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"We are Zambians—Don't Tell Us How to Fish!" Institutional Change, Power Relations and Conflicts in the Kafue Flats Fisheries in Zambia

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Abstract Many scholars claim that open access due to the effective absence of state control is the major reason for the overuse of common-pool resources such as fisheries. Based on data from the Kafue Flats fisheries in Zambia, we argue that the main problem in open-access situations is the paradox of a state that is simultaneously absent and present: present in actions that dismantle local fishery institutions but absent when it comes to the ability to enforce the laws that might protect the resources. Thus, the state is present in the voice of immigrants from other parts of the country who use their Zambian citizenship to legitimize free access to the fisheries. But it is absent when the Department of Fisheries is not able to enforce its own formal rules or control these immigrants' activities. Local groups are unable to act collectively to reinstall new institutions due to the absence of formal law enforcement. This paper analyses this historic process of institutional change within the theoretical framework of New Institutionalism. We test the hypothesis that the main reason for the lack of local collective action in the Kafue Flats is ideology (the notion of citizenship) strengthening the bargaining power of external actors, who profit most from open access constellations.

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Introduction

In the debate on the sustainable management of common-pool resources, the effects of dismantling locally developed rules by state control are widely discussed. In reaction to the 'Tragedy of the Commons' paradigm by Hardin (1968), which claimed that resources held in common will inevitably be overused, numerous studies have shown that not all common property regimes caused resource degradation. A comprehensive literature review by Agrawal (2003) argued that common property regimes were at least as successful as market, private, or state regimes in the management of common-pool resources. The studies showed that the emergence of open access situations is a consequence of changing institutional frameworks. In many developing countries common property regimes were not maintained by the national governments. State control was introduced, while means to implement and control the newly established property regimes were limited. This led to a de facto open access situation. In other words, if the state overrules local institutions that would have managed common-pool resources yet lacks the capacity to provide adequate alternative monitoring, then the resources will be free for all and inevitably overused (see Ostrom 1990; Ostrom *et al.* 2002; Feeny *et al.* 1990; Acheson 1989). This has been shown for the fisheries (for Africa generally see Haller 2005a; Chaveau *et al.* 2000, for Nigeria, Thomas 1996, for Zambia (Lake

Mweru region), Hilhorst and Aarnik 1999, for Kafue Flats, Haller and Merten 2006; Haller 2007).

Yet, there are several indications that this analysis only partly explains what is happening. Under weak state control, traditional institutions might be revitalised (Berkes 1999, 2000[1]), although they might be adapted or transformed for new market conditions (Fay 1994, 2000; Kassibo 2000; Beeler and Frei 2005; Fokou 2006). In this case, the question arises why these revitalised local institutions are unable to protect the resources. Also open access to fisheries is not inevitably unsustainable. In some traditional systems, seasonal open access was common and did not necessarily negatively impact sustainable use (see Thomas 1996). Resource utilisation becomes unsustainable when access periods are prolonged and when open access occurs in combination with demographic and technological change or with man-made changes in ecological conditions (dams, irrigation, climatic changes, etc). In these cases, the question is why no mechanisms evolved at the local level to counter the emerging overuse.

Based on empirical data on the fisheries in the Kafue Flats, we argue that local inability to enforce communal processes in order to protect the common-pool resources must be seen in the context of the historical background of nation-state building and later decentralisation, when formal and informal property rights and power structures were reshuffled. The nation state endows all citizens with equal (access) rights, but the statutory regulations are not fully enforced. Meanwhile, the state interferes with local governance at several other levels, which may raise fears of being controlled by imposed 'traditional leaders', or by 'outsiders' (Geschiere and Jackson 2006; Socpa 2006). If statutory institutions are not fully implemented, local institutions may fill the gap following principles of subsidiarity. But who is entitled to craft or rebuild local institutions? What role do local political leaders play since decentralisation became the new development paradigm? Who adequately represents 'the community' (Chaveau 2006; Berry 2006)? How are migrants represented? Problems of legitimacy of local institutions arise not only for statutory law, but also with respect to the legislative body. This literature, mostly on land issues and the question of autochthony, reflects how identities embedded in ideologies of belonging and of the self can be used differently depending on economic and political contexts. Formal legislation as well as crafting or re-crafting local institutions can be a means to control access to land and common-pool resources, especially if the economic value of such a resource rises.

In this paper, we investigate the development of fishery institutions in the Kafue Flats of Zambia from precolonial times onwards. We then address the current situation of a de facto open access constellation as a consequence of institutional change. An important issue is the role of the state, which is unable to enforce the fishery laws but endows powerful actors with the ideology of citizenship. The state gives all Zambians equal access to fisheries in this part of Zambia and delegitimizes locally devised institutions, while it fails to enforce statutory law. These paradoxical interventions of the state are discussed as a determinant for local collective action since the turn of the millennium.

After an overview of the theoretical basis of New Institutionalism, linked to African inland fisheries, and an introduction to the research site and methodology, a historical analysis of the institutional change of the fisheries addresses the dynamics between local governance and the colonial regime, and later the independent government. Data from an ethnographic study then provide the basis for an analysis of local collective action in the fisheries between 2002 and 2007.

New Institutionalism and African Fisheries

Our analysis draws on the theoretical framework of New Institutionalism (North 1990; Ostrom 1990; Becker and Ostrom 1995; Ensminger 1992; Acheson 2003) which emphasizes the role of formal and informal institutions, such as property rights, rules, and regulations for the governance of common pool resources. People have an interest in institutions because they reduce costs of transactions, providing clear arrangements of who is entitled to utilize a resource when and where. Institutions regulate the monitoring of agreements and enable the punishment of violations (see Ostrom 1990; Becker and Ostrom 1995).

Many scholars, drawing on the seminal work of Douglas North (1990) and Elinor Ostrom (1990), have provided in-depth examinations of the characteristics of the institutional frameworks necessary for sustainable resource use. However, less attention has been paid to historically-based analyses of the sociopolitical processes which trigger institutional change and influence the robustness of institutions. An exception is the work of the anthropologist Jean Ensminger (1992), whose analysis of pasture use among the Orma in Kenya is based on North (1990). She pointed out that in order to understand institutional change related to common-pool resource management, issues of power and ideology are crucial elements. Also the more recent work of Arun Agrawal, who provides a review of anthropological research on resource management, emphasises that in the analysis of the commons, power and ideology issues between and within communities needs to be analysed in historical depth (Agrawal 2001, 2003, 2005).

Locally developed institutions were in place for fisheries in Africa before colonial and state rule which reduced transaction costs for collective action by providing clear

[1] Berkes refers to the Cree hunters and fishermen in Canada.

regulations for who can access the fisheries, when, under what conditions (timing of use), with what equipment, and with what related property rights. The conditions of use by outsiders were also defined (Thomas 1996; Hilhorst and Aarnik 1999; Chaveau *et al.* 2000; Bene *et al.* 2003a, b; Haller 2005b; Haller and Merten 2006). These studies support a basic assumption in common-pool resource management theory: Institutions regulating access to common-pool resources—often in the form of common property regimes—are of major importance for sustainable management of fisheries, because they make resource use predictable and reduce transaction costs, buffering risks in the use of a mobile common-pool resource. But when the state extended control over these common-pool resources for example, enacting laws requiring licences and regulating closing times, mesh size, etc, notions of ownership and management of fisheries started to change. It subsequently became apparent that the state institutions were unable to enforce access and coordination regulations (see generally McCay and Acheson 1987; Acheson 1989, 2003; Feeney *et al.* 1990, for fisheries specifically in Africa, see Thomas 1996; Moorehead 1989; Fay 2000; Kassibo 2000).

