

What Commons?

Rethinking Participation in the sub-Saharan African Water Sector

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ABSTRACT

Global reports and major funding agencies herald the comeback of agriculture on the international development agenda as a means of achieving the *Millenium Development Goals*. Within this renewed interest, irrigation is presented as pivotal to increasing food production and alleviating poverty. This is especially the case in sub-Saharan Africa, where macro indicators point to an underdeveloped and underperforming agriculture-cum-irrigation sector. While large dam projects are still prevalent, small-scale irrigation has also become the focus of increased attention from researchers, national decision-makers, and the international development community. Indeed, small-scale irrigation fits well within the development narrative of participation. This paper engages with such a view. It uses the example of small reservoirs in northern Ghana to highlight that small scale irrigation projects are, firstly, based on narrow visions of the 'commons' and participation that rarely consider the experiences and perceptions of local populations; secondly do not account for the de-facto institutional "bricolage" and the diverse land and water claims that they contribute to shape; thirdly, and in contrast to the new vocabulary of development, continue to regard intended beneficiaries as 'recipients' rather than participants with agency; and, finally, largely ignore broader institutional issues that characterize the water sector in the country. Further investments and reforms are said to be the remedy. These are unlikely to succeed, so long as they adhere to a narrowly-defined notion of development. This paper calls for an approach that which acknowledges the multiple claims and uses of natural resources, and which recognizes that projects contribute to shaping new meanings of space and relationships to environments, whose fairness depends on the vantage point considered.

Key words: Governance, Water resources, Small Reservoirs, Ghana

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INTRODUCTION

In 2007, the World Development Report heralded the comeback of agriculture after an apparent 25-year hiatus from the development agenda. There is a renewed interest also in water sector projects and reforms that are seen by international organizations as “effective instruments in using agriculture for development” (for instance, FAO, 2008).

In the 1950s and 1960s, the conventional wisdom that dominated the irrigation sector was one of centralized planning, development and management (Meinzen-Dick, 1996). However, the discovery of elaborate farmer-managed irrigation systems in the 1970s, disillusion towards poor-performing state-led interventions, and controversies around large scale projects (WCD, 2000), provided the basis of a paradigm shift towards so called participatory approaches (for instance, Chambers et al., 1989). The remedy to past failure would be bottom-up and participatory practice that will meet users’ needs and demands. To that end, institutions are set up that will promote and manage technology through collective action. The underlying assumption is that a greater dependence on, and knowledge of, the socio-ecological system would translate themselves in a better stewardship of the latter (Ostrom 1990; Wade 1987).

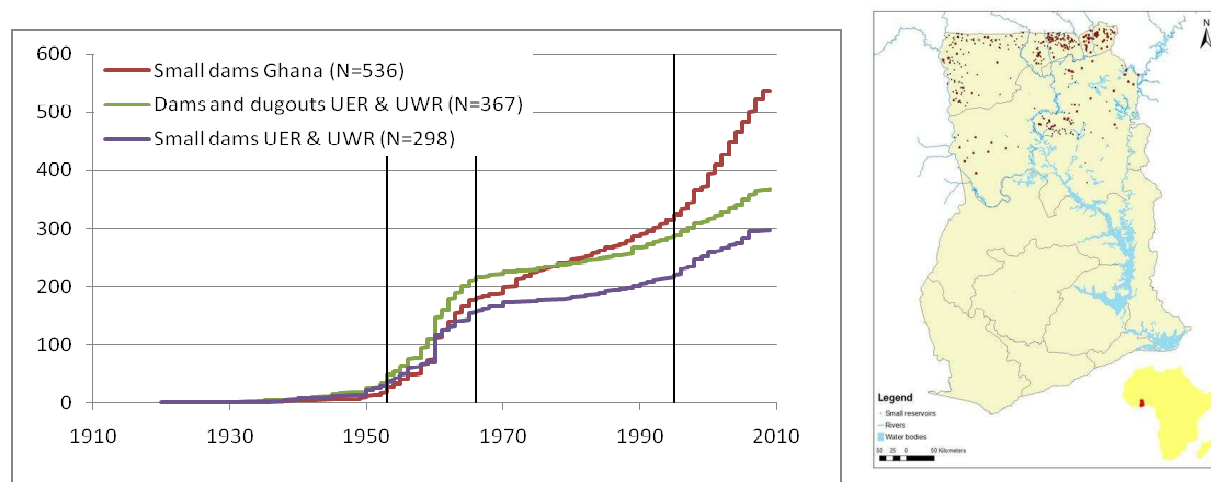
The shift from technology-oriented, top-down development towards an approach that recognizes the role of users and institutions is certainly encouraging. However, similar long-held concerns of projects failing to match expectations despite theoretical promises and early records of success have been widely documented (Andersson and Ostrom, 2008; Blaikie, 2006; Ribot et al., 2006). This paper engages with this literature. Based on a case study of small reservoirs in northern Ghana, it argues that beyond the shift in discourse, the framing of so called participatory approaches still reveals a linear vision of how development (should) take place and *via* which institutions. Section 2 gives some background information on small reservoirs in Ghana. Section 3 highlights that the perceptions of the benefits and risks –and related performance - of small reservoirs depend on the vantage point considered; this is important as multiple understandings of small reservoirs have implication in terms of governance. Section 4 describes the institutional set-up adopted and promoted by recent small reservoir projects and highlights their disconnected with the messy reality of local governance. The conclusion highlights the need to account for this local complexity as well as the multi-scalar innovation processes that characterize any development intervention.

