

Panel Property Rights regimes in the theory and practice of the Commons

Theory, policy and practice of water rights in Africa

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1. Introduction: customary water rights regimes in Africa¹

By examining practice and policy of water property regimes in Sub-Saharan Africa, this paper explores whether and which theoretical approaches to the Commons can provide answers to burning policy questions with regard to formal water legislation. This is examined in the light of the practice that millions of small-scale water users in rural and peri-urban areas directly and typically informally abstract water for basic livelihoods under or just above poverty lines (Meinzen-Dick and Nkonya 2007). These agrarian societies depend in many ways on water for cropping, horticulture, tree growing, livestock, fisheries, crafts, small-scale enterprise, and ceremonial uses. Since time immemorial, they have invested themselves, and later sometimes supported by the state or NGOs, in water infrastructure for higher productivity during a longer time of the year, more resilience to climate variability and change and protection against inundation (IFAD, 1997; Bolding 2005; Van Koppen et al 2007; Woodhouse et al 2016). Customary, informal, or local 'living laws' (terms that are used interchangeably in this paper) govern these investments, their uses, sharing of benefits, and dispute resolution. Prevailing concepts are about respecting and protecting people's efforts to feed their families, and the search for win-win arrangements that maintain and even strengthen vital networks of kin and neighbours (Derman et al 2007). This also holds for upstream-downstream issues within manageable distances and networks.

In customary arrangements, water is seen as the commons, a resource 'given by god' that belongs to no-one. If claims to water are made, they are linked to the sweat equity of investing in the infrastructure to make water available in the right quantities and quality, at the right time at the right place, and maintaining this infrastructure, so hydraulic property rights creation (Coward). Location of water resources and settlement patterns count as well. In no way do these normative frameworks firmly contain exclusion sticks. If exclusion occurs, it is unintended or related to lacking relationships. For example, exclusion can occur as a result of groundwater abstraction by those who can afford deep tube wells, depleting the aquifers for those who depend on them through shallow wells. The strong natural variability and unpredictability of precipitation and the lack of infrastructure to control water resources in the way high-income countries and the wealthier segments did, further discourage to an exclusion stick in customary bundles of rights.

However, in sharp contrast to this legal practice, policies and related formal water legislation across the continent are entirely framed in terms of the exclusion stick (Van Koppen et al 2014). As elaborated in section two, this is the colonial legacy of the British and other powers who declared history's most massive water grab and consolidated this under a guise of wise water management through permits (or licenses or water rights, which refer to the same tool). During the expansion

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over-time towards more water resources and more citizens, this same stick was reproduced, which is now affecting everyone abstracting water (with hardly any exemptions), over-ruling the customary laws with even more force. Thus, there is hardly any difference between Rhodesia's Water Act of 1927 and Zimbabwe's current Water Act (1998) or between Kenya's Water Ordinance of 1929 and Kenya's (2016) current act. And they are almost similar to the permit systems that were adopted later, as in Malawi (1969), Uganda (1995) and, as the last country in 1998, South Africa (but only for post-1998 new water uptake). The analysis will focus on these five countries.

Section three moves to the last element of the title: theoretical approaches to the commons that can provide answers to the burning question today: how to decolonize Africa's water legislation and ensure that water development and management can fuel sustainable development according to the Sustainable Development Goals?

2. Permit systems as the exclusion stick

2.1 Colonial water grab

Permit systems are characterized by a centralized authority claiming ownership or custodianship of water resources. This authority 'grants' permits to any water user or legal persona who abstracts and uses water from that resource, or discharges waste. Water authorities further regulate by tying specific conditions to the permit application procedure and the water use, for example certain caps of volumes, payment, or prohibition to pollute. Those who abstract water are obliged to apply for a permit. Without a permit they commit an offence that can result in being fined, or jailed, or both – as in the same 19th century and today's wordings. The only exemptions from the obligation to apply for a permit are for individual water abstractions for domestic uses and micro-scale productive uses.

The entitlements and obligations of permits are two sides of the same coin because permits are the exclusive way for the water authority to declare water abstractions as lawful; this carrot is then used as the 'stick' to impose regulations². The name 'water right' emphasizes the entitlement, and was most commonly used in the past (with the exception of Kenya's 1929 Act which refers to 'licences'). Over-time, and certainly at the most recent round of revisions, all water laws emphasized the regulatory aspects, and changed the names into 'permit' (with the exception of South Africa, where the term 'license' is used for water abstraction and discharge; and the 2013 Water Act of Malawi, with a 'licence' for water use; but a 'permit' for waste discharge). In this paper we use the name 'permit' in the generic sense. For a specific country we use its formal name of the specific era.