Thomas (1996) provides a good illustration. He descries locally developed institutions in the Hadejia Jama'are Floodplain, Northern Nigeria, adapted to flooding patterns, including open access constellations during high flood. It is important to emphasise the temporal limitation of open access, clear rules prevailed for most of the time. Thomas shows how these rules were dismantled as the state took over control and issued licences for commercial fishermen as a form of re-regulation. But the state could not adequately enforce its new law and serious over-fishing occurred, provoking local conflicts (Thomas 1996). In the Niger Inland Delta Floodplain, Mali, similar processes were observed by Fay (1994, 2000) and Kassibo (2000). In this case too, traditional institutions were in place until the state intervened. However, after intervention by both the colonial and postcolonial state, local institutions remained but were transformed by powerful local leaders and state administrators with rent-seeking objectives who profited from their knowledge of statutory regulations (see also Moorehead 1989; Beeler 2002; Frei 2004; Beeler and Frei 2005). However, the question of why local people are not acting collectively to fill the vacuum of governance under inadequately implemented state law remains.

According to Elinor Ostrom (1990), several conditions determine whether local people are able to craft robust institutions for the management of common-pool resources. She analysed well-operating local institutions and deduced principles on which such robust institutions are based. These include clear boundaries and information about actors and constellations, monitoring, sanctioning and conflict-resolution mechanisms (see Ostrom 1990 for full list, see also Becker and Ostrom 1995). Most of these principles can in fact be subsumed under transaction costs. Thus robust institutions for the management of common-pool resources are successful as long as they reduce costs for transactions. Less discussed is the fact that a robust institutional framework allowing *sustainable* resource management does not necessarily allow *equity of access*: Powerful leaders may have an interest in managing resources sustainably while excluding other users. If poverty reduction is at stake, the robustness of an institution alone is not a sufficient criterion of its success. It is thus important to address local power relations explicitly.

The work of Jean Ensminger particularly puts more emphasis on the role of bargaining power of actors for the change—or maintenance—of existing institutions. Ensminger's analysis of the conditions for institutional change provides a suitable framework to discuss why local institutions can sometimes be recrafted during a vacuum of governance, whereas in other cases no change occur, or only change to the benefit of a few powerful stakeholders. Ensminger looks at how ecological, demographic, technological, political, and social changes affect the value of some resources or resource options (change in relative prices). We would also include macroeconomic changes at the national level and local microeconomic changes.

A pool of potential users will change and more actors will become interested in using a resource as it increases in value or as existing or alternative livelihood options become more costly or less available. A resource may become more interesting to more people and to more powerful stakeholders when the expected profits are greater compared to other opportunities. More powerful users will likely try to renegotiate the institutional regulations in their favor. Whether they succeed, or which groups are successful in re-crafting (or impeding) regulations, will again depend on the existing institutional framework and on external factors endowing the stakeholders with material options and with the legitimacy to independent institutional change.

Ensminger and Knight (1997) have pointed out the importance of the ability of an actor to legitimate existing or new institutions. In this context, the presence of a socially anchored ideology, such as a discourse on citizenship and the nation-state, or a political discourse of indigenousness, ethnicity or autochthony, become important strategic tools for local actors trying to renegotiate access rights in the absence of a strong authority. Based on these assumptions, we discuss the institutional change and status quo in the Kafue Flats fisheries.

Ecology, Ethnography and Demography in the Kafue Flats

The Kafue Flats are a floodplain of 6,500 km^2, of which between 3,000 and 5,000 km^2 are seasonally inundated.

The whole basin covers an area of 154,000 km^2 (see Fig. 1). Despite having little annual rainfall, the area receives a lot of water from the Kafue River, which has its catchment areas north of the Copperbelt. This makes the area rich in natural resources and an attractive place in a semiarid region (800 mm annual rainfall). After the floods recede, rich pastures, fishing grounds, and abundant wildlife are available (Handlos 1977; Ellenbroek 1987; Chabwela 1992; Hughes and Hughes 1992; Jeffrey *et al.* 1992). The area permanently has sufficient water due to the Kafue River, and in the south-western parts, fertile alluvial soils. Topographically, the area can be divided into woodlands, termitaria, permanent swamps, ponds, lagoons, and levies. There are three national parks in the Kafue Flats (Kafue, Lochinvar and Blue Lagoon) and a Game Management Area (GMA No. 11) where the use of wildlife is regulated. Most important is the Lochinvar National Park, which covers a large section of what was previously Ila, Balundwe and Batwa territory, especially for pasture and fishing.

The most important fish species are bream, such as the Kafue Bream or *mpende* (*Orechromis andersonii* and different *tilapia*), so-called "bubble fish" or barbel (such as the *mbuli* (*Clarias gariepinus*), and, especially in the tributaries, the small *cisekele* (*Striped Robber, Alestes lateralis*). Spawning and mobility patterns vary greatly for these fish but are, as a general rule, linked to the flooding of the area. At the start of the rainy season between November and December the tributaries, which are by now dried up, get water from their catchment areas and from the raising Kafue River. Some of the fish species, such as sardines (*Alestes lateralis*), then move out of the Kafue River and the ponds near the tributaries in order to migrate up the tributaries. In January and February, when the Flats start to be flooded, bream and other species of fish spread for spawning. Some head for specific locations, such as an area called Hippo Corner in the Lochinvar Park. Others move freely in the flooded area. The water reaches peak levels in March and April, than recedes and the Flats dry out again and water remains only in ponds, oxbows, and lagoons, where some of the fish also stay (see Mortimer 1965; Subramaniam 1992; Haller 2007). Other animals such as crocodiles, which feed on fish, and hippos may also move to the outer parts of the Flats (mentioned in Smith and Dale 1968; Haller 2007).

The early colonial administration recognized several peoples in the area and referred to them with local terms: the indigenous Batwa hunters and fishermen, and the Ila/Balundwe agropastoralists. Maintaining the colonial