SMALL RESERVOIRS IN GHANA

Ghana witnessed a first phase of small reservoirs construction following independence in the 1960s (figure 1), after which small reservoirs virtually disappeared from the national development agenda. Since the mid-1990s, however, there has been renewed interest in such projects, mainly due to large donor-driven investments in the north of the country (among which the World Bank VIP project, and the IFAD UWADEP and LACOSREP 1 and 2 projects). Between 1995 and 2009, 222 small reservoirs (1,271 when including dugouts) were constructed in the country, among which 82 in the three

northern regions.² This is approximately twice the number built between 1970 and 1995. Another 80 dams, at least, were rehabilitated in the Upper East and Upper West regions during the same period. The International Fund for Agricultural Development (IFAD) and the Africa Development Bank (AfDB) also plan to invest a further \$30 million by 2015-2020 to build or rehabilitate an additional 50 small dams (Venot and Cecchi, 2011). Most dams constructed after independence were aimed at soil and water conservation while providing a “water point” for domestic and livestock purposes, often in remote communities. Recent donor-driven investments have, however, focused on rehabilitating and upgrading existing schemes for irrigation purposes –against which their performance is now assessed. According to the Ministry of Food and Agriculture database, the irrigation potential of small reservoirs and dugouts would be well over 5,000 ha, half of which in the three northern regions (this is about one third of the irrigation potential of public irrigation schemes in Ghana).

Figure 1. History and spatial distribution of dam construction and rehabilitation in Ghana



Source: Based on secondary databases of relevant ministries; date of construction are available for 2,445 out of 3,522 dams and dugouts (e.g. about 70%) (536 out of 946 when limited to dams)

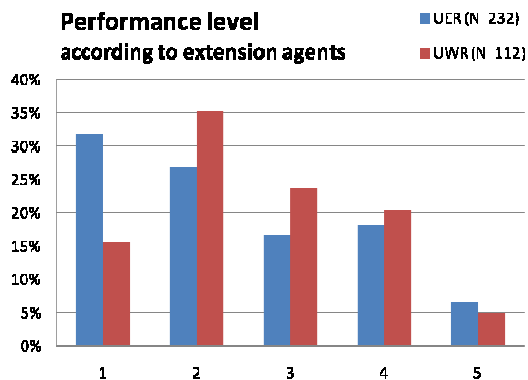
The two following sections focus on the Upper East and Upper West regions of Ghana that have the highest concentration of small dams. We draw from quantitative and qualitative data that were collected during a sequential process. First, working sessions with the extension agents of the Ministry of Food and Agriculture (MoFA) were organized in each district capital of the two regions. This allowed collecting detailed information on: (1) the characteristics of the dams; (2) their design purposes and actual uses; (3) their level of performance; (4) the constraints faced by the communities; (5) the benefits derived from using the small reservoirs; (6) the local institutional arrangements and modes of management. 242 and 112 dams were documented in the UER and UWR, respectively. Second, 24 detailed case studies were conducted. For

² Dugouts are rainwater harvesting structures (smaller than small dams). They are located in “depressions” that have been further scooped (either manually or with machinery) to impound more water but often dry up during the dry season. Traditionally, they were aimed at livestock watering and domestic uses in areas with little water availability.

