’. Some BMU leaders shared a similar view, with the formation of  
543 BMUs explained as ‘the powers that the Department of Fisheries had was given to the BMU’  
544 and another that ‘by introduction of the BMUs at that time, the work of the fisheries staff at the  
545 landing site was terminated. It was taken on by the BMU committees’.

546

547 Differences in views about the purpose of co-management and the role of government officers  
548 in co-management may reflect the absence of a definition of co-management in policy and  
549 legislation. Table 2 sets out how the remit for co-management is catered for in national policy  
550 and legislation. The *Kenyan Fisheries Management and Development Act of 2016*, for example,  
551 makes only one reference to co-management and this is in relation to the remit of BMUs. In  
552 the Tanzanian National Fisheries Policy of 2015 there is no explicit mention of BMUs, other  
553 than a definition, and the word ‘co-management’ is used once. In addition, the policy sets out  
554 a list of local government functions but these do not set out clear roles in terms of co-  
555 management other than promoting formation of fisherfolk associations. Instead, the policy  
556 refers to ‘decentralisation and devolution’, referring to the broader approach to decentralizing  
557 government functions in Tanzania (Hulst et al., 2015), and to the creation of community-based  
558 fisheries management. In the Ugandan policy, co-management is referred to but no definition  
559 is provided. A draft fisheries bill has been under consideration for more than a decade and so



the 1970 Bill still stands, with no mention of co-management. This lack of reference to BMUs and explicitly to co-management calls into question the governments' commitment to the approach and contributes to diverse views about the purpose and nature of co-management within local government and fishing communities.

<TABLE 2 HERE>

### *5.3 The national and local economies*

#### *5.3.1 National economies*

Most East African economies recorded impressive growth rates since 2003, with notable exceptions of the fragile states of South Sudan and Somalia. In 2017, the growth in average GDP was 5.9% in the region. Despite an impressive rate of growth, poverty remains endemic and the agricultural sector has kept its position as the largest contributor to GDP (ADBG, 2018). This reliance on the agricultural sector is under pressure due to climate change, with drought in 2016 leading to a sharp decline in output (UNECA, 2018). Although economic growth rates have been impressive, they have not been at a level that has made a difference to employment and poverty reduction and insufficient employment generation means that many people continue to rely on agriculture for their livelihoods. Levels of government revenue have remained low, limiting investment in the economy at the local and national level (UNECA, 2018).

#### *5.3.2 Fisheries employment and funding of the sector*

Given the employment situation described above, fisheries remains an attractive sector for income-generation, despite concerns about reduced catches. Money can be earned far more quickly in fisheries than in agriculture and, if working as a boat crew, no capital is needed. This

places pressure on the fisheries and on the potential for co-management systems to manage fishing effort. Increasing fishing effort is one of several factors that encourages illegal fishing, as illegal methods and gears become essential as smaller fish remain. This situation makes it challenging for BMUs to enforce regulations and for co-management to deliver on reduced illegalities. The lack of alternative income-generating opportunities and high levels of poverty therefore impact on the potential for co-management to succeed.

Funding for the work of fisheries staff comes from central and local government, with government departments and officers competing with other sectors, including health and education, for limited funds. The sector therefore often relies on donor-funded projects to support infrastructure and activities beyond basic staffing and running costs. There have been efforts over the last twenty years to develop a Fish Levy Trust Fund in the three countries bordering the lake, which would generate funds through taxation and donations, providing a sustainable source of funding to support management and development of the sector. Progress has been slow in getting the Trust Fund up and running, though there are signs that efforts may be renewed with Kenya including the formation of a Fish Levy Trust Fund in the 2016 *Fisheries Management and Development Act No. 35* and the LVFO Strategic Plan 2016-2020 including an action to ‘fast track’ the Fish Levy Trust Fund (LVFO, 2016). The Fund would take money away from revenue going directly to government and this is perhaps a reason for the slow progress in establishing the Trust Fund.

At the local government level, fisheries staff repeatedly stated that they receive insufficient funding to cover the costs incurred in travelling to landing sites and being away from their station for several nights, which is essential, particularly for district/county officers given the distance of some landing sites from district/county headquarters. Fisheries staff at the district

or county level seek funding for their activities at that level rather than receiving funds directly from the fisheries ministry. They are competing for very limited funds, with much of the funding coming from national government to the district or county for specific activities, with little raised locally. Instead of the sector receiving adequate funding, the sector is seen as a source of revenue for local government, with a landing fee and fee associated with the sale of fish serving as important sources of revenue for local government. The collection of these fees are put out to tender, with the successful tenderer, which is sometimes a BMU, collecting much more than the minimum fee payable to the local government. This means that whilst revenue may sometimes stay within the sector, if a BMU wins the tender, very often much of the revenue does not stay within the sector, losing an opportunity for investment (Nunan, 2014). Boat license fees go to central government in Uganda, to the County government in Kenya and to district local government in Tanzania, representing an incentive to provide as many licenses as possible to generate revenue. A further source of revenue comes in the form of the Fish Movement Permit, which was brought in to enable fish to be traced as a result of concerns by the European Union about traceability and quality. In Uganda, 25% of the FMP revenue is supposed to be returned to the BMU but this does not always happen in practice. There is also an export levy charged on exported fish and fish products, though not all of this goes back into the sector.