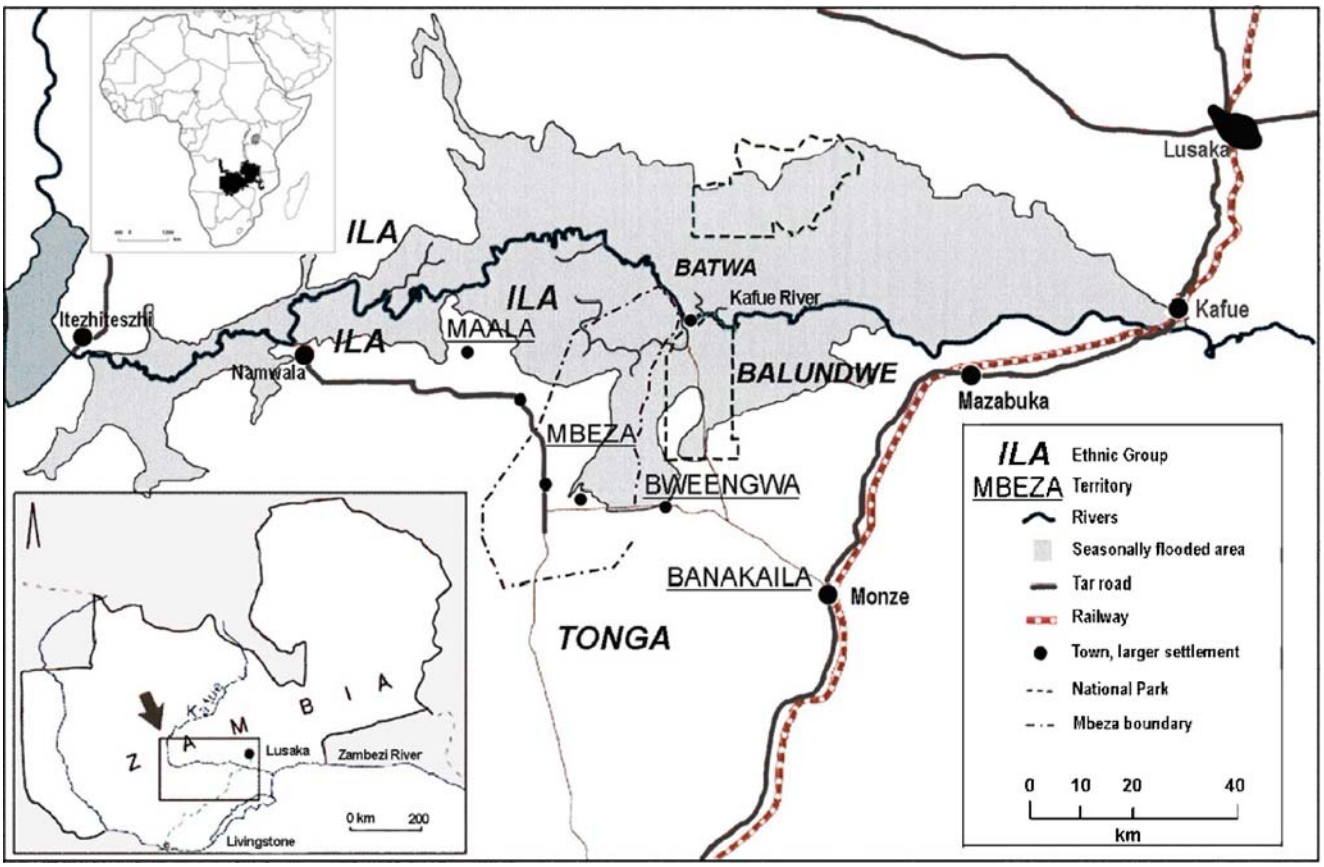

Fig. 1 The Kafue Flats and local ethnic groups (by C. Furrer based on map of S. Merten)

definitions of ethnicity, the people are today still organised in 14 chiefdoms.[2] The *Batwa* live on the banks of the river, but became a marginalised and stigmatized minority after the immigration of *Lozi* and *Bemba* fishermen from western and northern Zambia. They are respected for their magic and knowledge of the river and lagoons, and specialise in fishing with boats and, in former times hunting lechwe antelope and other animals (Lehmann 1977; Haller 2007). Today they also herd a few cattle, but their settlements on the higher ground close to the riverbanks limit extensive cattle herding.

The *Lozi*, who immigrated between 1930 and 1960, have specialised in commercial fishing. They fish with nets and sell most of the fish to outsiders and to a lesser extent to local Ila and Balundwe. There are leaders in the permanent villages that employ less wealthy people for fishing activities (LaMunière 1969; Haller 2007). Apart from the permanent communities there are fishermen from many different ethnic groups, which the *Bemba* strongly represented, who only stay for a season and are highly mobile.

The largest group in the area, the Ila/Balundwe, are transhumant pastoralists, whose main activity and source of identity has remained cattle herding. After the water recedes, they move with their cattle to the lush grazing pastures close to the main river. However, other activities such as fishing in tributaries, ponds and at cattle camps and oxbows as well as collective hunting have been of major importance for subsistence (Smith and Dale 1920(1986), Cutshall 1980; Haller 2007)

In the past, the Ila and the neighbouring Balundwe[3] lived in large villages to protect themselves from slave and cattle raids by the Lozi and from wild animal attacks. Following the Pax Britannica, these big villages, headed by leaders (*mwami*), broke up and today people live in villages made up of scattered hamlets.

The more recent *Tonga* immigrants are mostly peasants who keep fewer cattle than the Ila, which they do not bring to the Kafue Flats for dry season grazing but keep nearby their settlements. They also engage in fishing activities for subsistence and increasingly in small-scale irrigation horticulture (vegetables; Haller 2007).

The territory of Mbeza, where most of the research took place, is about 1,500 km^2 and has a population of 26,000 people (17 p/km^2). The area is located in Namwala District, which had an annual population growth rate from 3.12% between 1964 and 1980 that fell to 1.97% between 1980 and 2000. The growth up to 1980 resulted from immigration but between 1980 and 2000, due to a collapse of livestock production after a *theileriosis* epidemic, more people were moving out of the area to urban centres.

Methodology

Between 2002–2004, extensive fieldwork was conducted over a period of 12 months in the Kafue Flats (during two 6-month periods), followed by three site visits until 2007.[4] Research was conducted mainly in the Chiefdom of Nalubamba in the territory of Mbeza, (see Fig. 1), but included several selected villages in neighbouring chiefdoms (Hamusonde, Choongo and Mwanachingwala). Both quantitative and qualitative methods were used. A household survey was carried out, including 13 villages within Chief Nalubamba's area (250 households in ten Ila and one Tonga village), two Batwa villages on the north bank of the Kafue River (52 households), three fishing camps in the border area between the chiefdoms of Nalubamba and Hamusonde (70 households), and one fishing village closer to the urban centres near Mazabuka in Chief Mwanachingwala's area (28 households). The survey included questions about past and present income generating activities, household assets, access to resources (location and entitlements), and changes of access to resources and the emergence of related conflicts. Between one and four household members were interviewed, and for this purpose, a local research team was specially trained. In addition, we conducted economic survey of 31 male and 26 female fish traders, and 56 fishermen, which provided quantitative information on commercial fisheries and fish trade throughout all ecological zones within the Flats.

Participant observation over 12 months, 12 focus group interviews, and oral history (resource related) allowed in-depth insights into the contemporary local political setting, illuminating local power-relations and institutional frameworks, as well as institutional changes and conflicts in traditional and commercial fisheries. During the study we worked intensively with staff of local Fishery Departments and attended meetings they held with local people and

[2] We are fully aware of the problem of ethnic names as an often colonial form of identification of groups and people. We are therefore using these names because local people use them but are aware of their different meanings in different contexts. There are 11 Ila and three Balundwe (also labeled as Plateau-Tonga) chiefdoms. The Batwa do not have their own chiefdom and are included in several chiefdoms that have territories up to the riverbank.

[3] See also Colson (1970), who calls these people Plateau Tonga. Smith and Dale labeled them as Ila or Balundwe–Ila (Smith and Dale 1968). The local people refer to themselves as Balundwe locally and also Tonga if they are further away.