that purpose, 24 small reservoirs were randomly selected. In each site, the detailed case studies involved participatory exercises (focus group discussion, transect walks), semi-structured interviews with individual small reservoir users (rainfed and livestock farmers, irrigators, fishermen, women, etc.) and key informants interviews in the community (local elected representative, customary authorities, representative of Water User Associations). The detailed case studies aimed at gaining a qualitative understanding of the multiple uses and perceptions of small reservoirs. In addition, we conducted key informant interviews with policy-makers (in Ministries of Water Resources, Agriculture, Irrigation and Environment at the national and local level), donors and technical development partners, elected officials of local executive bodies (districts), and other key informants to explore the governance structure, and the implementation and planning processes, of small reservoirs projects in Ghana.

USE VALUE AND PERFORMANCE: MULTIPLE VANTAGE POINTS

Figure 2. Performance of small reservoirs: the point of view of extension agents



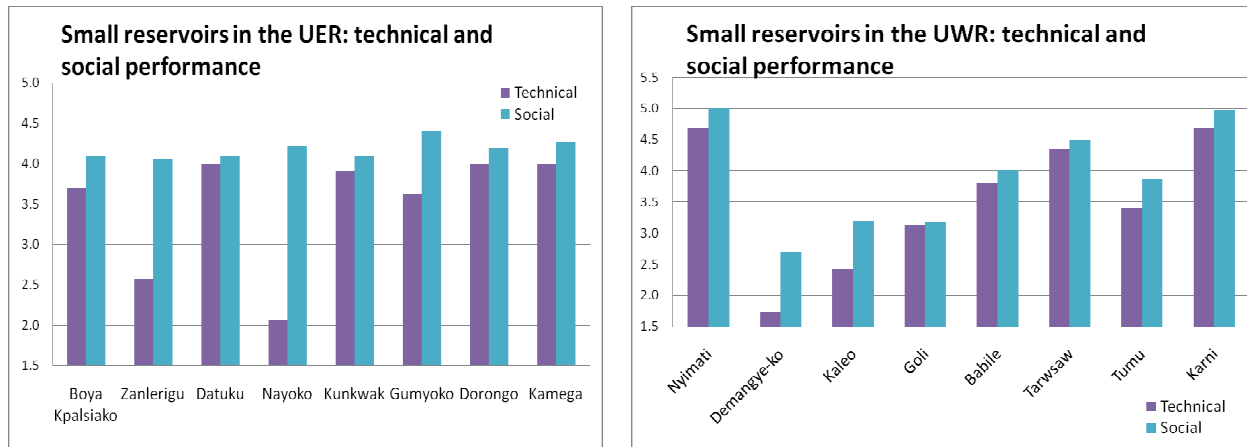
Extension agents give a grim picture of the performance of small reservoirs. When asked to rank small reservoirs on a scale from one (very poor) to five (very good), they indeed consider that nearly 55% of all small dams in the study area perform poorly (level 1 and 2; figure 2). They advance design and infrastructure problems as the main culprits for poor performance.

Shortcomings in the governance of investments and procurement processes (leading to poor quality design and construction) are indeed regarded as one of the main concerns faced in Ghana (*not shown*). Managerial set-ups centred on the WUA are ill adapted to address those concerns (see below) as they go well beyond the level of the reservoir/community. The picture of reservoirs given by local users is slightly different. Local populations seem to value reservoirs “more” than extension agents. For example, in 14 out of 19 sites surveyed, the local population mentioned a level of satisfaction higher to the one expressed by the extension agents. This suggests that the performance of any intervention depends on the vantage point considered, as will the institutional arrangements deemed relevant for its governance.

When unfolding further the notion of “satisfaction” on the basis of 4 commonly used performance indicators: physical infrastructure, management, benefits derived, and equity, it becomes clear that local users score small reservoirs lower against the first two indicators than against the last two (figure 3). The low scores regarding infrastructure are in line with the performance assessment of extension agents who tend to evaluate small reservoirs through an engineer lens (and, to a lesser extent, a

managerial one e.g. the presence of a WUA or not; see below). The high scores regarding equity and benefits derived (social performance) show that local population have different understanding of small reservoirs – their opportunities and risks- than extension agents whose views remain, however, decisive in devising development interventions as it gets “passed-up” along the line ministries to the national level.