There are then sources of funding to support co-management through BMUs raising funds and funding to government staff to travel to landing sites and work with BMUs. However, this is very limited and inadequate funding has led to delays in BMU Committee elections and insufficient support to BMUs, particularly where new committees have been elected yet there is no training in legislation and functions.

## 5.4 Corruption

### 5.4.1 Corruption within the three countries

Corruption has been described as being endemic, or embedded within the three countries (Asiimwe, 2013; Hope, 2014; Muhumuza, 2016), with the Corruption Perceptions Index of Transparency International ranking Tanzania, Kenya and Uganda 117, 139 and 139 respectively out of 168 countries (Transparency International, 2016). A bribery survey in East Africa reported that the majority of respondents described the level of corruption as high and that it had increased in the previous year (Transparency International-Kenya, 2014). As shown in Table 3, data from Afrobarometer (2019) on perceptions of the involvement of government officers and elected members in corruption found that at least some of the officers/elected members were perceived to be engaged in corruption, though the numbers are higher in Uganda and Kenya than in Tanzania. Police officers received the highest response in the ‘most’ category for the countries overall.

**Table 3 Perceptions of involvement in corruption**

	Kenya	Tanzania	Uganda	All
Government officials				
Some	42.2	52.8	42.2	47.1
Most	38.7	9.8	32.8	24.0
All	8.2	2.0	17	7.3
Total	89.1	64.6	92.0	78.4
Local government councillors				
Some	42.3	49.9	50.4	47.7
Most	32.7	7.6	26.6	19.7
All	12.1	2.0	11.4	7.3
Total	87.1	59.5	88.4	74.7
Members of Parliament				
Some	40.2	44.3	46.3	43.5
Most	35.9	6.5	26.4	20.1
All	10.9	1.3	13.4	7.0
Total	87.0	52.1	86.1	70.6
Police				
Some	25.1	40.5	23.6	31.9
Most	37.3	31.0	34.6	33.7
All	28.5	5.5	35.8	19.6

Total	90.9	77.0	94.0	85.2
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Source: Afrobarometer (2019)

Asiimwe (2013, p. 130) attributes corruption in Uganda to “neo”-patron-clientelism and a skewed power structure that enables institutional and social manipulation’, with neo-patrimonialism in enabling the prevalence and sustenance of corruption. Corruption is viewed as undermining the delivery of public services, the nature of democracy and societal values, as well as removes resources away from development activities (Hope, 2014).

#### *5.4.2 Corruption within fisheries*

In the research, interviewees were not asked any questions about corruption in the sector. There was, however, a section of questions about their experience of illegalities, why they think people conduct illegal fishing and how prevalent they believe illegalities to be. Around 50% of boat owners and boat crew across all three countries referred to corruption when responding to questions on illegalities, and 30% of fish traders/processors. In these responses, actors from all stakeholder groups involved in fisheries and in enforcing legislation and regulations were alleged to be involved in corrupt practices – BMU leaders, village council members, fisheries staff, police officers and the judiciary. This finding reflects the perceptions of involvement in corruption by government officers and elected members reported on in Table 3.

Corruption was reported to take place largely through either regular payments made to allow illegal gears to be used or payments offered or demanded when someone was caught using an illegal gear or method, or selling undersized fish. It was claimed that such practices undermine the willingness of BMUs to become involved in enforcement and that corruption perpetuates illegalities. Despite the close connection between corruption and illegalities, there is no

mention of corruption in strategies and plans to tackle illegal fishing practices (Nunan et al., 2018).

## **6 Discussion**

The political economy of fisheries co-management has been explored through four interlinked areas: characteristics of the political regime, decentralisation of government functions and power, the level and growth of the economy and prevalence of corruption. In each area of analysis, the situation found within the wider political economy is reflected in the practice and outcomes of fisheries co-management.

In relation to the political context, the regime in all three countries has been described as ‘competitive authoritarianism’, where the apparatus of democracy is in place, in the form of opposition parties and regular elections, but the incumbent president or party abuses state power to ensure that the opposition is at a distinct disadvantage, thus keeping hold of power over decades. Levitsky and Way (2010) identify several characteristics of competitive authoritarianism that may influence and inform practice beyond national elections and beyond the ruling party. These include the centrality of informal institutions in keeping hold of power over time, which, in relation to elections includes ‘vote buying, ballot-box stuffing, and manipulation of the vote count’ (Levitsky and Way, 2010, p. 27). Levitsky and Way (2010) also note characteristics of organized corruption, informal mechanisms of repression and ‘privatized’ violence of competitive authoritarian regimes. These mechanisms are used rather than more transparent mechanisms to keep the façade of democracy whilst suppressing opposition and unrest.