[4] The research was part of a comparative research project AFWeP (African Floodplain Wetlands Project) which is being carried out in collaboration with the Department of Social Anthropology, University of Zurich and the National Competence Centre in Research North South, Switzerland. CPR institutions (fish, wildlife, pasture, forests, water) and historical changes to them are being studied and compared in six African floodplain areas in five African countries (see Haller 2002a, b, 2005a, b).

commercial fishermen. This allowed important insights into the interactions among the commercial fishermen, local people, and the formal fishery sector.

Archival research carried out at the National Archives in Lusaka and the Livingstone Museum in Livingstone contributed to the historical context and provided information on formal institutional change (laws, regulations etc).

Re-regulation Needed: Current Crisis in the Kafue Flats' Fisheries

In the Kafue Flats, livelihoods have come under pressure over the last two decades because of drought and an epidemic affecting cattle culminating in a large-scale food crisis during the lean season of 2002–2003. During this crisis, the fisheries attracted people from other urban and rural areas of Zambia, where loss of jobs due to the economic crisis as well as crop failure and increasing maize prices, drove them to seek alternative income-generating activities. Large fishing camps of seasonal commercial fishermen emerged in the Flats. As we visited various chiefdoms to explain our research objectives, we experienced a high level of tension with regard to the fisheries. Concerns were expressed that regulations, such as the formal fishery laws, were not enforced, and that consequently overfishing would occur. In particular fishing with small mesh-size net was perceived as destructive and having an adverse distributional effect. During one of our first meetings with the acting Chief in Hamusonde area,[5] we were shown a piece of extremely fine-mesh cloth used as a fishing net, widely perceived as destructive for fisheries in the area. He informed us:

> This type of net is the way people who come to our place are fishing now. I was given this by my headmen. We are very concerned about what is going on in the fisheries (Acting headman Hamusonde August 2002).

The next time we visited the acting chief, we were accompanied by three fishery officers. In an informal meeting they accused the local people of using unsustainable fishing methods. Immediately, the blame was rejected and linked to the immigration of 'outsiders' and to the failure of the state to control these developments:

> We always had plenty of fish! We were not fishing anyhow. We had rules on when and how to fish. But if I send my boy to the flats now, there are no fish. Or it is too expensive and so I cannot buy fish. These foreign fishermen are using bad techniques. (...). We have been calling for the Fishery officers, but they don't show up! (a headman at chief Hamusonde's place, September 2002).

Local people, 'the first-comers' such as Batwa and Ila/Balundwe including many permanently settled immigrant Lozi fishermen, feared losing access to the fisheries to outsiders who were often seasonal immigrants belonging to the Lozi or Bemba ethnic groups. It was common to hear them say that they wanted to 'throw the Lozi and the Bemba into the Kafue River' because these people were taking all the fish and using 'destructive techniques.' Yet the two statements also illustrate the clear interest local Batwa and Ila/Balundwe have in functioning regulations and sanctioning mechanisms. It must be made clear that these people were not generally arguing that they were more entitled to use natural resources due to their status as 'autochthones.' As will be shown, local groups had rules based on restricted access, allowing outsiders to use fisheries with local permission. However, in this case they tended to blame outsiders with short-term interests for overexploiting and destroying the resources by introducing bad fishing methods and disregarding the statutory closed times. Resentment was clearly expressed that no binding rules and regulations existed since the state did not enforce the fishery law, and local regulations were no longer respected (or only by some of the people). Outsiders adhering to local rules and norms, however, have (from a historical perspective) always been absorbed, and they were even actively courted in order to increase group strength and importance.

In the following section, we outline how the fisheries were historically regulated, how the institutional framework changed due to external political and economic changes, and how the governance of the fisheries then oscillated between the local people and the colonial and postcolonial state. This is of major importance for the analysis. To assess the actual situation related to the problem of collective action we have to understand the diversity of locally developed institutions, how and why they could be crafted and how they worked and the change created by state institutions. We then come back to our basic question of why local institutions were not reinforced at the local level if the problem of under-regulation seemed so evident, and the interests of the majority of the local population involved in fishing seemed so homogeneous.

Traditional Fishing Institutions: Accounts from Precolonial Times

Fishery institutions had been established in precolonial times. Fishing was regulated according to different seasons in the Kafue River, the flats, oxbow lakes, lagoons, and in the tributaries of the Kafue River. While the Batwa and later the Lozi fished in the main river and bigger oxbows

[5] The last Chief had died and an acting Chief was taking his place until the election of a new Chief.

Picture 1: A traditional monitor and ritual master (*utamba*) in Mbeza (Ila-Chiefdom Nalubamba) performing a ritual before a collective fishing event (T.Haller)

and lagoons, the Ila and Balundwe fished in the tributaries, ponds and oxbows in the flats.

The main feature regulating access to fish was the notion of spiritual ownership (see also Smith and Dale 1968; Haller 2007). The Ila and Balundwe established a basic land tenure concept linked to their religion. A section of land with clear boundaries, in which tributaries of the main Kafue River and ponds as well as lagoons and oxbows are located, was believed to belong to a specific village group. Several villages together constitute a territorial unity (chichi) with a specific name (for example "Mbeza" for the territory of today's chiefdom Nalubamba). The village leader or big man (*mvami*) was given the right to use and to supervise the collective use of this area by the spirits (*mizhimo*) of the founding patrilineal ancestors. These were worshipped at sacred places in the compound as well as at graves, which were places for rain making and forecasting events. These spirits demanded offerings from the living as well as behavior in accord with the territorial rules. Generally, the *mwami* was in charge of organising such offerings. Ignoring the *mizhimo* might result in sickness, bad yields and catches, as well as natural disasters and fire (Haller 2007; see also Colson (1970) for the notion of ancestral sprits among the Plateau Tonga). The *mwami* appointed monitors (*utamba*) who controlled tributary sections including ponds and oxbows, allowing the *mwami* to establish their power over the area and providing the legitimacy to distribute access to resources and set conditions for this distribution (Haller 2007).

Fishing was open to all members of the community and also to outsiders during high floods. There were however, gender-specific rules for the use of techniques: men were to fish with spears and women with baskets. Women sometimes had special fishing places, which they marked with sticks (*imbelo*) indicating that nobody else was allowed to fish there. There was a ban on making fires along the

Picture 2: Ila Women with baskets during a collective fishing event (*lwuando*). They are members of a local community or have been invited to the fishing day form the local community. These invitations are based on rules of reciprocity (T.Haller)

tributaries in order to prevent people from camping there for long periods. As the water gradually receded, men established fishing weirs with fish traps. Part of the catch had to be given to the owner of the place or the *mwami* responsible for the place. This relatively open access ended after the water stopped flowing. The *utamba* then had the responsibility of ensuring that no fish were taken out of tributary sections, ponds and oxbows before a major ritual (*kupa ila*) was performed by him. He would announce a date for a collective fishing event (lwuando). People gahering at that day would have to wait for the utamba to make the ritual (spitting water out and asking spirits for permission). Then they could start fishing (see pictures 1 and 2). Violating these rules would be punished by the ancestral spirits attacking in the form of crocodiles and hippos, and with fines. Thus access was strictly coordinated, regulated and controlled between the time the floods began and receded and in the early dry season. While collective fishing events could include invitations to other villages and chiefdoms to participate in fishing activities, it was also possible to exclude resource users (Haller 2007).

