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**ACCESS TO SANITATION AND SAFE WATER:  
GLOBAL PARTNERSHIPS AND LOCAL ACTIONS**

**Drinking water policy, water rights and allocation practice  
in rural Northern Ghana**

*I. Eguavoen, Germany*

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*Rural drinking water policy in Ghana is based on the 'communal management' approach. The formal membership in water user communities has been introduced in the end 1990s during the implementation of a new water policy, called National Community Water and Sanitation Program. Members of pump communities hold a monopoly on ownership, access and power over their water facility. But local water users also had to balance contradictions and conceptual differences between their previous water right regime and innovative institutions. Despite a new conceptual design, structural shifts in the pattern of water user groups and the local diversification of water rights and rules, the practice of household water allocation does not show major changes but continues to depend primarily on non-institutional factors.*

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**Background and research questions**

Current drinking water policies at global level assume that rural drinking water supply facilities, such as improved hand-dug wells or hand pump-fitted boreholes should be best managed by local water users. It is expected that so-called 'communal management' will guarantee the technical sustainability of the supply facilities as well as more equal access to water. Ghana – as many other African countries - has adopted and implemented this approach countrywide in its National Community Water and Sanitation Program (NCWSP) from 1998 onwards. After a long period of centralized management by the state owned Ghana Water and Sewerage Corporation (GWSC, today Ghana Water Company Limited), which could not ensure long-term sustainability of the rural water supply facilities (Bacho 2001, Fuest 2006, Fuest and Haffner 2007), the management of rural water facilities was handed over to local water users. This transfer in management rights was accompanied by the implementation of crafted institutions, such as rules and procedures, which local water user groups were supposed to implement and translate into action, irrespective of local management practices of household water, which have always existed and co-existed with the centralized management. It is important to acknowledge that even though GWSC was in charge of water project planning and implementation as well as the technical maintenance of the hand pumps, the day-to-day management issues, such as the definition of access, the allocation of water as well as the maintenance of the pump site were always and continuously performed by local water user groups.

As a result of institutional development intervention, some concepts, which the NCWSP policy suggests, contradict the previous local water right regime as well as local perceptions and conditions. Among these concepts are (1) formal water user communities, (2) water tariffs and (3) the right to exclude others from access. Under NCWSP, local water user groups were challenged to balance these contradictions and deal with project legislation and pump management guidelines, as well as with socio-cultural norms, ecological circumstances and practical needs, which all embody divergent management priorities. This paper will tackle the following questions:

- What empirical impact has the international drinking water approach on the local management of household water?
- What institutional and conceptual changes have emerged in comparison with the previous water right regime at local level?
- And what are the consequences for the access to household water and local water allocation practice?

**Methodology**

The presented qualitative and quantitative data was collected during a nine-month field stay in a Ghanaian rural settlement situated in Kassena-Nankana district close to the border to Burkina Faso. The research took

place within the context of the interdisciplinary GLOWA-Volta research project, which is concerned with the implications of climate change for the hydrological cycle in the West African Volta River Basin. The methodology included a survey among all village water committees and local water authorities<sup>1</sup>, a compound survey<sup>2</sup>, interviews with water experts, local authorities and water users, participant observation, as well as the review of historical and project documents.

## Results

### Bounded water user communities

The NCWSP implemented in rural Ghana has provoked major structural changes in the local pattern of water user groups and water rights. Usually, households frequent a number of water sources for their household supply. Water is not only used for primary purposes (drinking, cooking, washing) but also for small productive uses (e.g. livestock watering, fruit tree irrigation, craft, construction). Household water sources may include potable water from hand pumps but also water sources of lower quality, such as from reservoirs or streams. Households take preferences for their fetching pattern, which are shaped in the research site by the distance to various water sources, the perception of water quality, the composition of the household, as well as the kind livestock owned by the household. Moreover, households tend to maintain use rights in several water user groups. This strategy secures the household water supply when water sources fail or become seasonally unavailable. It used to be the distance to the water source and household's preferences, which characterized the constitution of water user groups before the introduction of 'communal management'. Use rights were public, even when the right to own the facility was held by an individual, as is the case with so-called *buligadaama* (well owners) in the research site, who also hold a number of decision-making rights over the facility. If no owner was defined for a water source, local councils of elders used to hold the decision-making rights.