From the 1900s onwards, the first step of the colonial powers was to vest political control and control over water, land and other natural resources in the white minority, accompanied by permit systems in two countries, which were gradually being adopted by the other three countries as well.

In **South Africa**, the colonial rulers claimed authority over an ever-expanding range of water resources after 1652. After the creation of the Union of South Africa in 1910, the 1912 Irrigation and Conservation of Waters Act entrenched this centralized power, along with the use of the riparian regime in white areas, and secondary rights in the native reserves and later homelands. In 1998, the National Water Act was promulgated with state ownership of all water resources and licenses for water uptake after 1998. (White) water uses that were lawful under earlier colonial acts became Existing Lawful Use.

² A Tanzanian water officer called this the 'cakes' and 'spears' of permit systems (Van Koppen et al 2014)

In **Rhodesia**, the 1927 Water Act vested all water resources in the colonial state (Derman et al 2007) and was the first fully-fledged permit systems, and quite similar to the current 1998 Water Act. **Kenya's** 1929 Water Ordinance (Colony and Protectorate of Kenya, 1929) was the next fully-fledged permit system, focusing on specific surface waters that were to be managed. Section 4 declared 'the water of every body of water is hereby declared to be the property of the Crown, and its control is hereby declared to be vested in the Governor in Council on behalf of the Crown, subject to the provisions in this Ordinance'. 'Body of water' referred to both surface water and water under water courses, but swamps or springs that fell entirely within the boundaries of a land owner were excluded. Even quite some wordings have remained the same in the 2016 Water Act. In **Nyasaland**, the Natural Resources (Amendment) Ordinance 22 of 1952 introduced permits for groundwater use in certain areas. In 1969, this was expanded into an encompassing Water Resources Act.

Lastly, in **Uganda**, there was less activity on the part of the colonial powers to develop complex statutory law regulating the use of water resources, possibly because African smallholders did most of the farming, unlike in Kenya where white settlers established large farming areas. Also, with relatively high rainfall, water management and irrigation was less needed. In the River Act of 1907 and other measures, the British focus in Uganda was primarily on it being the assumed main source of the Nile (Nilsson 2011). Water resources rights were tied to land; water management was regulated through the land laws.

Thus, a handful of self-declared white water managers, backed by their foreign governments, claimed authority over all relevant (land and) water resources, including waters to be developed in the short term, and, with the precautionary foresight of prospectors, ownership of all water resources that might become useful in the longer term.

Following British indirect rule of racial divides, the colonial water managers were well aware of successful African (or, in the idiom of the time: 'native') water use and governance systems (Ranger, 1985; Phimister, 1988; cited in Derman et al 2007). The colonial powers carefully recognized these vital arrangements for Africans, in a discourse of equity, fairness and protection. In Rhodesia, the British South Africa Company emphasized in its Order in Council, 1898, Section 81 that the company should ensure that the 'natives or tribes' have 'a fair and equitable portion of springs or permanent water' (Derman et al 2007). The 1929 Ordinance in Kenya also aimed at 'protecting the rights of the Natives'.

However, through both territorial and institutional segregation, indirect rule over customary water uses and governance regimes was established, ensuring the superior access to water by the colonial powers and white settlers. In Kenya, South Africa and Zimbabwe, both territorial and institutional segregation were the well-documented way to ensure settlers' access to the most fertile and well-watered lands. In Malawi and Uganda segregation was primarily institutional.

Implicit control over water in the communal lands by Africans was through the colonial authorities in charge of managing these land resources and other colonial governors. In Rhodesia, they might select 'any fit person to represent the interests of the occupants of any Native Reserve' to Irrigation Board or River Board, or Water Court hearing. The 'protection' remained highly subjective. In case a decision by the settlers would 'substantially affect the water supply of any Native Reserve', approval of the high Commissioner needed to be obtained first. But this was not needed if the water supply

was not substantially affected. In the 1929 Ordinance in Kenya, a similar indirect rule over customary water law was achieved: the Chief Native Commissioner was one of the nine members of the Water Board. Section 27.3 indicated that if an application for a license was likely to affect water use in native reserves, the Water Board should 'inform' the District Commissioner who should cause 'such native to be informed of the terms of the application'. As for other issues, in native reserves, 'all powers of the Ordinance should be subject to any laws in force and to the approval of the Native Lands Trust Board, the authority in charge of 'protecting' the rights of the natives' (Nilsson and Nyanchaga 2008).