The indigenous Batwa groups likewise controlled river sections and claimed that ancestral spirits gave them the legitimacy to do so. As hunters and fishermen, they fished more intensively in laggons, oxbows, and in the main river using wooden canoues. They developed a peculiar fishing technique by installing a white cloth over a canoe to create shadow which attracts the fish and makes them easier to spear (MacLaren 1974; Haller 2007). No nets were used. The Batwa controlled and protected specifically known breeding grounds for bream, and fishing was forbidden in these areas in the rainy season from November to February, during which open access regimes otherwise prevail because of flooding. Table 1 provides an overview of Ila/Balundwe and Batwa fishing institutions that were adapted to flooding patterns and costs of defendability. According to Ostrom's design principles, traditional fishery institutions of the Batwa and Ila/Balundwe can be considered as having been robust insofar as they worked well to reduce transaction costs and regulated fishing in a common property regime. The result seemed to be sustainable. Rivers were described as "loaded full with fish" according to colonial missionary sources (Smith and Dale 1968), or as "underused fisheries" (Subramaniam 1992), or, according to informants among Ila in Chiefdom of Nalubamba, simply as providing daily additional and reliable protein resources in the past and a basic resource for subsistence among the Batwa.

Institutional Change: State Ownership Replaces Local Common Pool Resource Management

The first fundamental institutional changes occurred when fishery laws were enacted in the 1930s. In the first two decades of the twentieth century the fisheries in the Kafue Flats, producing an estimated 2 metric tonnes annually, were regarded as underdeveloped and as having an enormous potential for feeding the urban sector (Smith and Dale 1968; Mortimer 1965; Lehmann 1977). Consequently, the colonial administration opened up Batwa areas along the main river in the plain to commercial Lozi fishermen, who were encouraged to move into the area. These commercial fishermen started to use nets, which the Batwa had not used. With only 6,500 people, the Batwa population was too small to resist this influx and technology change, and could only partly and informally maintain their rules of access.

The first Lozi fishermen settled in the Ila/Balundwe Chiefdoms of Nalubamba and Hamusonde and close to some of the Batwa villages (e.g., the biggest village Nyimba). They formed their own permanent villages close to the riverbank or in the flats on higher ground, some of them moving between permanent villages closer to the woodlands in the flooding season and back to the flats in the dry season. Some of these villages were tolerated and even defended by local Ila/Balundwe chiefs. During this time, the local Ila/Balundwe did not show a commercial interest in the fishery sector, although fish had always been important for subsistence. Hence, the immigrant fishermen were not a threat to their access to the fisheries. On the contrary, they enlarged the Ila and Balundwe chiefs' spheres of influence.

The situation in the Kafue Flats' fisheries changed in 1958, as the first copper crisis evolved. In order to compensate for job losses in the mines more immigrants came from the Northern Province and Lozi areas and started using the fisheries on a larger scale (LaMunière 1969); fishing became more important as an income generating option than before the crisis. In addition to the initial permanent villages, seasonal fishing camps emerged. Although the villages and the camps were locally under the control of a headman, the main power lay with the so-called draw-net or boat masters (see LaMunière 1969; Haller 2007)—successful fishermen owning boats and employing other fishermen who can use the equipment during a specific time of the week for their own catch.

It remains unclear to what extent this massive influx of fishermen or the droughts[6] influenced catches in the late 1950s. After the catches estimated by the colonial administrators went up from 2 to 10 metric tonnes annually after the opening of the area, they dropped to less than 3 metric tonnes annually before 1960 (Mortimer 1965). The declining catches in the Kafue Flats, then attributed to overuse, motivated the colonial administration to design specific fishing laws for the

[6] Generally larger inundation is statistically related to an increase in fish production in African floodplains (see also Loth 2004 for floodplains in West Africa).

Kafue Flats that were introduced in 1962 (Mortimer 1965) and resulted in catches rising again between the 1960s and 1970s (see also Mortimer 1965; Muyanga and Chipundu 1982; Subramaniam 1992). Although it is unclear to what extent the regulations contributed to a regeneration of the fisheries, the fact that they seemed to recover justified the new laws in of the eyes of the public and the state. During this time, the state did invest in the control of the fisheries providing ships, transport, offices in all the districts and on provincial levels and local and scientific staff and equipment.

From Independence to the Early 1990s

Zambia became independent in 1964 and President Kenneth Kaunda, formulated as one of his primary goals the development of rural and remote areas. However this mainly concerned the agrarian sector, and wildlife and fishery management continued as it had under the colonial administration, although the Department of Fisheries was moved from the Wildlife Department to the Agricultural Department (today subsumed in the Ministry of Food and Agriculture). Initially after district fishery officers carried out governance of the fisheries at the district level for issuing licences and for monitoring and enforcing the fishery laws in their section. The Kafue Flats were divided into four sections, mostly according to the district boundaries: Mazabuka, Monze, Namwala, and Iteshiteshi Districts. These sections cover at least 80 km or more of the Kafue River. The management of the tributaries, lagoons and oxbows of each of the sections should have theoretically been included, but efforts concentrated on the commercial fisheries along the main river. At that time the Department of Fisheries was well equipped with officers and infrastructure including speed boats, cars and scientific equipment. Not only did the officers supervise and enforce the fishery laws but researchers kept track of the development of the fisheries in the country.

But problems in the fisheries reemerged as the state slid into an economic crisis related to international and national economic changes. Copper prices were declining since 1975 before they plunged dramatically in the 1990s. Coupled with the oil crisis during this period and with the continued socialist policies of the President Kenneth Kaunda, expenditure (import substitution and subsidised agriculture) grew leaving Zambia one of the ten poorest countries in the world and with one of the highest debts in the region (Anderson *et al.* 2000; Ferguson 1999). The fact that catches declined again to 4–6 metric tonnes in the

Table 1 Fishery regimes according to season among Ila, Balundwe and Batwa

Season	Where	Regime	Rules	Technology and name	Costs of economic dependability
Rains (Dec–Feb)	Tributaries, ponds and river sections	CLOSURE COMMUNAL COLLECTIVE (people from Chichi and others)	Breeding areas at the river		LOW
			Fishing in village and Chichi reciprocity	Baskets(women); Spears (men); Ikuo	HIGHER
Floods (Feb–April)	In all inundated areas	OPEN ACCESS	No rules, exception: breeding areas at river, no fireplace, imbelo place	Boats, Spears, Tonga baskets (women)	HIGHEST (low for specifically known places, end of season)
				Weirs (buyeelo)	
Retreat (May–July)	river, ponds and tributaries	CLOSURE PRIVATE COMMUNIAL COLLECTIVE	When water stops flowing, invitation by rit. master reciprocity	No fishing in restricted areas. Some weirs (buyeelo) still allowed	HIGHER To LOW
				Lwuando controlled Ila baskets and Spears	
Dry (Sept–Nov)	river, tributary and ponds	COMMUNIAL TO CLOSURE at Kafue river Batwa still fish	Reciprocity rit. master closes when little water	Lwuando, Spears at river boats (Batwa)	LOW

Source Haller (2007)

1980s and 1990s (see Subramaniam 1992), may be interpreted as a growing inability of the government to implement the laws effectively. At the same time pressure on the fisheries increased because many jobless people from the industrialised areas began to turn to fishing.