NCWSP project law requests a community contribution of 5% capital cost towards facility construction, the installation of an elected pump committee, regular payments of water tariffs, and transparent bookkeeping. Such institutionalization of a water policy introduces innovative regulation to the local management arena (Botchway 2004). With its implementation, the membership in water user groups became registered and formalized. The borehole provider delivers the water supply facility to the new water user group, which constitutes a formal water user community (e.g. pump community, improved hand-dug well community). This community holds joined rights to own the hand pump ('communal ownership'). The ownership of already existing facilities has been directly transferred from the state to the former water user group. According to this policy, the pump community alone is in charge for all cost of operation and maintenance ('Community Ownership and Maintenance/ COM approach'). To avoid free-riding by outsiders of the community, the boundaries of pump communities are strictly drawn and membership status clearly defined. To avoid free-riding from members, regular payments have to be made to maintain use rights. In practice, membership of a pump community can be gained by the payment of either the initial community contribution (inter alia, a share of the communal amount which has to be paid to the provider) or a later entrance fee. The entrance fee was not foreseen in project guidelines but is an innovative institution, which was created at the local level to cope with households' inabilities to contribute<sup>3</sup>. Entrance fees are higher than the initial contribution penalizing compound houses, which had not been able to afford paying during the project implementation period. Only after the payment of the entrance fee, water rights (right to own, use rights, decision-making rights) are transferred to the entire compound house. Official statistics on rural water coverage may give a misleading impression because the number of facilities is not equally shared among the number of users. This is partly due to the dispersed settlement pattern in Kassena-Nankana district but may also have institutional causes. In one pump community, 65 compound houses share one hand pump. Another pump community in the same village section has only eight members. In this particular case, it is due to the restrictive policy of the smaller pump community, which scared potential new members away with very high entrance fees to avoid waiting times at the pump.

Another practical implication of NCWSP policy is that households may not always be able to translate their preferences for water sources into practice. A compound house belongs to a particular pump community and usually holds no use right in any other – even if the other hand pump is closer, easier to reach in rainy season, less crowded or in more functional state. Gaining membership status in an additional pump community is linked to high expenses. Only a slight minority of compound houses situated in about equal distance to two pumps follow a strategy of double membership. But almost all compound houses are members of a reservoir community additional to their membership in a pump community, if such a facility was situated in their neighbourhood. This allows them to integrate multiple water sources and qualities in their

household water usage and opens up options for decision-making. In the perception of the local male and female water users, the research village does not lack hand pumps as much as it lacks permanent surface water sources, such as small reservoirs. The existence of small reservoirs shows an impact on the usage of hand pumps and may lead to much shorter waiting times and thus less conflict in water allocation practice. But such inter-dependency between hand pumps and small reservoirs is not considered by the NCWSP which solely focus on drinking water issues.

The design for bounded water user communities take the interest and water needs of surrounding settlers into consideration but not these of other water users. In the field site, villagers farm fields not only around their compound house but also in other village sections. Livestock roams freely all over the village. Some pumps are situated at the roadside, where many people pass by or at the market, where traders are in need of water. These water users are ignored or neglected by NCWSP management guidelines. Villagers balanced the contradiction by the creation of an additional, innovative hierarchy of water users and categories of use rights. As a consequence, non-members of pump communities may obtain use rights, which limit the amount of water, the water use and the period of withdrawal. Illegitimate access was rarely tolerated but happened.

Whenever not restricted by the exclusiveness of pump communities, the pattern of multiple household water sources was maintained. When facilities broke down, extraordinary arrangements had to be negotiated between pump communities, which took the form of temporally limited use rights linked to some conditions, which additional user have to fulfill (e.g. extra fees, special fetching times).

### **Water tariffs and the right to exclude others**

The regular payment of water tariffs for rural water supply was extended to all rural regions of the country. This introduction of water tariffs was not meant to introduce water as commodity but to provide means to accumulate local funds for spare parts and repair. This is so because experience had shown that many local user groups had difficulties to make ad hoc contributions when a break down occurred and were not able to employ pump mechanics. Pump communities were encouraged by management guidelines to sanction non-payment with the exclusion of such free-riders. Thus on paper, it was intended to link use rights to regular payments. Similarly, payments were locally conceptualized as maintenance fees not as water tariffs and called 'borehole fees'. Water remained a public good in character. Borehole fees are low and in most pump communities they are paid as yearly lump sum by compound houses or by single male/ female adults, irrespective of its number of households, inhabitants or water consumption rates. This may imply unequal costs among compound houses of the same pump community.