Figure 2. Performance and satisfaction: perceptions of local users in 16 small reservoirs[‡]



[‡] Scores for “physical infrastructure” and “management” were similar and pooled together into a single category (technical performance). The same was observed for “benefits derived” and “equity” pooled into a single category (social performance).

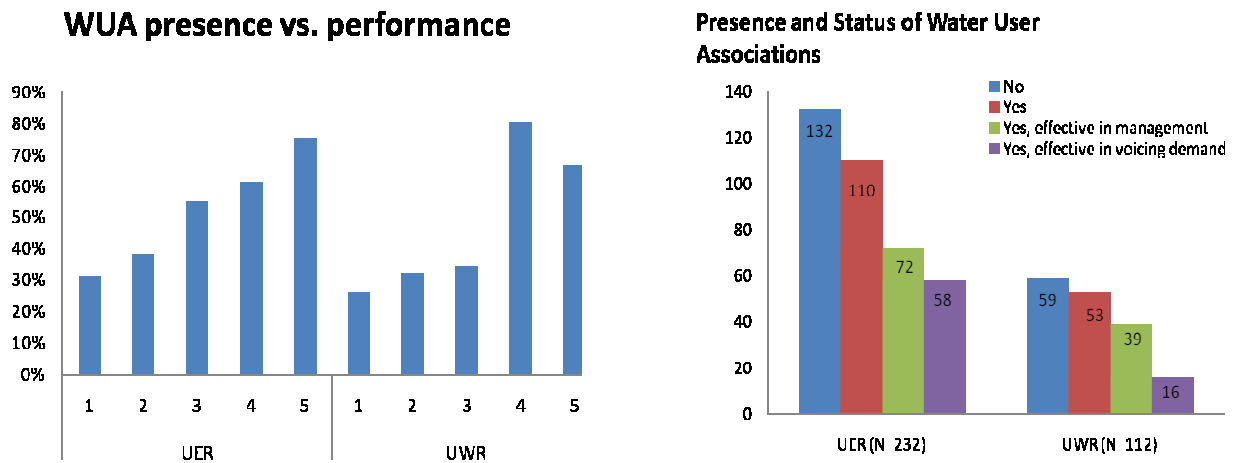
Interestingly, though poor people are sometimes excluded from direct benefits (such as irrigation), they were the group indicating the highest level of satisfaction in all dams (together with old people). On average, youth and women’s group tend to give lower satisfaction score than irrigators while rainfed-cum-livestock farmers give higher satisfaction score. This shows the importance of small reservoirs to support livestock activities (during water shortages, it is for example common that priority is given to livestock watering over irrigation activities). Concerning low performing dam (e.g. low score as given by extension agents), small-scale water users (e.g. poor, youth, women and fishermen) tend to give higher satisfaction score than irrigators. This clearly shows the wide-shared perception that small reservoir performance is linked to irrigation development though different groups have different use of the reservoir. When irrigators give high satisfaction scores, small-scale water users seem to give a more balanced view of the benefits they derive from the reservoir (they remain satisfied but to a lesser extent than irrigators and livestock farmers). This shows the difficulties in coordinating and integrating multiple users and social groups around a common resource. To address those issues, small reservoirs project have promoted Water user Associations.

WATER USER ASSOCIATIONS: WAY FORWARD OR SIDEWARD?

The current blueprint for developing small-scale irrigation is one of participatory, community-led projects.³ A core component of such initiatives is the establishment of Water User Associations (WUAs) as the legitimate entities to maintain and manage small reservoirs. By extension, the performance and success of small-scale irrigation projects is determined partly according to the numbers of WUAs that have been set up.

The left panel of figure 4 seems to support this view. It indicates a correlation between the presence of a WUA and the performance of small reservoirs. Indeed, proportionally, there are more WUAs among well performing reservoirs than among poor performing ones. At first encouraging and supporting the view that WUAs enhance performance, this observation is however questionable.

Figure 4. WUA and performance of small reservoirs



The right panel of figure 4 indeed shows that only 70% and 45% of existing WUAs are considered as effective for managing the reservoirs and voicing demands of users, respectively. Further, in absolute terms and among the well performing reservoirs (score equal or higher than 3), there are as many dams with than without WUAs (*not shown*); highlighting that the presence of a WUA is neither a pre-requisite nor a guarantee for good performance, as often assumed by development projects that consider the existence of a user organization as a precondition to further intervention. Finally, among the 24 detailed case studies, there was no clear correlation between the level of satisfaction of local users and the presence or absence of a WUA. Hence, the left panel of figure 4 highlights an endogenous correlation: by their very presence, WUAs are a

³ Though it has tremendous traction among development partners, participatory irrigation management faces mounting critiques notably among researchers that highlight the extraordinary “sway it has continued to hold [...] despite virtually no evidence of having succeeded anywhere in the developing world except on an experimental basis, and only with facilitation of un-replicable quality and scale” (Shah 2009 on the case of Indian irrigation).

pledge of the performance of reservoirs. This highlights the power of global development discourses that both “trickle” down to and are used by the “local”.