The increasing problems in the fisheries were once more countered with refined fishery laws. The national Fishery Law of 1974 and the statutory amendments of 1986 clearly stipulated that everyone fishing commercially in the Kafue Flats had to get a licence and must use nets with mesh sizes no smaller than 76 mm. A closing and breeding time between December and February was established, during which no commercial fishing may take place. But given the shrinking resources of the fishery departments these laws were not implemented effectively. Many forbidden fishing techniques were used. Illegal draw nets including shed cloth and mosquito nets had the worst and most obvious effects on the juvenile fish population.

However, use of destructive techniques and lack of effective enforcement of regulations were not the only problems contributing to declining catches in the Kafue Flats. Two dams for hydroelectric power production had been built, one upstream of the Kafue Flats (Iteshiteshi 1978), one downstream (Kafue Gorge 1972). The decline of catches in the 1980s was also a consequence of the changing flooding pattern after the construction of the upstream dam (Chooye and Drijver 1995), which, while not so much affecting the fish population as a whole did alter its distribution.

During the 1990s structural adjustments and privatisation programmes were implemented by the Chiluba government. But debt and aid policies tended to lessen the monetary resources available for formal jobs (Anderson *et al.* 2000). Comparable to the situation after the initial sharp decline of copper prices in the mid 1970s there was a sudden and massive reduction in state income. However, one of the major differences from the 1970s was the relatively high price of fish compared to other commodities. Between 1980 and 2000 there was a high rate of inflation, which made the prices of all goods rise considerably. But, the price of maize rose by only nine times, whereas fish prices increased approximately 17-fold in Lusaka, making fishing and the fish trade particularly attractive. Additionally, the monitoring of the fisheries had de facto ceased to exist in any way and therefore it became impossible to control these increasing fishing activities (Haller 2007, also Scudder, pers. com. 2003).

De facto Open Access, Gains to be Made, and the Effects on the Fisheries in the New Millennium

The increasing price of fish on the national market and the considerable gains to be made from commercial fishing and fish trading in combination to low access costs due to the lack of regulation enforcement by the state led increasing number of people to take up this opportunity. The pressure on the Kafue Flats fisheries was now much higher than in the 1970s, at the same time that control of the main river areas by the state was much lower due to lack of financial resources. Between 2002 and 2003 statutory fishery institutions were hardly in place in the more remote areas. Most of the Kafue Flats Fishery Departments did not have their own car and a motorbike was a rare privilege. If a vehicle was available, the money for repairs or fuel was often lacking. As a consequence, the fishery officers failed to monitor licences, fishing gear, and closed periods. In addition, some (not all) officers topped up their salaries with fish trading in violation of the closed period. However, they also tried to set up participatory, subsidiary mechanisms of control by forming fishery committees which would, at least to some extent, try to implement some of the regulations.

While some of these problems had started with the decline of state finances in the mid-seventies, the situation was now exacerbated by rising maize prices. During the food crisis, the fishing camps in the Kafue Flats and along the tributaries grew well beyond their former sizes (former sizes not going higher than 50 to 60 households). In 2002, we counted over 900 households (often single males) in one such camp. Fish traders from the region as well as from Lusaka bought fish in these camps or at the regular fish market that took place twice a week in Lochinvar Park. Monthly gains for a trader from Lusaka travelling once a week to a fish market could be up to 1.4 m ZMK (320 US$; 80 US$ times four, see Table 2), which was double the salary of a local Fishery Department officer. It became impossible for the local fishing committees and the headmen to control the activities in these camps. But even if they could have intervened, they would likely have been reluctant to do so during a food crisis with so many people hungry and given the lack of support from the police and fishery officers.

Although official estimates are unreliable we summarize them and compare them with estimates of local fishery officers and local fishermen. According to official national data on the Kafue Flats Fisheries the annual catches were reduced from 10 to 6 metric tonnes between 1970 and 2000. Local fishery officers, however, estimated that annual catches are between 3 to 2 metric tonnes (interviews with local DoF in Kafue Flats in 2002 and 2004).[7] Despite the methodological problems associated with these estimates, data from our research based on local people's estimates support this assumption. In a household survey in Monze

[7] Since the mid-1990s it has been difficult for the Department of Fisheries to gather scientific data due to lack of funds, therefore the quality of the data is questionable.

Picture 3: A seasonal fishing camp in the Kafue Flats where commercial fishing is taking place and that is visited by fish traders from town. These camps often lack law and order. Health and sanitation facilities do not exist (T. Haller)

District (Balundwe or Plateau-Tonga), in Chief Chongo's and Chief Hamusonde's area, all household heads from six fishing villages (Nyimba, Shimungalu, Chiko, Nakumba, Nakasale, Nswilile) engaged in fishing were asked about an estimated change in catches compared to 5 years ago. In addition, we surveyed household heads involved in fishing from seven villages in the woodlands (Mwanamwale, Namachila, Nalubamba, Matala, Kasoka, Shikapande, Mutinta Mushala). Local people reported catches have dropped between 25–50% the last 5 years at the individual

Picture 4: Commercial fishermen using a large draw net made out of fine meshed shed cloth or mosquito net (*chukukula*). Local people and the Department of Fisheries consider these techniques as being destructive. Due to de facto open access such fishing methods cannot be banned (T.Haller)

Table 2 Profits of fish traders according to place of sale (converted from Zambian Kwacha to US$)

Place of sale	No of fish traders	Mean profit per trip ZMK (US$)	Mean expenses per trip ZMK (US$)	Net profit ZMK (US$)
Local villages	7	125,000 (27.7)	10,000 (2.3)	115,000 (25.4)
Rural area (within 50 km)	16	115,000 (25.4)	18,000 (4.0)	97,000 (21.4)
Small towns	6	140,000 (31.2)	100,000 (23.0)	40,000 (8.2)
Lusaka	6	760,000 (168.8)	400,000 (88.8)	360,000 (80.0)

Source: Surveys made by the authors between 2002 and 2004 in Chiefdoms Nalubamba(Mbeza), Hamusonde (Bweengwa), and Chongo (Banakaila), 1$=4,500 Zambian Kwacha)

level.[8] In our interviews and focus group discussions local fishermen also mentioned that the varieties have changed (e.g., the red breasted bream is no longer common), and that the size of the bream (*tilapia* and *oreochromis*) declined. In the Batwa fishing village Nyimba, where a lot of immigrant fishermen have settled, catches were also reported to have declined. However, the lowest catches are reported from fishing camps such as Shimungalu (Mazabuka District, Chiefdom of Mwanachingwala) to the far east and Namwala (Namwala District) to the far west of the Kafue Flats. In these two areas, the catches in the last 5 years were said to have gone down between 50–75%.[9] Fishermen from these districts now travel further up and down the Kafue River in search of fishing grounds that are less plundered. For many local people, getting access to fish for local consumption has become difficult even if the catches in some areas were still good, as the following statement illustrates:

> If I send my boy out with the bicycle to get some fish in the flats he comes home with empty hands because all the fish are gone. The few fish there are, are sold to traders and are too expensive for us. (Headman from Bweengwa, Monze District, focus group interview 2002)

Ideological Justification of Access to Fisheries and Conflicts: The Paradox of the Presence–Absence of the State

The gains to be made in the fisheries led to a shift in interests among people from urban and other areas of Zambia as well as for local people, and increased the competition in which the main question of who is entitled to control access to fishing areas emerges. The different stakeholders used different ideologies and discourses to legitimize their access and their fishing techniques. The link to identity is crucial here because it is in this way that legitimacy is established, which increases the bargaining power of the actors involved in order to transform or maintain institutional regimes. On the one hand, open access is most profitable for commercial users and for traders, who are very mobile. The use of citizenship is their strongest ideological asset. On the other hand, some local interest groups would be more interested in a combination of locally and state enforced rules, limiting access to the fisheries to obtain better distribution in favour of small–scale fishing. However, this is difficult because the state, which could give stronger legitimacy to the local level groups, is absent. This leads us back to the initial question of why collective action has not been possible so far in order to reregulate access to the fisheries.