At the local level, there is a strong cultural norm of non-exclusion, which prohibits the exclusion of people from access to water for primary uses (including livestock watering). This norm got challenged through the new policy. Not only culturally but also practically, the exclusion from access proved to be unfeasible. Payments are usually made in the beginning of the year as suggested by management guidelines. This is the period of the year, when most households do not have items to sell for cash. At the same time, almost all water sources apart from the hand pumps are not available. Single source situations are created by seasonal water shortage and the exclusiveness of other pump communities. Some compound houses only have access to one specific pump to draw all water for household usage (even though more hand pumps may exist in the surrounding area). The single source situation diminishes practical sanction capabilities even if exclusion is an institutional part of the management system<sup>4</sup>. Additional institutions such as rules for payment by installment, procedures of negotiation and issuing cautions, as well as minimal access were locally created to avert the exclusion of users because such excluded people would not be able to shift to an alternative water point. Hence in practice, use rights got linked to ownership and not to the payment of water tariffs. Watering rights remained public. For the NCWSP is not concerned with non-improved water sources, such as dug-outs, alluvial wells and streams, their respective water right regime remained completely untouched by the policy. Non-exclusion continued to be the norm and practice.

### **Water allocation practice**

Local water law contributes to a right-based allocation of household water. Water rights in pump communities stress the equity of member compounds in ownership, access and power – ignoring the social, economic, gender or age status of individuals living within the households of a member compound. The bottleneck for the receipt of such water rights is the membership in a pump community. Although water rights shape fetching pattern and resource allocation to some extent (e.g. they regulate which compound may fetch from which hand pump), both practices were influenced strongly by:

- Decision-making of individuals at household level, specific household water requirements (quality and quantity) and attempts to smooth labor routine. Preferences have an impact on the water quantity, the water source and the fetching times as well as on individuals' behaviour at the pump site.
- Structural/ institutional factors, such as the combination of household members and their particular property in livestock. They result in specific water requirements and in specific availability of labor force for water fetching. Gendered division of labour, socio-cultural organization and norms manifested, for example, in the main responsibility of young women for water fetching.
- Non-institutional and non-decision-making factors, such as individual physical weakness or an unfortunate combination of household members (small number, physically weak members, out-migrated young adults).

Most of the individuals and households receive the quantity and quality of water they need and desire because the groundwater is abundant and only limited by pump capacities. Constraints in water allocation occurred due to a high number of users in the form of rush hours at the hand pump. But this does not affect allocated amounts but instead has an impact on fetching times (which eventually disturb labour routine smoothing, such as fetching during dark night). Insufficient response to water needs is caused by a combination of factors, which always includes the third category, which eludes institutional regulation.

## Conclusion

Management guidelines derived from NCWSP policy had an impact on local institutions of household water management. They were not translated 1:1 into local water law but provided one set and source of institutions among others (previous water right regime, socio-cultural norms and forms of organization), which served as repertoire for institution building. Current local water law is an outcome of institutional bricolage (Clever 2002) and a legal response to specific socio-political, economic and ecological conditions in the field site. Strikingly, the rules and regulations in all pump communities vary to some degree but embody very similar principles and ideas. Whilst the physical access to water (the number of water points) increased in Kassena-Nankana district through NCWSP and former water development projects since the 1970s, the institutional access to water has become more limited due to institutional development intervention accompanying the program. An important outcome of the research shows that local water law is only one of a number of factors contributing to water allocation practice.

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**Notes**

- <sup>1</sup> The 65 questions were addressed and discussed with 25 pump committees (two of them managing two hand pumps), two improved hand-dug-well committees, two reservoir committees, and several well owners. Committees of newly constituted pump communities, which were still in the project implementation phase, were addressed with a different questionnaire.
- <sup>2</sup> A compound house is a local house, which comprises one or a number up to eight households. Each household has own buildings, yard and cooking place. Stores and the central kraal are shared. The households are related over patrilinear descent. The eldest man acts as the compound head.
- <sup>3</sup> The majority of local pump communities and improved hand-dug- well communities displayed such a regulation.
- <sup>4</sup> In 14 of 25 pump communities, the committee stated that non-payment of borehole fees would result in exclusion. Most of them did not face such situation yet or reacted otherwise in practice.

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**Contact details**

Dr. Irit Eguavoen  
Center for Development Research (ZEFa)  
Walter-Flex-Strasse 3, 53113 Bonn/Germany  
Tel: 0049-228-734912  
Fax:0040-228-1972  
Email: [eguavoen@uni-bonn.de](mailto:eguavoen@uni-bonn.de)  
www: [www.glowa-volta.de](http://www.glowa-volta.de), [www.zef.de](http://www.zef.de)

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