The influence of competitive authoritarianism on fisheries co-management is seen in at least the following ways: interference of politicians in the elections of BMU committee members; interference by politicians in enforcement by fisheries officers; control of policy and funding by central government despite decentralization; a militarized approach to enforcement, with burning of illegal gears in Tanzania and Uganda; deployment of a Special Enforcement Unit in Uganda outside of the fisheries department, formed of military personnel, without fisheries training and adequate resources; and, corruption being endemic within the fisheries sector, and closely linked to illegal fishing activities, reflecting the endemic nature of corruption within the public sector in the three countries and the ‘organized corruption’ associated with competitive authoritarianism. President Museveni’s interference in fisheries governance by banning BMUs and stopping the work of fisheries officers during an election campaign is particularly notable as a potential strategy to prevent opposition supporters from mobilising through BMUs.

These illustrations of the reflection of the political regime within the fisheries sector impact on the practice and outcomes of fisheries co-management. Political interference, ongoing corruption and a militarized approach to enforcement go against the spirit of co-management of power-sharing and collaboration, thus undermining the legitimacy of co-management and potential for it to succeed. Constrained decentralization of government functions and resources, and limited alternative opportunities for employment and income-generation outside of fisheries, can also be linked to the political context and to impacts on the potential for co-management to succeed in delivering on more sustainable fisheries.

The context provided by the political economy clearly affects at least some of the enabling factors and conditions identified as being necessary for co-management success. For example,

Pomeroy et al. (2001) identify political support and adequate financial resources as being conditions important for effective co-management. Political support should be constructive, with Pomeroy et al. (2001) suggesting that if politicians in any way oppose co-management, the system will not work. There is certainly evidence of unhelpful political action and decision-making on Lake Victoria, creating conditions that are not conducive for effective co-management. In terms of financial resources, funding through local government was found to be inadequate and challenges were experienced in generating sufficient funds through fisheries.

The analysis has also unpacked the wider context referred to in frameworks such as the social-ecological systems framework (McGinnis and Ostrom, 2014) and identified as absent in several analyses of governance of common pool resources by Agrawal (2003) and Clement (2010). Different characteristics of the political economy may be more relevant in different countries and over time, but the analysis demonstrates the value of unpacking the political economy context to explain the practice and outcomes of co-management, and of natural resource governance more generally.

## **7. Conclusion**

The evidence strongly shows how influential the wider political economy is on the practice of co-management, confirming that the practice and performance of fisheries co-management cannot be examined by focusing on co-management alone. The wider political and economic context matters: characteristics of the wider political system are reflected in fisheries and affect the practice and outcomes of co-management through political interference and patronage; the insufficient devolution of power and resources through decentralisation to local government also affects, and is reflected in, co-management; the reliance on agriculture in the national economies and high levels of income-poverty continue to make fisheries an attractive sector



and makes it difficult to exclude people from the sector through limiting fishing capacity; and, corruption within fisheries reflects the nature and prevalence of corruption within the public sector more broadly. The context of competitive authoritarian regimes in the three countries constitutes the ‘politics and institutional structures’ that ‘shape policy choices and ultimately economic outcomes’ (Adam and Dercon, 2009, p. 175), thereby supporting the contention that taking a political economy lens to the analysis of the wider context of co-management enables identification of political decisions and actions that influence the practice and outcomes of co-management.

Understanding of the political economy of co-management enables identification of not just why co-management may not be working as desired but also how and why it will be constrained and why alternative strategies for its development and effective performance may be needed. The analysis suggests that motivations for the way actors behave affect co-management and that these can be identified through analysis of the political economy. Understanding motivations for behaviour could inform the design or reform of a co-management system so that sources of motivation are addressed where possible and appropriate. The analysis also shows that there is a limit to what can be achieved in supporting or reforming any co-management system. Some of the sources of influence for the way actors behave and for the factors that affect the practice of co-management are beyond the co-management system itself.

The findings and conclusions are significant owing to the scale of adoption of fisheries co-management in low-income countries and beyond. Evans et al. (2011, p. 1939) reported that their review of fisheries co-management had found 221 examples ‘in over 50 countries in the developing world’, confirming claims that co-management has been adopted across the world. However, the argument that analysis of the political economy is essential for contributing to

explanations of the performance and outcomes of fisheries co-management can also be made for natural resource governance more broadly. This includes community forest management, community-based conservation and protected area management, where politics and power in particular have already been shown to impact on policies and governance (Bluwstein and Lund, 2018; Calfucura, 2018; Kashwan, 2013).

The findings and analysis reported on contribute to an opening up of the ‘black box’ of the political-economic context of common pool resource or social-ecological systems governance. Analysis and understanding of the political regimes in place, and how these affect the economy and decentralized government, is particularly encouraged by the findings of this case. Further research into the wider political and economic context of natural resource governance, particularly in terms of explaining the potential for success, is essential for moderating expectations as well as informing support, interventions and reform.