Obviously, where competition arose, Africans contested colonial powers' self-proclaimed foreign ownership and control over water resources. They had no incentive whatsoever to recognize this formal law and their authorities by applying for a permit. Anyhow, formal laws remained – and remain - largely unknown in rural areas.

For the settlers, recognition of the water authority and applying for permits ensured the authority's political backing and protection as the only formally recognized water 'right', entitled to take water on a first-come-first-serve basis. Declaring a first class right excluded everybody else in case of competition. The conditions tied to the permits were painstakingly detailed, adding a range of management sticks to the colonial water authority for their permit holders. At the time, these overdetailed obligations aligned well with the small-scale nature of infrastructure investments. It also helped rapidly developing sophisticated technical knowledge about water resources availability and infrastructure in entirely unknown terrains. And it became a source of norms for water management, for settlers' legal identity of living law and peer-control but, above all, settlers' joint interest to exclude Africans from their water resources. Overall, permits enabled the colonial governments to embark on their hydraulic mission on the most cost-effective sites, both through private investments and, increasingly, through state-led, larger-scale infrastructure for railways, municipalities, large-scale irrigation schemes, hydropower, mines and industries. Reference to supposedly powerful water authorities in the colonial state and complex technocratic rules further served to vest the legitimacy of this outright water grab excluding Africans.

2.2 Continuities and discontinuities till today

Obviously, the context of Malawi, Kenya, South Africa, Uganda and Zimbabwe has profoundly changed since the early 1920s. Populations grew, and continue to grow, and have become much more mobile. The race-based colonial minority economy and African agrarian societies started mixing. Divisions evolved into a dual economy of a wealthier segment in a formalized, usually capital intensive, industrialized and urban-based formal economy with a growing number of wage workers, and a much larger segment of poor, or just-above-poor informal income earners in rural and peri-urban areas, primarily depending on agriculture and rural off-farm employment.

However, the water laws largely continued as they were; each revision or amendment only referred to the exclusive property claims vested under earlier laws that continued to be lawful (but, in most cases, had to be renewed in the data bases). The water authority remained totally centralized, with permits as the exclusive formal way to obtain 'lawful' water use. However, at independence, the centralized authority changed and ownership of water resources by the colonial powers was replaced, on paper, by ownership, or rather 'custodianship on behalf of all in a public interest' by the new independent government. However, without much debate, the laws that were designed to

boost *new* water uptake by the handful of relatively homogenous settlers suddenly became applicable to both the minority water economy and the very large numbers of the rural and peri-urban population who had continued investing in water abstractions in parallel to the formal economy. Without a permit, they were declared as committing offences, facing fines, imprisonment or both. All the micro-water users exempted from that obligation had no recourse when their water uses continue to be grabbed by the powerful. Zimbabwe's 1998 Act repeats precisely the same wordings as in 1927, but just referring to today's institutions. South Africa's National Water Act of 1998 is entirely silent on the legal status of water use in former homelands, so this can still be interpreted as Existing Lawful Use. Malawi's 2013 Act is the only one that mentions the recognition of communities' – already existing- reasonable water use as an important factor to consider when judging applications for permits. In sum, this 'integration' of all existing and new water uses confirmed their exclusion as lawful water users even more drastically than the colonial powers had done.

At the same time, under permit systems it was logistically impossible for the few staff of the water authority to reach even just a fraction of the users, let alone the millions of customary water users, not for their faults. The logistic implications became even more daunting because this enormous expansion in target group, at least on paper, was accompanied by a stronger emphasis on increasingly complex regulatory goals of permit systems, by gradually including more and more resources, uses, and conditions. Each amendment and revised act expanded the water resources declared as 'public' to be managed by the state, or expanded activities that had to be better controlled.

While the first laws only looked at surface water, groundwater also became increasingly regulated. Although South Africa's 1956 Act even extended to 'the control of activities which may alter the natural occurrence of certain types of atmospheric precipitation', groundwater was still largely considered a private resource under this piece of legislation. The law revisions in Kenya (1972) and Malawi (1969) were to include groundwater but still excluded private water (defined as pans or springs within private land boundaries) from being vested in the government. In their later laws (Kenya 2002 and 2016) and Malawi (2013), *all* water resources became vested in the government. This inclusion of all water resources also holds for the current post-independent laws in South Africa (1998), Uganda (1995), Zimbabwe (1998) and the latest revised laws in Malawi (2013) and Kenya (2016). After all, from the 1990s onwards, the principles of Integrated Water Resource Management taught: 'all components of the water cycle such as ground water, surface water, evaporation, clouds and rainfall are recognized as being interdependent and forming part of a single water cycle' (Zimbabwe 1998 Water Act section 6.2.a). Uganda is an exception in the sense that water resources fell under the land administration until 1995 Water Statute which was the first water law to vest all water resources in the state. However, the 1969 Public Land Act, section 27.10 also stated: 'All rights to the water of any spring river, stream, watercourse, pond or lake on or under public land whether alienated or not shall be reserved to the government'.