Building on the work of institutional analysts (Ostrom 1990), development projects have associated participation processes with clearly defined groups of resource users and structures of authority such as WUAs; rigorous application of graduated sanctions; and transparent decision-making that is codified in written records (Cleaver 2000). We suggest here that in their insistence to establish “one-mode-fits-all”, (the WUA) small reservoir projects embody narrow visions of the commons and participation. By asserting the primacy of WUAs as the rightful entities for maintaining and managing small reservoirs, project undermine existing collective action institutions; ones that may actually contribute to good governance of small reservoirs. This is not to say that WUA do not have a role to play, but that major shortcomings –both procedural and structural– still remain for them to fully contribute to sustainable governance of small reservoirs.

First, development partners still consider local actors as recipients or “beneficiaries” playing a given role in an overall “concept” (GTZ, 2003) rather than participants with agency. When stating that “*the failure to complete the appraisal target was due to the time wasted sensitizing the communities*” (IFAD, 2008), project workers and designers show the little value they give to interacting with communities and considering local priorities over the apparent need to inform them about what is good for them.

Second, WUAs convey the experiences and perceptions of only some segments of local populations. Only half the user associations that were reported are inclusive of all users while 85% of them include irrigators. They seem, therefore, ill-adapted to govern socio-ecosystems such as small multipurpose reservoirs.

Third, WUAs do not account for the de-facto institutional bricolage (Cleaver, 2000) and the multiple collective action institutions that contribute to the governance of small reservoirs. Not less than seven (7) types of actors/groups were identified as contributing to the governance of small reservoirs by assuming different and complementary roles (figure 5, table 1). WUAs were identified as the main decision maker regarding issues pertaining to small reservoirs in less than one third of the cases (figure 5) and their main tasks seem to revolve around minor maintenance and daily management activities (table 1). Line ministries and government agencies are rarely considered as the main decision makers regarding small reservoirs (figure 5) but their role in the procurement and construction processes and in supporting farmers (extension, marketing) appears very clearly (table 1). Finally, traditional authorities seem to play a crucial role, in close interaction with the WUA: they are deemed to take most of the decisions regarding the uses and management of reservoirs in 20 to 30% of the cases (figure 5) and they appear crucial to settle dispute, resolve conflicts and maintain social cohesion (table 1).