## References

- Adam, C., Dercon, S., 2009. The political economy of development: an assessment. Oxford Review of Economic Policy 25 (2), 173–189. <https://doi.org/10.1093/oxrep/grp020>
- Agrawal, A., 2003. Sustainable Governance of Common-Pool Resources: Context, Methods, and Politics. Annual Review Anthropology 32, 243–62. <https://doi.org/10.1146/annurev.anthro.32.061002.093112>
- African Development Bank Group (ADBG), 2018. East Africa Economic Outlook 2018. African Development Bank Group, Côte d’Ivoire.
- Afrobarometer (2019) Afrobarometer survey <https://www.afrobarometer.org/> Accessed 18/06/2019.
- Asiimwe, G.B., 2013. Of Extensive and Elusive Corruption in Uganda: Neo-Patronage, Power, and Narrow Interests. African Studies Review 56 (2), 129– 144. <https://doi.org/10.1017/asr.2013.45>
- Awortwi, N., 2011. An unbreakable path? A comparative study of decentralization and local government development trajectories in Ghana and Uganda. International Review of Administrative Sciences 77 (2), 347–377. <https://doi.org/10.1177/0020852311399844>
- Awortwi, N., Helmsing, A.H.J., 2014. In the name of bringing services closer to the people? Explaining the creation of new local government districts in Uganda. International Review of Administrative Sciences 80 (4), 766–788. <https://doi.org/10.1177/0020852314533455>

811

812 Béné C, Belal E, Baba MO, Ovie S, Raji A, Njaya F, Andi MN, Russell A, Neiland A (2009)  
813 Power struggle, dispute and alliance over local resources: analyzing ‘Democratic’  
814 decentralization of natural resources through the lenses of Africa inland fisheries. World  
815 Development 37 (12), 1935–1950. <https://doi.org/10.1016/j.worlddev.2009.05.003>

816

817 Béné, C., Hersoug, B. and Allison E. H., 2010. Not by Rent Alone: Analysing the Pro-Poor  
818 Functions of Small-Scale Fisheries in Developing Countries. Development Policy Review 28  
819 (3), 325-358. <https://doi.org/10.1111/j.1467-7679.2010.00486.x>

820

821 Berkes, F., 2009. Evolution of co-management: Role of knowledge generation, bridging  
822 organizations and social learning. Journal of Environmental Management 90 (5), 1692–1702.  
823 <https://doi.org/10.1016/j.jenvman.2008.12.001>

824

825 Bluwstein, J., Lund, J. F., 2018. Territoriality by conservation in the Selous–Niassa Corridor  
826 in Tanzania. World Development 101, 453-465.  
827 <https://doi.org/10.1016/j.worlddev.2016.09.010>

828

829 Booth, D., Cooksey, B., Golooba-Mutebi, F., Kayinga, K., 2014. East African Prospects. An  
830 update on the political economy of Kenya, Rwanda, Tanzania and Uganda. Overseas  
831 Development Institute, London.

832

833 Calfucura, E., 2018. Governance, Land and Distribution: A Discussion on the Political  
834 Economy of Community-Based Conservation. Ecological Economics 145, 18–26.  
835 <https://doi.org/10.1016/j.ecolecon.2017.05.012>

836 Carlsson, L., Berkes, F., 2005. Co-management: concepts and methodological implications.  
 837 Journal of Environmental Management 75 (1), 65-76.  
 838 <https://doi.org/10.1016/j.jenvman.2004.11.008>  
 839  
 840 Cheeseman, N., Klaas, B., 2018. How to Rig an Election. Yale University Press, New Haven,  
 841 USA.  
 842  
 843 Cheeseman, N., Lynch, G., Willis, J., 2016. Decentralisation in Kenya: the governance of  
 844 governors. Journal of Modern African Studies 54 (1), 1-35.  
 845 <https://doi.org/10.1017/S0022278X1500097X>  
 846  
 847 Clement, F., 2010. Analysing decentralised natural resource governance: proposition for a  
 848 “politicised” institutional analysis and development framework. Policy Sciences 43, 129–156.  
 849 <https://doi.org/10.1007/s11077-009-9100-8>  
 850  
 851 Daily Monitor, 2010. Government officials clash over fish industry  
 852 <http://www.monitor.co.ug/News/National/688334-922652-brskbrz/index.html>, accessed  
 853 02/01/2018  
 854  
 855 Daily Monitor, 2016. Minister defies Museveni on disbanded fisheries team, Available at:  
 856 [http://mobile.monitor.co.ug/News/Minister-defies-Museveni-disbanded-fisheries-](http://mobile.monitor.co.ug/News/Minister-defies-Museveni-disbanded-fisheries-team/2466686-3201902-format-xhtml-dd5n0s/index.html)  
 857 [team/2466686-3201902-format-xhtml-dd5n0s/index.html](http://mobile.monitor.co.ug/News/Minister-defies-Museveni-disbanded-fisheries-team/2466686-3201902-format-xhtml-dd5n0s/index.html), accessed 02/01/2018.  
 858  
 859 Daily Monitor, 2017. Uganda losing millions in illegal fishing says ministry