By 2002, traditional institutions regulating access to the fisheries had been severely eroded. This was particularly the case for the fishing in the tributaries. Commercial fishermen had begun to also intrude into these fishing grounds close to the woodland villages of the Ila and Balundwe, which up to now, had been managed by the headman and traditional monitors (*utamba*). Discussions with local people, including many fishermen, in structured and unstructured interviews and focus groups meetings between 2002 and 2004 revealed that the majority of the stakeholders wanted to stop the uncontrolled fishing. Complaints especially cited the large small-mesh nets that catch fish when they are too small, and even take the eggs of bream. The disturbance of breeding places is also mentioned, alongside the need to enforce closed times for commercial fisheries. But equally important and strongly unifying interests were concerns about social developments such as alcoholism, violence, and prostitution in the fishing camps (Haller and Merten 2006; Merten and Haller 2007). In this context, the distinction between locals and outsiders was blurred: it had become a matter of controlling the young, unemployed men and preventing violent outbursts.

Given the fact that the state is absent and local people could in fact manage their resources on their own, an explanation is needed as to why it is impossible for this

[8] There is a difference between an overall decline of fish and a decline of individual catches. The fact however that in some areas no fish at all could be caught was reported as a new phenomenon, supporting the absolute decline of the fish population.

[9] Data stem from a survey in two fishing camps in both areas and from interviews with local DoF staff in 2002 and 2004.

large group of people, which included the local headmen, fishing committees, and many permanently settled fishermen from different origins, to prevent a minority of seasonal immigrants and locals from using harmful fishing techniques, selling all the fish to outsiders and ignoring closed periods. This minority was violating all regulations, and was often responsible for violent conflicts in the camps or while fishing.

The lack of collective action partly relates to the absence of any backing from the state for those who were locally responsible for law and order, such as the headmen and chiefs. Angry participants at a meeting in September 2002 were in full agreement with the following statement made to local fishery staff, who were visiting the local authorities for the first time:

> There are many problems in the camps. We have been waiting for you for so long to enforce the law but you never show up! (A headman, Chief Hamusonde area, 2002).

The compliant said that they went to the fishing camps to confiscate illegal nets but that they were harassed, in particular by young seasonal fishermen. Another headman added:

> We were told to move, otherwise they would beat us up! They said that they were Zambians and had a licence. We had no right to tell them how to fish. We are scared because they are strong (Another headman, Chiefdom Hamusonde, Bweengwa)

Seasonal immigrants legitimize their right to fish on the grounds of Zambian citizenship. But at the same time they deny the traditional authorities the right to enforce the law at the local level. The local authorities, who were legally entitled to solve many issues on property rights by the government, were immobilized by this argument. At the same time, government officers and police were rarely seen in the area, in part because they lacked means of transport. After a violent outburst in one camp in 2002, the local authorities called for the state police. They reported in this same meeting that the police promised to come but never showed up. The official explanation was lack of transport.

It became evident that there have been several vain attempts by local people to actively enforce existing formal state rules. But the ideology of citizenship as used by seasonal immigrants was a very powerful tool for seasonal immigrants in concrete action arenas (Ostrom 2005). It enabled them to justify free access to fish and to fishing technologies, to increase their bargaining power, and to undermine the bargaining power of local people. The ideology of citizenship worked so well in this context because in the eyes of local people, the state is the body which having dismantled local institutions legitimately manages the fisheries. Nevertheless, in many interviews and conversations with focus groups, local stakeholder groups said that they would like to change the de facto open access to fisheries. Local Ila and Balundwe made a clear link between commercial interests and local basic livelihoods:

> We always had fish. But now, if I want to get fish from the flats and I send my boy out, he returns with nothing. There is fish but very little and it is bought up by traders for people in the town (Ila man, 40 years, Mbeza, 2002).

It is accepted that given the local economic crisis, more people rely on fish. However, opposition emerged when the local people feared complete exclusion from their 'own' resources by external, powerful commercial fishermen. Fish have always been important to the Ila and Balundwe, particularly as a complementary protein-rich food during the lean season, as evidenced by the many traditional regulations for fisheries that existed (Smith and Dale 1968; Haller 2007).

The indigenous Batwa, who have become a minority, were particularly affected by the developments in the fisheries. Their numbers fell from 6,500 to about 1,000 people, and in one of the most important settlements, Nyimba, located at the Kafue River close to Lochinvar National Park, they account for only one-fifth of the population. Batwa suffer from being stigmatized as inferior to other people, who claim ideologically to be superior and therefore—as modern citizens—to claim more rights. Batwa from the settlement of Nyimba complained bitterly about seasonal immigrants not following the rules of fishing, using destructive techniques and especially fishing in zones where local people know that fish (bream) are making nests and breeding. The Batwa say that the open access and illegal methods mean fish are now less available to them. The loss of hope of being able to continue managing the resource base is commonly stated in interviews. The following position is typical:

> All right, fish are there. But nowadays fish are taken by many people who come here from many parts of Zambia. They use illegal and bad methods of killing fish. And so fish stocks are declining. Now getting food from fish is difficult because fish numbers are dwindling all the time. So we have no faith in fish (interview with a Batwa representative from Nyimba 2002).

The failure to stop the permanent use of these techniques and the perceived selling out of the fisheries in the area without any regulation without respecting seasons and closing times made many local stakeholders very angry. During interviews and meetings during 2002 and 2004, we often heard the statement: "We want to throw the Lozi and the Bemba into the river".

This paradox of the absence and presence of the state is a reason for local inaction, and fosters the recourse to ethnically or autochthony-shaped strategies and identities. This process can be seen in other contexts in Africa as has been recently documented, especially in debates over access to land (Geschiere and Jackson 2006; Evers *et al.* 2005; Kuba and Lentz 2006; Lund 2007). Although these authors do not emphasize the link between changing relative prices and disputes over autochthony, case studies such as Lund (2007), Chaveau (2006), and Berry (2006), indicate clearly that specific identities of belonging are linked to the perception of interests generated by changing political and economic constellations. Identity is then a strategically used asset and linked to ideologies, discourses and narratives of belonging to an area giving legitimacy to its exclusive use, or for the taxation of, in this context, defined non-autochthonous users. But the case of the Kafue Flats provides an alternative context: here autochthony is not an asset, because of the paradox of the present–absent state which increased the bargaining power of mobile outsiders such as fishermen and traders.

