

33rd WEDC International Conference, Accra, Ghana, 2008

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

**Lessons from emerging conflict resolution mechanisms
in the Volta Basin**

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One key expertise that remains untapped in Ghana is community-based arrangements for water resources management and how such arrangements are/or could be employed in developing an integrated framework to promote sustained management of the resource and improved livelihoods of the people. This paper presents the results of an in-depth investigation carried out on how community-based strategies are employed to resolve conflicts that confront communities in the White Volta and Lower Volta sub-basins of the Volta Basin in Ghana. Such strategies include promoting negotiations, instituting measures to prevent the occurrence of conflicts and institutionalising local organisations. The outcome provides some useful insights into the use of such community-based strategies in supporting development planning and policy formulation for managing water resources at the national and possibly regional level.

Introduction

Ghana has witnessed a gradual shift from the state-driven water resources development regime towards decentralised and mainly local community-based management regimes. There are good reasons for this: the nature of water resources management problems is now growing to be that where one actor's use or neglect of the resource influences other actors' possibilities for using that resource. This makes the development of local collective actions i.e. norms, rules, adaptive mechanisms and conflict resolution mechanisms to manage the use of the resource a crucial issue.

Accordingly, an investigative study has been conducted in the Volta Basin in Ghana aimed at providing inputs towards developing a generic framework for incorporating indigenous principles into transboundary river basin institutional arrangements for the Volta Basin and other African transboundary basins. This paper, presents results of the conflict resolution mechanisms component of the study.

Objectives

The overall objective of the component study was to assess mechanisms developed by riparian communities in the Volta basin to address emerging conflicts in the use of water resources to enhance their livelihood. Specifically, the study sought to:

- Identify the various conflict situations in the use of water use in the communities;
- Assess the effectiveness of mechanisms that the communities have developed to address such conflicts;
- Draw lessons for scaling up the planning of the management of water resources and improving livelihoods in the long-term at the national and regional levels.

The study area

The study was conducted in three selected sites in three sub-basins of the Volta Basin. The sites were Anlo-Keta, Binduri/Bugri and Afram Plains in the Lower Volta, White Volta and Obosum sub-basins respectively.

Anlo-Keta is located in the Volta region with a coastal environment, which is typically made up of crop-lowland, scrubs, and swamps. The population is mostly involved in farming and fishing. Binduri/Bugri is located in the Upper East region of the country, with savannah crop land and pasture vegetation. The population is mainly into farming, livestock rearing and poultry production. The women are also engaged in small scale productive water activities such as shea butter extraction, brewing of local drinks, bricklaying, and pottery making. Afram Plains is an extensive high grass fertile region in the Eastern region of Ghana. Most of the population is engaged in farming and it remains one of the key areas in Ghana with a lot of potential for food production (Ghana Statistical Services, 2005).

Methodology

The ethnographic methods of key informant and focus group discussions were used and complemented with a checklist guide for direct observation. The field survey was carried out from December 2005 to March 2006. Key persons interviewed included chiefs, assemblymen, chairpersons of community development associations, local spiritual heads (known in the local communities as the 'Tindana'), and executives of nongovernmental organisations (NGOs) operating in the areas. In the case of the focus group discussions, interactions were held with youth, men, and women's groups, water user groups, selected community members, and livelihood-based groups in the communities. The data collected was qualitatively analysed.

Water sources and livelihood practices

The communities in the three areas surveyed were mostly agrarian communities, which is consistent with that of the entire country. Agriculture has remained the predominant industry over the years, with more than 50 per cent of employed persons in this industry (Ghana Statistical Service, 2005).

The main source of water in Anlo-Keta was shallow wells used by the farmers for their coastal irrigation farming. Communities in the Binduri/Bugri area typically faced water shortages during the dry seasons and therefore relied on small reservoirs and dugouts for their livelihoods. Boreholes and wells were also used for domestic and agricultural activities, especially during the dry seasons. Rain was the main source of water for farming in the Afram Plains. Few people also harvest rainfall to complement well, borehole, pipe borne, and stream sources for domestic purposes.

In all the cases, water availability greatly influenced the livelihood of the communities, as they made conscious efforts to look for ways of ensuring that the scarce water was conserved and used to sustain their livelihoods. However, it was the non availability of water that in most cases generated the conflicts that has to be addressed.

Conflict management and resolution mechanisms

One major issue that was either apparent or latent in the study sites was conflict in the use of water resources among the same water users and/or between competing uses. However, various strategies have been developed by the local water management institutions to address the conflicts, which are discussed in this paper.