860 [http://www.monitor.co.ug/News/National/Government-losing-millions-illegal-fishing-](http://www.monitor.co.ug/News/National/Government-losing-millions-illegal-fishing-ministry/688334-3896446-us9vu9z/index.html)  
861 [ministry/688334-3896446-us9vu9z/index.html](http://www.monitor.co.ug/News/National/Government-losing-millions-illegal-fishing-ministry/688334-3896446-us9vu9z/index.html), accessed 02/01/2018  
862  
863 D’Arcy, M., Cornell, A., 2016. Devolution and Corruption in Kenya: Everyone’s Turn To Eat?  
864 African Affairs 115 (459), 246–273. <https://doi.org/10.1093/afraf/adw002>  
865  
866 d’Armengola, L., Castillo, M. P., Ruiz-Malléna, I., Corbera, E., 2018. A systematic review of  
867 co-managed small-scale fisheries: Social diversity and adaptive management improve  
868 outcomes. Global Environmental Change 52, 212–225.  
869 <https://doi.org/10.1016/j.gloenvcha.2018.07.009>  
870  
871 Department of Fisheries Resources (DFR), 2003, Guidelines for Beach Management Units.  
872 Ministry of Agriculture, Animal Industries and Fisheries, Entebbe, Uganda.  
873  
874 Etiegni, C.A., Irvine, K., Kooy, M., 2017. Playing by whose rules? Community norms and  
875 fisheries rules in selected beaches within Lake Victoria (Kenya) co-management. Environment,  
876 Development and Sustainability 19 (4), 1557-1575. doi:10.1007/s10668-016-9799-2  
877  
878 Evans, L., Cherrett, N., Pems, D., 2011. Assessing the impact of fisheries co-management  
879 interventions in developing countries: A meta-analysis. Journal of Environmental Management  
880 92, 1938-1949. doi.org/10.1016/j.jenvman.2011.03.010  
881  
882 Gutiérrez, N.L., Hilborn, R., Defeo, O., 2011. Leadership, social capital and incentives promote  
883 successful fisheries. Nature 470, 386-389. doi:10.1038/nature09689  
884

885 Hope, K.R., 2014. Kenya's corruption problem: causes and consequences. *Commonwealth &*  
886 *Comparative Politics* 52 (4), 493-512. DOI: 10.1080/14662043.2014.955981  
887

888 Hulst, R., Mafuru, W., Mpenzi, D., 2015. Fifteen years after decentralization by devolution:  
889 political-administrative relations in Tanzanian local government. *Public Administration and*  
890 *Development* 35 (5), 360–371. <https://doi.org/10.1002/pad.1743>  
891

892 Kagoro, J., 2016. Competitive authoritarianism in Uganda: the not so hidden hand of the  
893 military. *Z Vgl Polit Wiss (Suppl)* 10, 155–172. DOI 10.1007/s12286-015-0261-x  
894

895 Kakumba, U., 2010. Local government citizen participation and rural development: reflections  
896 on Uganda's decentralization system. *International Review of Administrative Sciences* 76 (1),  
897 171–186. <https://doi.org/10.1177/0020852309359049>  
898

899 Kantel, A. J., 2019. Fishing for Power: Incursions of the Ugandan Authoritarian State. *Annals*  
900 *of the American Association of Geographers*, 109 (2), 443-455.  
901 <https://doi.org/10.1080/24694452.2018.1527679>  
902

903 Kashwan, P. 2013. The politics of rights-based approaches in conservation. *Land Use Policy*  
904 31, 613-626. <https://doi.org/10.1016/j.landusepol.2012.09.009>  
905

906 Kjær, A. M., Muhumuza, F., Mwebaze. T., Katusiimeh, M., 2012. The political economy of  
907 the fisheries sector in Uganda: ruling elites, implementation costs and industry interests, DIIS  
908 Working Paper 2012:04, Danish Institute for International Studies, Copenhagen, Denmark.  
909