Further, the range of water uses that needed permits expanded and permit conditions got more detailed. In South Africa, in the 1970s afforestation became a 'streamflow reduction activity' requiring a permit. The installation of devices to measure actual water use and the provision of information to the state about such use became more often required. For groundwater, Kenya's 1972 Act, as well as the acts that followed this act specified that anyone constructing a well should

keep a record with 'a) measurements of the strata passed through and specimens of such strata; b) measurements of the levels at which water was struck' and c) measurements of the quantity of water obtained [...] (4th schedule, section 2).

Also, in the second and later generations of water legislation of the five countries, waste discharge started requiring a permit, with a concomitant application fee. The requirement for waste discharge permits and charges has been strengthened over time. Uganda's 1997 Water Act requires separate permits for works and for surface or ground water abstraction (and for one-year permits for drilling companies). The most recent generation of water acts also define the environment as a water user, operationalized as the priority need to maintain certain environmental flows. (However, in countries in which only 30 percent of water resources have been developed, the still available water resources are environmental flows by definition and no quantitative interventions are required).

Moreover, over time, the duration of permits has also become shorter, warranting faster renewal. Kenya's 1972 Ordinance fixed the duration of a permit to a maximum of 25 years, with the possibility of renewal, but five years is common in Kenya's 2016 Act and regulation. In Zimbabwe permanent rights remained in force until 1998, after which permits became temporary as well. Permit durations in current legislation vary between two years but 'generally not more than five years' (Uganda) to not more than 40 years (South Africa). The duration of waste discharge permits tends to be shorter for than for water use. In theory, shorter durations increase the state's regulatory powers, as each obligatory renewal offers an opportunity to check and enforce compliance with the permit conditions. Also, renewal allows for the imposition of new conditions. In Zimbabwe, the shift to temporary permits was expected to serve the goal of freeing up water used by former colonists for more equitable distribution. However, the many inactive permits in today's data bases in Zimbabwe and elsewhere highlight that the expectations of state's stronger control have not been met. Lastly, the uses exempted from an obligation to apply for a license became even more restricted.

Most of these changes remained a dormant letter; the independent governments focused on continuing its broader-based hydraulic mission. However, the global wave of water law reforms since the 1990s under the banner of Integrated Water Resources Management were particularly instrumental in awakening the permit systems across Africa, and also Latin America and Asia. National and international water managers, investors and lawyers were hopeful that this single legal tool could simultaneously meet at least three goals: first, neat and orderly regulation of water allocation to prevent and solve disputes; second, collection of information as basis for any regulation and management; and third, the generation of net revenue for governments and the newly established basin organizations to implement these three functions. In line with the broader IWRM discourse, the original purpose of permit systems to boost infrastructure development for new water uptake had totally disappeared.

None of these goals is achieved particularly well, on the contrary. Although the staff of the water authorities somewhat increased and somewhat decentralized to basin organizations, the numbers of water abstracters reached with a permit are only a tiny fraction of all water users (see table 1). All others, including the majority of poor or just-above-poor formally obliged to apply for a permit are excluded as criminals, while the exempted users have no legal protection vis-à-vis permit holders at all.

Can theories of water as the commons move beyond the exclusion stick of first-come-first-serve permit systems as exclusive form of entitlement and provide alternatives? We turn to that question.

Table 1. Progress in permit allocations and fees collected (source: Pegasys Institute and IWMI 2017).