Negotiations for water use

In Binduri/Bugri conflicts usually occurred among members of the same and different user groups in the use of reservoirs. The communities had established a rule that owners of land close to the reservoirs should release such lands for re-allocation to the whole farming community during dry seasons for equitable sharing of water. The land re-allocation exercise, which was supervised by the Water User Associations (WUAs), sometimes generated conflict among vegetable farmers. Farmers close to the reservoirs were unwilling to give out their land for redistribution. On the other hand, those who were sited far from the reservoirs were eager for land close to the water source. Over time, the WUAs had been applying negotiations rather than the laid down rules and regulation, with the view to make the farmers appreciate the essence of collective action to make the 'privileged' group agree to the annual land reallocation exercise. Furthermore, it was observed that initially the application of strict rules by the WUAs rather intensified the conflicts until flexible negotiations were applied.

Conflicts among farmers in Anlo-Keta were rooted in land during preparations for farming and not so much in water since there was great cooperation in sharing of water from the shallow wells. Conflict on land was mainly with the demarcation of farm boundaries which seemed to be a reoccurring phenomenon. There was a recognised local vegetable farmers' union that acted as the arbitrator in resolving individual conflicts through its own set of rules and regulations. The executives of the union sat over such land issues and imposed fines and other sanctions on offenders. However, the rules and regulation, including the imposition of fines for guilty parties, had limited success since some members either challenged the decisions of the union or sought redress from traditional authorities.

The application of strict rules and regulations to manage conflicts may not always be effective, especially in instances of multiple dimensions such as the reallocation of land for better access to water. Such situations could hinder the equitable sharing of benefits and are legitimately challenged.

Introduction of coping physical measures

The communities also recognise that the land re-allocation conflicts were rooted in the scarcity of water during the dry seasons. Accordingly, the livelihood groups -farmers, fishers, and local productive water users - apart from the efforts of the WUAs have developed appropriate coping mechanisms to reduce such conflicts. First, the groups undertake limited manual dredging of reservoirs and dugouts before the rains for more water storage in the dry season. Secondly, the groups use the wells as a supplement for water from the dugouts and reservoirs.

The useful observation was that efforts were being made to remove the underlying tension between parties, which is the availability of water. For that reason, the communities were concerned with developing physical measures that may increase water availability for dry season farming. This would not come easily but it is the basis towards the avoidance and full resolution of the conflicts.

Allocation of water by time

In Binduri/Bugri, water for irrigation was allocated according to time and not by quantity. Individual farmers were entitled to water for specified hours of the day after which other users had their turn and equal share of time. However, differences came up between farmers whose farms were closer to the reservoirs and those farther away over the time schedule for the release and use of water during dry periods. The latter claimed that they do not get water from the canals when those near the reservoir open their valves. The WUAs resolve such issues by rescheduling the periods for watering to allow for the equitable distribution of water.

Apart from the ease of monitoring and avoiding further conflicts, allocation of water by time spreads the risk as broadly as possible. For example, a farmer with the rights to one hour of irrigation personally plans for greater or lesser supply of water at the local level (Wolf, 2002). Alternatively, allocating water in a given quantity or amount would concentrate risk among the users selected to bear the burden of fluctuation

Priority of water use

There was an unwritten code in Binduri/Bugri for priority of water use to deal with annual fluctuating supply. The first priority was water to quench thirst, considered an unalienable right, and may not be refused from any water source. This was followed by watering animals, irrigation, fishing, and finally commercial and industrial purposes. By prioritising uses risk can be distributed more equitably by allowing critical uses to have high priority in times of fluctuating supply. Wolf (2002) also illustrates this potential benefit of prioritising water use among the Berbers and Bedouins of Northern Africa.

Notwithstanding such prioritisation, conflicts usually occurred during the closed fishing season and between herdsmen and farmers. The strict adherence to the unwritten code implied that herds had the right to the use of water, but the issue was from which and whose water source? The issue was being addressed by developing water points for the herds. In the case of offending fishermen, the WUAs with the support of traditional rulers resolve the issues through negotiations.

Ownership of water sources

Conflicts pertaining to ownership of water sources were noted particularly among formal institutions in Afram Plains. The relationship between the District Assembly and some NGOs was not cordial in the past. This was mainly due to the lack of consultations when the latter initiated activities without adequate consultations with the District Assembly. Conflict was also evident between the Water and Sanitation Board (WSB) comprising four communities benefiting from one water supply facility and the Water and Sanitation (WATSAN) Committee which is restricted to a community over their status and functions in the communities. In all such cases, the District Assembly had to intervene to settle the issues by ensuring that the parties in conflict (including the District) voluntarily sought to reach a mutually acceptable settlement and that all parties gain.