910 Levitsky, S., Way, L., 2010. Competitive Authoritarianism: Hybrid Regimes After the Cold  
 911 War. Cambridge University Press, Cambridge.  
 912  
 913 LVFO, 2010. Guidelines for Fisheries Co-management on Lake Victoria. LVFO, Jinja,  
 914 Uganda.  
 915  
 916 LVFO, 2015a. LVFO Nile Perch Fisheries Management Plan, 2015-2019 (NPFMP2). LVFO  
 917 Secretariat, Jinja, Uganda.  
 918  
 919 LVFO, 2015b. Regional Status Report on Lake Victoria Bi-ennial Frame Surveys between  
 920 2000 and 2014. Kenya, Tanzania and Uganda. LVFO, Jinja, Uganda.  
 921  
 922 LVFO, 2016. Strategic Plan 2015-2020. LVFO, Jinja, Uganda.  
 923  
 924 McGinnis, M. D., Ostrom., E., 2014. Social-ecological system framework: Initial changes  
 925 and continuing challenges. Ecology and Society, 19 (2), 30. [http://dx.doi.org/10.5751/ES-](http://dx.doi.org/10.5751/ES-06387-190230)  
 926 06387-190230  
 927  
 928 Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), 2015. Press Release on  
 929 Illegal Activities by Persons Involved in the Enforcement of Fisheries Related Matters: Interim  
 930 Measures to Curb Illegalities, 11/12/2015. MAAIF, Kampala, Uganda.  
 931  
 932 MAAIF, 2016. Press Release on Illegal Activities by Persons Involved in the Enforcement of  
 933 Fisheries Related Matters: Extension of Interim Measures to Curb Illegalities, 05/05/2016.  
 934 MAAIF, Kampala, Uganda.



935

936 Mkumbo, O.C., Marshall, B.E., 2015. The Nile perch fishery of Lake Victoria: current status  
937 and management challenges. *Fisheries Management and Ecology* 22 (1), 56-63. DOI:  
938 10.1111/fme.12084

939

940 Mohmand, S.K. and Loureiro, M., 2017. Introduction: Interrogating Decentralisation in  
941 Africa. *IDS Bulletin* 48 (2), 1–14. DOI: 10.19088/1968-2017.110

942

943 Mudliar, P., 2018. Fire on the water: Militarization of fisheries management on Lake Victoria.  
944 <https://securefisheries.org/news/militarization-fisheries-lake-victoria>. Accessed 3/10/2018.

945

946 Muhumuza, W., 2016. The politics of anti-corruption reforms and reversals in Uganda's  
947 changing political terrain. *Economic and Political Studies* 4 (1), 62-84. DOI:  
948 10.1080/20954816.2016.1152095

949

950 Napier, V.R., Branch, G.M., Harris, J.M., 2005. Evaluating conditions for successful co-  
951 management of subsistence fisheries in KwaZulu-Natal, South Africa. *Environmental*  
952 *Conservation* 32 (2), 165–177. DOI:10.1017/S0376892905002195

953

954 New Vision, 2015. Museveni orders probe into illegal fishing.  
955 [http://www.newvision.co.ug/new\\_vision/news/1411741/museveni-probe-illegal-fishing](http://www.newvision.co.ug/new_vision/news/1411741/museveni-probe-illegal-fishing).  
956 Accessed 19/08/16.

957

958 Nunan, F., 2014. Wealth and welfare? Can fisheries management succeed in achieving  
 959 multiple objectives? A case study of Lake Victoria, East Africa. *Fish and Fisheries* 15 (1),  
 960 134-150. <https://doi.org/10.1111/faf.12012>

961

962 Nunan, F., Cepić, D., Yongo, E., Salehe, M., Mbilingi, B., Odongkara, K., Onyango, P.,  
 963 Mlahagwa, E., Owili, M., 2018. Compliance, corruption and co-management: how corruption  
 964 fuels illegalities and undermines the legitimacy of fisheries co-management. *International*  
 965 *Journal of the Commons* 12 (2), 58–79. DOI: <http://doi.org/10.18352/ijc.827>

966

967 Ogwang, V.O., Ikwaput Nyeko, J., Mbilinyi, R., 2009. Implementing Co-management of Lake  
 968 Victoria's Fisheries: Achievements and Challenges. *African Journal of Tropical Hydrobiology*  
 969 *and Fisheries* 12 (1), 52-58. <http://dx.doi.org/10.4314/ajthf.v12i1.57372>

970

971 Ostrom, E. (1990). *Governing the Commons. The Evolution of Institutions for Collective*  
 972 *Action*. Cambridge: Cambridge University Press.

973

974 Ostrom, E., Cox, M., 2010. Moving beyond panaceas: a multi-tiered diagnostic approach for  
 975 social-ecological analysis. *Environmental Conservation* 37 (4), 451-463.  
 976 DOI: <https://doi.org/10.1017/S0376892910000834>

977

978 Paget, D., 2017. Tanzania: Shrinking Space and Opposition Protest. *Journal of Democracy* 28  
 979 (3), 153-167. [10.1353/jod.2017.0053](https://doi.org/10.1353/jod.2017.0053)

980

981 Parliament of the Republic of Uganda, 2018. Address violations of human rights by UPDF –  
 982 Kadaga. [https://www.parliament.go.ug/news/2711/address-violation-human-rights-updf-](https://www.parliament.go.ug/news/2711/address-violation-human-rights-updf-kadaga)  
 983 [kadaga](https://www.parliament.go.ug/news/2711/address-violation-human-rights-updf-kadaga). Accessed 3/10/2018.