	Number of permits	Annual water resource management charges collected
Kenya (valid abstraction permits)	2006: 100 2010: 250 2011: 300 2013: 1700 2016 (Sept): 4194 In addition: by 2016: 10000 authorisations Largest volume: hydropower. Out of all permits issued for other uses, irrigation is 46% of total volume. 2013: permits cover 70% of abstracted surface water and 33% of abstracted ground water Further, the installation of measuring devices is monitored.	2013: USD 2.9 million 2014: USD 3.1 million
Malawi (abstraction, waste discharge)	2016: 1033 licences issued to 434 water users (active licences); 1881 licences issued to 611 water users (sleeping licences); 128 licenses of 52 users cancelled Total: 3042 licences by 1098 water users	Maximum achieved: USD163,550. Potential total: USD286,220 (82% from Eskom and Illovo).
South Africa (abstraction <i>registrations</i> of uses before the 1998 National Water Act, and post-1998 licenses)	Around 2005: about 80 000 ELU/licences for water abstraction to 60 000 unique users, of which about 8000 were taking water from state infrastructure; this excludes waste discharge permits Period 1998-2016: 5956 new licenses	Income for 2010: USD23 million
Uganda (all permits (abstraction, waste discharge, drilling) – new and renewed)	2010 (Oct): Total all permits: 491 366 abstraction (232 renewals; 134 new) 89 waste discharge permits (39 renewal; 50 new) 36 drilling permits 2016: total 1320 43 drilling permits 856 permits are monitored; 72% complying (50% waste discharge; 74% volume abstracted; 90% drilling)	FY 2010/11: USD 45 000 Steadily increasing to: FY 2014/15: USD 166 000
Zimbabwe (abstraction), including inactive (=no fee payment) permits	2000: 9,711 (esp from the period 1960s-80s) 2016: 10,799	Low collection rates since the fast-track land reform

3. Water as the commons in Africa

A conceptualization of water as the commons is probably the only way to move beyond this ‘administrative disaster’ and legal dualism of ‘received’ permit systems and customary water tenure. The highly variable, difficult to predict global hydrological cycle is essentially a shared resource and common property, starting from each place, up to the relevant level of aggregation, which ultimately encompasses our entire planet (Bollier 2017). In Sub-Saharan Africa it is a well-accepted theory for the majority of those abstracting water, done under customary arrangements. The challenge is to identify existing, or develop new principles of sharing adjusted to each context.

As already included in the different laws, certain factors need to be ‘considered’ during approval or rejection processes of permit applications for new water uptake. Earlier investments (or ‘hydraulic property rights creation’) are one, but not the only consideration. Redress of inequities from the past and environmental flows are other factors to consider. Considering the full range works if win-win can be achieved, but it raises the question whether priorities should be set in the range of factors to be considered.

Constitutions and human rights frameworks are clear about the need for such priorities (Hellum et al 2015). Human rights have been mainstreamed in the UN’s development planning since 1997. Human rights also inspire citizens and states, as in Tanzania, Kenya, South Africa and Zimbabwe, to adopt new rights-based constitutions to shed the legal legacy of their colonial predecessors. As also reflected in the UN Sustainable Development Goals (SDGs), a global consensus is emerging on human values embodied in human and constitutional rights. Thus, human rights frameworks are undoubtedly the world’s most influential normative value system and yardstick to steer global and national state interventions, including those on water.

Principles are particularly well articulated in General Comment No. 15, ‘The right to water’ of the International Covenant on Economic, Social and Cultural Rights – ICESCR (2002). The Committee on Economic, Social and Cultural Rights (CESCR) monitors the implementation of the International Covenant on Social, Economic and Cultural Rights (UN 1966). General comments are interpretations of the contents of rights included in the ICESCR by the Committee.

The Committee stresses the State’s legal responsibility in fulfilling the right and defined water as a social and cultural good and not solely an economic commodity recognises that priorities *also* and simultaneously include water to prevent starvation and meet “core obligations” in general (General Comment No. 15 para 6):

Water is required for a range of different purposes, besides personal and domestic uses, to realize many of the Covenant rights. For instance, water is necessary to produce food (right to adequate food) and ensure environmental hygiene (right to health). Water is essential for securing livelihoods (right to gain a living by work) and enjoying certain cultural practices (right to take part in cultural life). Nevertheless, priority in the allocation of water must be given to the right to water for personal and domestic uses. Priority should also be given to the water resources required to prevent starvation and disease, as well as water required to meet the core obligations of each of the Covenant rights.

General Comment No. 15 further explicitly refers to farming and livelihoods and the need for infrastructure to realise access to water (General Comment No. 15 para 7):

People should not be deprived of their means of subsistence. States should ensure adequate access to water for subsistence farming and for securing the livelihoods of indigenous peoples. This also entails that disadvantaged and marginalized farmers, including women farmers, have equitable access to water and water management systems, including sustainable rain harvesting and irrigation technology.