Conflict over the ownership of water resources was also evident in Anlo-Keta. There were a number of clans who claimed ownership over a piece of land and for that matter laid claim to the water resources on the land. Such conflicts trickled down to the individual farmers, especially during periods of land preparation. A systematic method of resolving conflicts among the clans has evolved beginning with mutual settlement between the parties involved. Failing a resolution, the traditional authorities intervened before the modern courts finally arbitrate.

The modern courts have gradually come to play a significant role in resolving conflicts, even though most cases are resolved by the traditional authority. Under such circumstances, statutory modes of conflict management need to be balanced with local practices and resources used to manage conflict.

Payment and accountability

A major source of conflict in Afram Plains was the introduction of payment for domestic use of water. Since the introduction of decentralisation and District Assemblies about two decades ago and the subsequent establishment of WSBs and WATSAN Committees, institutional roles have gradually changed. The payment of water tariffs initially created tension, since traditionally there were no such tariffs in most rural areas of the country. The operation of community standpipes experienced conflicts over water rates, preferential treatment to other water users, and allegations of lack of accountability on the part of revenue collectors. It was also gathered from respondents that the WSB's authority was initially challenged, especially by the youth. Some people also challenged the judgment and fines imposed by the WSB. This was probably due to the perception that the WSB was an imposition from the District Assembly and donors and the difficulty in adjusting to change.

In addressing the situation, a mix of traditional and statutory system was agreed on and has effectively reduced such perceptions and problems. The chiefs consented to the formation of the WSB and WATSAN committees; they have their representatives serving on the on these institutions, and support them in their activities. In addition, individuals who do not conform to the authority of the WSB are referred to the chiefs as a last resort. These institutional arrangements have made the WSB and WATSAN committees functional in the area.

Emerging community based organisations

The emergence of Community Based Organisations (CBOs) such as the WUAs and local voluntary groups with clear responsibilities to resolve conflicts is significant. These institutions have developed mechanisms on water use and conflict resolution to promote the management of community water sources.

The roles of CBOs in conflict resolution could also be adopted in Alternative Dispute Resolution (ADR) plans that are being drawn up and encouraged in most societies and countries. ADR, which refers to "a wide variety of consensual approaches with which parties in conflict voluntarily seek to reach a mutually acceptable settlement" (Bingham and Wohlgenant, 1994), generally seeks to move parties away from distributive solutions, towards those in which all parties gain – positive-sum. In defining the methodologies for ADR, local processes are rarely drawn upon. However, it is quite evident from the preceding discussions that communities and CBOs in the study area have apparently been practicing ADR at the local level, which may need to be taken up.

Lessons and conclusions

From the foregoing, the following significant lessons could be drawn to enhance conflict resolution on water resources management.

- Conflict resolution should be built more on the principle of negotiation that promotes collective action and understanding rather than on the strict application of rules and regulations between parties.
- Physical measures and/or practices that would prevent the emergence of conflict should be seriously considered.
- In serious water stress areas, water for local irrigation should be allocated based on allotted time to allow for ease of monitoring, avoiding conflicts, and to spread risks broadly. However, this method of allocation is not recommended for use among domestic, and other productive users because their amount of water drawn is normally considered small.
- Codes for priority of water use, either written or unwritten, is relevant to deal with annual fluctuating supply. By prioritising uses, local water management distributes risks more equitably by allowing critical uses to have high priority in times of fluctuating supply.
- The role of emerging community based institutions/organisations in conflict resolutions should be recognised and encouraged.

There is no gain in saying the fact that conflict in water use has emerged as an issue that needs to be seriously tackled but carefully handled if water resources are to be properly managed. The study into water use conflicts at the local community level within the Volta basin reveals purposeful efforts and measures that are being developed to resolve conflicts. The way forward is to systematically balance such community-based practices with modern modes of conflict management, such as the emerging ADR in our water resources planning and policy formulation processes at the national and possibly regional level.

Acknowledgements

The author would like to extend thanks to Dr. Yaw Opoku-Ankomah of the Water Research Institute, Ghana, for his active encouragement in coming out with this paper.

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Keywords

conflict, resolution, community-based, water resources management, negotiation.

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