984

985 Pomeroy, R. S., Berkes, F., 1997. Two to tango: the role of government in fisheries co-  
 986 management. *Marine Policy* 21 (5), 465-480. [https://doi.org/10.1016/S0308-597X\(97\)00017-](https://doi.org/10.1016/S0308-597X(97)00017-1)  
 987 [1](https://doi.org/10.1016/S0308-597X(97)00017-1)

988

989 Pomeroy, R.S., Katon, B.M., Harkes, I., 2001. Conditions affecting the success of fisheries co-  
 990 management: lessons from Asia. *Marine Policy* 25 (3), 197-208. DOI:10.1016/S0308-  
 991 597X(01)00010-0

992

993 Quimby, B., Levine, A. 2018. Participation, Power, and Equity: Examining Three Key Social  
 994 Dimensions of Fisheries Comanagement. *Sustainability*, 10 (9), 3324.  
 995 <https://doi.org/10.3390/su10093324>

996

997 Raakjær Nielsen, J., Degnbol, P., Viswanathan, K.K., Ahmed, M., Hara, M., Abdullah, N.M.R.,  
 998 2004. Fisheries co-management: an institutional innovation? Lessons from South East Asia  
 999 and Southern Africa. *Marine Policy* 28 (2), 151–160. [doi:10.1016/S0308-597X\(03\)00083-6](https://doi.org/10.1016/S0308-597X(03)00083-6)

1000

1001 Republic of Kenya, 2006. National Beach Management Unit Guidelines. Department of  
 1002 Fisheries, Nairobi.

1003

1004 Sen, S. and Raakjær Nielsen, J., 1996. Fisheries co-management: a comparative analysis.  
 1005 *Marine Policy* 20 (5), 405–418. [doi:10.1016/0308-597X\(96\)00028-0](https://doi.org/10.1016/0308-597X(96)00028-0)

1006

1007 Stop Illegal Fishing, 2016. Illegal fishing on Lake Victoria How joint operations are making  
1008 an impact. Stop Illegal Fishing, Case Studies Series 12. [https://stopillegalfishing.com/wp-](https://stopillegalfishing.com/wp-content/uploads/2016/12/Case-Study-12-V5.pdf)  
1009 [content/uploads/2016/12/Case-Study-12-V5.pdf](https://stopillegalfishing.com/wp-content/uploads/2016/12/Case-Study-12-V5.pdf)

1010

1011 The Economist, 2019. The retreat of global democracy stopped in 2018: Or has it just paused?  
1012 [https://www.economist.com/graphic-detail/2019/01/08/the-retreat-of-global-democracy-](https://www.economist.com/graphic-detail/2019/01/08/the-retreat-of-global-democracy-stopped-in-2018)  
1013 [stopped-in-2018](https://www.economist.com/graphic-detail/2019/01/08/the-retreat-of-global-democracy-stopped-in-2018) Accessed 18/06/2019.

1014

1015 Transparency International, 2016. What is corruption? Transparency International  
1016 <http://www.transparency.org/what-is-corruption#define> Accessed 3<sup>rd</sup> November 2018.

1017

1018 Transparency International – Kenya, 2014. The East African Bribery Index 2014. Transparency  
1019 International Kenya, Nairobi.

1020

1021 United Nations Economic Commission for Africa (UNECA), 2018. Macroeconomic & Social  
1022 Developments in Eastern Africa 2018. UNECA, Kigali.

1023

1024 United Republic of Tanzania, 2005. National guidelines for Beach Management Units.  
1025 Fisheries Division, Dar es Salaam, Tanzania.

1026

1027 Venugopal, V., Yilmaz, S., 2010. Decentralization in Tanzania: An Assessment of Local  
1028 Government Discretion and Accountability. Public Administration and Development 30 (3),  
1029 215–231. <https://doi.org/10.1002/pad.556>

1030

- 1031 Weeratunge, N., Snyder, K.A., Sze, C.P. 2010. Gleaner, fisher, trader, processor: understanding  
1032 gendered employment in fisheries and aquaculture. *Fish and Fisheries* 11(4), 405-420.  
1033 10.1111/j.1467-2979.2010.00368.x  
1034
- 1035 Whitehouse, L. M., Fowler, M. S., 2018. Meta-analysis reveals that fisheries co-management  
1036 alters socio-economic outcomes and resource well-being. *Marine Ecology Progress Series*  
1037 600, 127–140. <https://doi.org/10.3354/meps12681>  
1038
- 1039 Whitfield, L., Therkildsen, O., Buur, L., Kjær, A.M., 2015. *The Politics of African Industrial*  
1040 *Policy: A Comparative Perspective*. Cambridge University Press, Cambridge.  
1041
- 1042 Wilson, D.C., Raakjær Nielsen, J., Degnbol, P., (eds.) 2003. *The Fisheries Co-management*  
1043 *Experience: Accomplishments, Challenges and Prospects*. Kluwer Academic Press, Dordrecht.