Referring to the general right to non-discrimination, “the right of access to water and water facilities and services should be ensured on a non-discriminatory basis, especially for disadvantaged or marginalized groups” (General Comment No. 15 para 8).

The Comment also includes procedural rights (General Comment No. 15 para 48):

The right of individuals and groups to participate in decision-making processes that may affect their exercise of the right to water must be an integral part of any policy, programme or strategy concerning water. Individuals and groups should be given full and equal access to information concerning water, water services and the environment, held by public authorities or third parties.

Impacts from state and non-state actors’ actions are included in these procedural rights (General Comment No. 15 para 25):

Before any action that interferes with an individual’s right to water is carried out by the State party, or by any other third party, the relevant authorities must ensure that such actions are performed in a manner warranted by law, compatible with the Covenant, and that comprises: (a) opportunity for genuine consultation with those affected; (b) timely and full disclosure of information on the proposed measures; (c) reasonable notice of proposed actions; (d) legal recourse and remedies for those affected; and (e) legal assistance for obtaining legal remedies.

In the water sector, a growing number of human rights institutions, civil society organisations and researchers have conceptualised rights-based freshwater governance and have invoked human rights frameworks in action and litigation (Boelens, Bustamante and De Vos 2007). Various national and global human rights institutions, especially in Latin America, exposed major water pollution and damage by mines and exclusion from any voluntary, informed and prior consent as violation of the human right to a clean environment (WaterLex 2014). In other cases, rights to a clean environment are invoked to justify a quantitative reservation of “environmental flows”. New issues have been raised pertaining to the duty of the state to ensure flood protection and prevent soil erosion (WaterLex 2014).

There are many other sources than constitutions and human rights of the notion of a core minimum to which every citizen should have access, also to have access to a range of productive uses that allow the poor to achieve levels of living incomes. This can be individual uses; but also collective uses, and even as benefits from water use by the corporate sector creating jobs. The Sustainable Development Goals mention ‘social floors’. Water managers in South Africa called this ‘some for all forever’, or ‘enough for all forever’. The proposed (but not implemented) priority General Authorisation reflects the same which is within the legal framework of South Africa’s National Water Act (Van Koppen and Schreiner 2014). The same notion was found in communal lands in Zimbabwe (Derman). In irrigation schemes, for example in the Warabandi system in India, the principle is that in times of scarcity, everyone should first get a basic share, after which the remaining water resources can be distributed according to other principles. Basic shares in the nation’s water resources for all are a top priority in this thinking. States are the duty bearers to ensure the availability of such resources at equal par as priority water allocation for the environment.

The past two decades have also seen a strong global move towards participation, transparency, accountability and access to information or “free, prior and informed consent”. In some cases of large-scale investments in dams, for example, in Latin America, human rights to participation are invoked. However, others, such as the global Water Integrity Network, aim at transparency, accountability and participation in the water sector and combating corruption as values on their own, and reference to human rights is rare. A case that is raised as a human rights issue with far-reaching implications regards the nature of private water services providers’ obligations relating to disclosure of environmental information (WaterLex 2014).

Procedural justice is also at the core of the Voluntary Guidelines for the Responsible Governance of the Tenure of Land, Fisheries and Forestry, led by the FAO. Significantly, water tenure was not included, because it was seen as ‘too complex’. FAO’s recent theoretical efforts to systematize the evidence base of plural water rights regimes and the varieties of bundles of rights and duties in each regime (Hodgson/FAO 2016; see also Caponera 1992), still leave many questions unanswered, especially with regard to current permit systems. In FAO’s ongoing efforts to fill that gap, the theory of water as the commons could play a major role as well, while much can be learnt from ways to address legal pluralism in the tenure of land and the other resources.

In fact, for the distribution of the remaining water resources after prioritizing a basic share of water resources for all, permit systems can still fulfil a realistic regulatory role, ensuring that sufficient water is left for basic domestic and productive needs. For example, permit allocations by large-scale investors should abide to free and prior consent of those affected to avoid the 21st century water grab (Franco et al 2013). The threshold above-which existing and new larger-scale users would have to apply for a permit with conditions could be set according to procedural justice: those remote, small- and micro-scale abstracters who can never be reached by the water authority staff for logistical reasons, should certainly be included as entitled to such basic share, instead of being declared illegal with the risk of a fine or imprisonment.

Further thinking about water as the commons in formal water law in Sub-Saharan Africa may not only give new directions to policy debates to align with practices, but, as a clear case of imminent failure without a notion of water as the commons, also enrich theoretical developments (Johnson 2007; Baron 2014; Bollier 2017).

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