The Problem of Local Heterogeneity of Interests

However, we also have to look more deeply into the differentiation of local actors, because the current economic problems, which are related to institutional, climatic and economic changes in the area, lead to heterogeneity in local interests. The crisis in the cattle economy and the loss of subsidies for agriculture, have pushed younger local men to look for alternative livelihood strategies. Realising that autochthony does not really pay in this context, while gains from commercial fisheries and from selling fish are high, they take any possible advantage in disregard of local rules, which can be seen as free riding from within the community; collective fishing used to be a market-like event where people from several villages met. Now the collective fishing rules are ignored by some young men, who go fishing with nets before the collective fishing days are announced by the monitors, and then sell the fish and invest the money, e.g., in grocery stores. In debates the young men state that they feel they are Zambians and not locals and that their activity is a legal business strategy for fisheries that are managed by the state. In addition, they mention the classic prisoners dilemma. If they do not take all the fish, some commercial fishermen would. Their strategies also include other activities regarded as illegal in the traditional system. Tributaries are increasingly used for commercial fishing by outsiders and by these young local men, while women get marginalized. Local men are starting to fish with baskets, traditionally the women's fishing technique that allows for larger catches than spears, the men's technique. This jeopardizes the subsistence of very small-scale commercial fishing, which is particularly important for women from poorer families in order to maintain food security during the lean season before the harvest period. Some of the women resort to 'fish for sex' deals with commercial fishermen and they often trade fish during closed times outside of the area, profiting from the high prices (Merten and Haller 2007). All these activities are newer types of livelihood strategies of heterogeneous actors, which the majority of local people see as free-riding.

It has been argued that in small-scale societies with homogenous interests, local people should be able to act collectively (Olson 1965; Ostrom 1990; Ensminger 1992; Agrawal and Gibson 1999). But the local communities can no longer be interpreted as small-scale societies with homogenous interests because they are now integrated into much larger networks and markets. Thus local, traditional institutions face more free riding as they hinder livelihood-critical gains in the new context. One could therefore argue that most of the local people are not interested in re-regulation or re-crafting of new institutions or revitalisation of old institutions. But this does not match the results of our surveys and focus groups where the majority of people clearly stated that they were looking for any kind of new enforceable regulation to change the situation. However, what was lacking was the possibility to legitimately act collectively in a domain that should be controlled by the state but is in fact not controlled at all.

Local By-laws: A Democratic and Subsidiary Solution?

In this situation the local fishery officers met with local authorities and several interested men and women from the Chiefdom of Hamusonde in order to discuss possible solutions. Both parties expressed a great interest in subsidiary comanagement between the state and the local authorities. In Zambia it is possible to issue by-laws on the District level that can be set up according to the existing fishery laws. This initiative was developed by local staff of the Department of Fisheries in Mazabuka District and was also taken up by other districts as a result of our research. These by-laws were drafted in a participatory manner, in order to enable local stakeholders (commercial fishermen, local village people fishing in tributaries, Batwa groups, women's groups, male and female fish traders, and chiefs' representatives) to discuss how they want to manage the fisheries on the local level. This local initiative was later financed by the World-Fish Centre, a CGIAR organisation, but remained purely local. One main feature was that it did not only address the chiefs as main representatives of the local groups, but recognised the sometimes contested position of chiefs and tried to incorporate as many different factions as possible, including male and female fish traders. The idea of developing local by-laws based on revitalised local institutions (for example strengthening rules of collective fishing,

gender related techniques, and strengthening the river monitors) and the statutory regulations alike, was taken up in neighbouring chiefdoms. It should be noted that apart from some logistical support to facilitate meetings, no financial incentive was present to promote this process. Nevertheless it continued through the initiatives of the local stakeholders.

Although the process of implementing by-laws formally had not been completed by the end of 2007, some local authorities started to introduce them in their areas. The fact that these more formal regulations existed motivated many of the migratory fishermen to comply with the local regulations, or to move to other areas. Since then, a clear effect of these—although still informal—institutions can be observed. In 2007, local people told us that there are now more fish and that they face fewer problems with seasonal fishermen than they did before the initiative.

Discussion and Conclusion

The current crisis in the Kafue Flats fisheries cannot be discussed without analysing institutional change from a historical perspective and without linking it to external changes. Based on the approach of New Institutionalism it is crucial to understand how the fisheries were managed in the past and how the rules had been altered overtime. Historical depth provides knowledge of how local people were able to act collectively, how the fisheries institutions were working, and also which rules are still present and which have been eroded. It is also important to understand what centralised resource management means and how de facto open access situations can emerge. Particularly, it helps in assessing the role of ideology and the different actors' bargaining power in changing or maintaining institutional settings that suit their interests. The approach shows how economic crises influence institutional change, and how the strategic use of the ideology of citizenship and modernity modifies the bargaining power of actors. Following Ensminger (Ensminger 1992; Ensminger and Knight 1997), fisheries in the Kafue Flats are contested because relative prices for fish have increased and at the same time regulation of access to the fisheries is unenforceable by a weak state. This increased the incentives for commercial seasonal fishermen and traders from all over Zambia. The external factors driving these changes, relate to the Zambian economic situation, particularly its dependence on copper, which has led to low state income and to declining job opportunities in the industrialised centres. In addition, further external changes have contributed to the increasing attractiveness of the fisheries, lowering the costs of access for seasonal immigrants: climatic and ecological changes (less rain, changes of flooding patterns, cattle disease, etc.) made the area more accessible, political, economic (neglect of agricultural production), and technological (new nets and boats) changes made the commercial use of fish more attractive compared to other alternatives[10].

However, in order to achieve access to fisheries, the production of legitimacy is important. Despite the fact that local users define themselves as locals, as autochthonous, the very fact that fishing rules happen to be state regulations limits collective action. It does so because formally fisheries are managed by the state and local people are obliged to, and do, refer to the state to enforce regulations. "Non-autochthonous" users or immigrants denying compliance with local rules were in a strong position by making reference to the ideology of state citizenship and modernity, legitimating access for citizens and legitimating non-compliance with local 'traditional' authorities, while the government officials were physically absent to control the regulations formally in effect. This constellation increases the bargaining power of mobile outsiders and hinders collective action at the local level as long as the state does not enforce rules and regulations regarding the management of the Kafue Flats fisheries. For non-autochthonous users it is easy to refer to state authority by having or claiming to have a license. The fact is that here citizenship and not locality or belonging is crucial. This resource is ideological and it is linked with the notion of citizenship, equality (we are all Zambians), and legality (only reference to the state's legal norms suffices in the situation of the absence of the state). But in reality, it is the result of an institutional change from a common property regime via state property to de facto open access. Open access then is the best option for highly mobile fishermen and traders. The only possibility for local stakeholders to react in this situation would be physical action without the state, which was also mentioned by some angry locals. But this kind of action is not legitimate and could lead to police or military reactions against local people.

The only tentative attempt to mitigate the situation was the initiative of local staff of the Department of Fisheries, mostly starting on their own, to delegate power and produce new forms of local institutions accepted by local Districts. This produced the kind of legitimacy needed for local collective action. Nevertheless, despite early positive results, the by-law project will only last if the state shows a minimal commitment. The major positive aspect is that a process of participatory consent—a kind of constitutionality—has been possible. Although it needed start-up help from outside the communities, this is hardly a criticism, as the problems mostly stemmed from outside the communities.

[10] Copper prices have again risen from 2003 to today but large parts of the Zambian copper industry are privatised and therefore the state does not profit from copper the way it was before. Although the state now may have more revenue, it is unclear how this will be distributed.

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