**Table 2 National policy and legislation related to co-management**

Country	Policy	Legislation	Regulations
Kenya	<b>National Fisheries and Ocean Policy 2008</b> <ul style="list-style-type: none"> <li>2.2.3 It has been difficult to enforce management measures because the fisher communities have been slow in taking up their roles as co-managers of the resources.</li> <li>One of eight guiding principles: Good governance (co-management and transparency)</li> <li>The Government will promote the role of Beach management units (BMUs) in the management of fisheries resources.</li> <li>In response to challenge 2.2.3 – strategy includes: Promoting Capacity building of BMUs through training in relevant areas to encourage management of fisheries resources.</li> </ul>	<b><i>Fisheries Management and Development Act 35 2016</i></b> Definition of a BMU.  Section 37: Establishment of beach management units <ul style="list-style-type: none"> <li>Refers to making regulations that set standards for the management of BMUs, including mandate in co-management of BMUs.</li> </ul>	<b>Fisheries (Beach Management Unit) regulations 2007 (Revised 2012)</b> Details formation process and functions of BMUs. Includes one mention of co-management: 7. Co-management areas (1) The authorised fisheries officer shall, following a consultative process, designate at respect of each beach management unit a co-management area which shall be an area in which the beach management unit shall undertake fisheries management activities jointly with the Director.
Tanzania	<b>National Fisheries Policy 2015</b> <ul style="list-style-type: none"> <li>Beach management unit: Means a group of stakeholders in a fishing community whose main function is management, conservation and protection of fish in their locality in collaboration with the government.</li> <li>The Government shall promote collaborative and ecosystem approach to fisheries management</li> <li>Decentralization by Devolution is considered the most appropriate form of fisheries governance to enable local governments to fundamentally control local fishing by a Community Based Fisheries Management (CBFM) system. Currently, most of the fisheries and aquaculture activities have been decentralized to Local Government Authorities.</li> <li>(i) The Government shall promote and support awareness creation on D by D in fisheries resource management; and</li> </ul>	<b><i>Fisheries Act 2003</i></b> “beach management unit” means a group of devoted stakeholders in a fishing community whose main function is management conservation and protection of fish in their locality in collaboration with the government; 18.-(1) The Director may enter into a management agreement with beach management units of the whole or part of or some specific fishery matter or activity within any water body or with any one or more local authorities having jurisdiction within the vicinity of any water body and deriving the whole or a part of their livelihood from that water body.	<b>The Fisheries Regulations 2009</b> No definition of beach management unit included but several sections on beach management units: <ul style="list-style-type: none"> <li>Section 25 which notes the formation of BMUs under Part III ‘Development of the Fishing Industry’</li> <li>Section 133: Establishment and management of BMUs</li> <li>Section 134: Functions of BMUs</li> <li>Section 135: National Register of BMUs</li> <li>Several other references to BMUs, e.g. in relation to vessel licensing</li> </ul> Only one mention of co-management in 260 pages: <ul style="list-style-type: none"> <li>A Beach Management Unit may associate with other Beach Management Units and co-management structures to form higher level Beach Management Units for the purposes of fisheries planning, management and development.</li> </ul>

Country	Policy	Legislation	Regulations
	(ii) The Government shall strengthen capacity to implement D by D in the fisheries sector.		
Uganda	<p><b>National Fisheries Policy 2004</b></p> <p>Part of vision: participatory fisheries management institutions that build on community and stakeholder structures leading to the generation of adequate incomes to alleviate and prevent poverty; (p.11-12) Key roles of the centre under decentralisation</p> <p>(13) Communities, under decentralisation policy, are expected to take a leading role in husbanding their resources especially in near shore waters.</p> <p>(22) Policy Area No. 2: Decentralisation and community involvement in fisheries management Stakeholders will be involved in the management of fisheries by devolving some decision-making responsibilities to local governments and communities.</p> <p>(24) Policy Area No. 4: District, sub-county and community co-operation in fisheries management</p> <p>Districts, sub-counties and communities will co-operate in the management of shared fisheries and aquatic ecosystems.</p>	<p><b><i>Fish Act Cap 197 1970</i></b></p> <ul style="list-style-type: none"> <li>• Still in force</li> <li>• No reference to co-management or BMUs</li> <li>• Draft Bill has been under consideration since 2004</li> </ul>	<p><b>Statutory Instruments No. 73 The Fish (Beach Management) Rules, 2016</b></p> <p>BMU Executive Committee to be comprised of 5 boat owners, 2 boat crew, 1 fishmonger and 1 from the ‘other’ category. At least 3 members should be women. Nominations are made by ordinary BMU members and these go to the head of the district, the Chief Administrative Officer, for appointment. Nominations are vetted by the District Security Committee.</p> <p>Includes sections on:</p> <ul style="list-style-type: none"> <li>• Establishment, composition and functions of BMUs</li> <li>• Roles of chairperson, committee, assembly, members and Chief Fisheries Officer</li> <li>• Financing and supervision of BMUs</li> </ul>