Figure 5. Main decision makers regarding the governance of small reservoirs

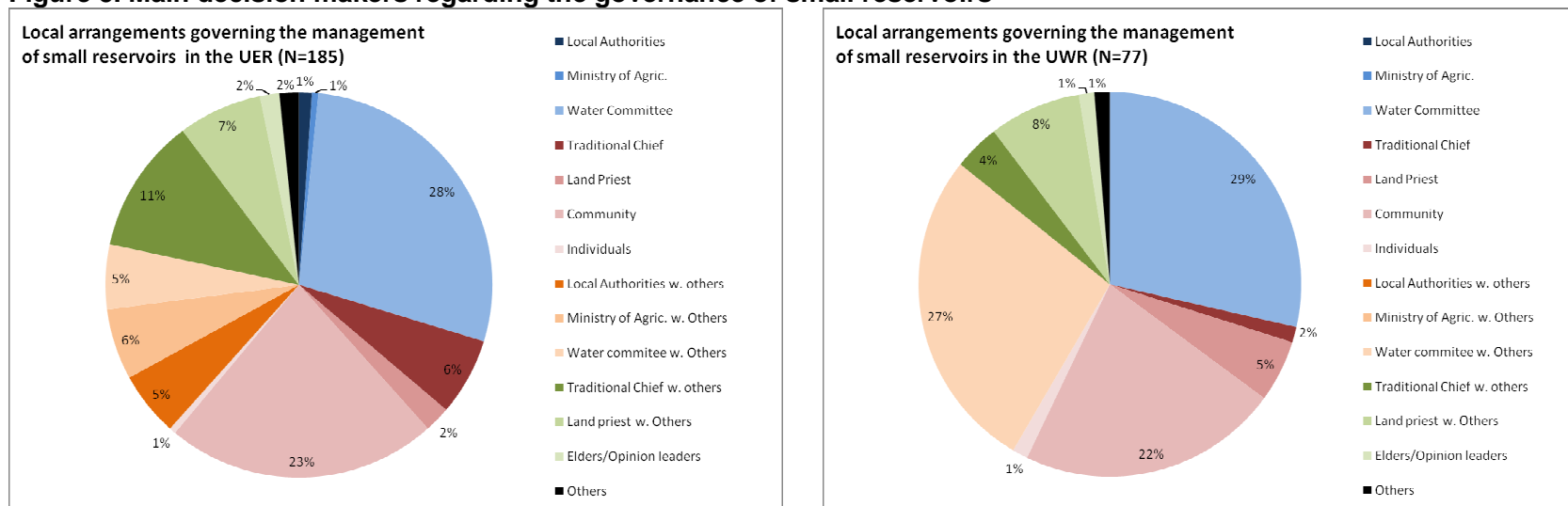


Table 1. Small reservoirs governance: who does what? ‡

| | MoFA | GIDA | Donors | Contractors | District Assemblies | Traditional Authorities | WUA | Community | Individual farmers | Others |
|---|------|------|--------|-------------|---------------------|-------------------------|-----|-----------|--------------------|--------|
| Construction | 17% | 51% | 4% | 29% | 12% | 1% | 2% | 1% | 0% | 1% |
| Major Maintenance | 22% | 38% | 10% | 5% | 36% | 1% | 2% | 2% | 0% | 2% |
| Minor maintenance | 3% | 4% | 1% | 0% | 6% | 6% | 52% | 31% | 3% | 1% |
| Setting of management rules | 7% | 2% | 1% | 0% | 3% | 18% | 60% | 12% | 5% | 1% |
| Implementation & monitoring of management rules | 6% | 2% | 0% | 0% | 3% | 14% | 66% | 13% | 2% | 2% |
| Relation with other actors (MoFA, DA) | 14% | 1% | 0% | 0% | 6% | 17% | 54% | 13% | 3% | 2% |
| Conflict resolution | 12% | 1% | 0% | 0% | 9% | 68% | 31% | 7% | 0% | 0% |
| Environmental protection | 4% | 2% | 1% | 0% | 4% | 14% | 49% | 32% | 4% | 1% |
| Extension role | 65% | 21% | 3% | 0% | 2% | 1% | 5% | 3% | 0% | 8% |
| Ag practices and marketing | 26% | 3% | 0% | 0% | 2% | 7% | 23% | 7% | 29% | 7% |

‡ Extension agents sometimes identified several actors as having some sort of responsibilities regarding a specific task, hence the sum of percentages exceeds 1 for any specific tasks (lines in table 1)

CONCLUSION

Small reservoir projects tend to adopt a technocratic approach guided by a focus on infrastructure and geared towards the efficient use of land and water resources. This is clearly exemplified by the priority given to irrigation over other uses (livestock, fishing, and brick-making) that are generally considered as less productive though they are central to poor rural livelihoods in northern Ghana. Newly established institutions, particularly Water User Associations, are meant to serve as conduits for achieving efficiency. They, however, ignore the multiple arenas through which participation, authority and local priorities are shaped. Innovation processes are multiple: they “transform” small reservoirs according to local priorities –often in unintended ways- and in the process the boundaries between global and local tend to disappear as local actors appropriate global narratives of participation and performance for their own ends.

The quick description of the multiple perceptions and institutional bricolage that govern small reservoirs in northern Ghana clearly shows that the question should not be whether small reservoirs –and WUAs- are effective when evaluated against the objectives and roles prescribed to them by external actors; but rather, what their actual effects and roles are on the ground. This paper contends that local concerns are best addressed by enhancing multiple institutional relationships at multiple scales, rather than by assuming that an imposed and ostensibly ‘apolitical’ organization (the WUA) can convey them. Local authorities such as district assemblies seem to be only marginally involved and concerned by small reservoirs; they could however constitute the missing link to enhance downward accountability whose current lack opens the way to poor planning, procurement and construction processes –the major impediment to date to a sustainable governance of small reservoirs in northern Ghana.

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